TSG RAN Meeting #21 **RP-030420**
Frankfurt, Germany, 16 - 19 September 2003

Title **CRs (Rel-5 and Rel-6 Category A) to TS 25.133 under WI "TEI5"**
Source **TSG RAN WG4**
Agenda Item **7.5.5**

RAN4 Tdoc	Spec	CR	R	Cat	Rel	Curr Ver	Title	Work Item
R4-020710	25.133	605		F	Rel-5	5.7.0	Accuracy requirement of non-HSDPA transmit carrier power measurement	TEI5
R4-020711	25.133	606		A	Rel-6	6.2.0	Accuracy requirement of non-HSDPA transmit carrier power measurement	TEI5
R4-020838	25.133	611	1	F	Rel-5	5.7.0	FDD inter-frequency cell identification	TEI5
R4-020839	25.133	612	1	A	Rel-6	6.2.0	FDD inter-frequency cell identification	TEI5

3GPP TSG RAN WG4 (Radio) Meeting #28 **R4-030710**

Sophia Antipolis, France 18 - 22 August 2003

CR-Form-v7

CHANGE REQUEST

⌘ **25.133** **CR** **605** ⌘ **rev** ⌘ Current version: **5.7.0** ⌘

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

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

Title:	⌘	Accuracy requirement of non-HSDPA transmit carrier power measurement
Source:	⌘	RAN WG4
Work item code:	⌘	TEI5
Date:	⌘	08/09/2003
Category:	⌘	**F**
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: ⌘

Transmit carrier power requirement

R99 and REL-4
- HSDPA transport channel is not supported
- Transmitted carrier power (DCH + CCH)
  - Measurement is used for RRM: admission & congestion control
  - Accuracy requirement: +/- 5% (5% ≤ Tx carrier pwr ≤95%)

REL-5 and Beyond
- HSDPA is supported
- Transmitted carrier power {DCH + CCH + (HS-PDSCH+HS-SCCH)}
  - Accuracy requirement: +/- 5% (5% ≤ Tx carrier pwr ≤95%)
- Non-HSDPA Transmit carrier power (DCH + CCH)
  - Measurement is used for RRM: admission & congestion control
  - Accuracy is not yet specified

The transmit carrier power measurement in R99/REL-4 and non-HSDPA transmit carrier power measurement in REL-5/REL-6 are the same measurements. Both are used for the same purpose, i.e. RRM. From RRM point of view, similar performance requirements need to be specified for the two measurements.

Definition of Non-HSDPA transmit carrier power was approved for TS 25.215 in CR134r1 at RAN#19. Measurement accuracy, measurement period, and report mapping is missing for the new Non-HSDPA transmit carrier power in TS 25.133.

Summary of change: ⌘

Introduction of measurement accuracy, measurement period, and report mapping for Non-HSDPA transmitted carrier power measurement.

Isolated Impact

		This CR adds new accuracy requirement for the non HSDPA transmit carrier power measurement introduced in REL-5.
Consequences if not approved:	⌘	Measurement performance for Non-HSDPA transmit carrier power is not defined.

Clauses affected:	⌘	New chapter 9.2.xx.			
		Y	**N**		
Other specs affected:	⌘		**X**	Other core specifications	⌘
			X	Test specifications	
			X	O&M Specifications	
Other comments:	⌘				

9.2.xx Transmitted carrier power of all codes not used for HS-PDSCH or HS-SCCH transmission

The measurement period shall be 100 ms.

9.2.xx.1 Accuracy requirement

Table 9.yy

Parameter	Unit	Accuracy [% units]	Conditions Range
Ptot	%	± 5	For 5% ≤ Transmitted carrier power of non-HSDPA codes ≤95%

9.2.xx.2 Measurement report mapping for transmitted carrier power of all codes not used for HS-PDSCH or HS-SCCH transmission

The reporting range for *Transmitted carrier power of non-HSDPA codes* is from 0 ... 100 %.

In table 9.zz the mapping of measured quantity is defined. The range in the signalling may be larger than the guaranteed accuracy range.

Table 9.zz

Reported value	Measured quantity value	Unit
NON_HSDPA_UTRAN_TX_POWER_000	Transmitted carrier power of non-HSDPA codes = 0	%
NON_HSDPA_UTRAN_TX_POWER_001	0 < Transmitted carrier power of non-HSDPA codes ≤ 1	%
NON_HSDPA_UTRAN_TX_POWER_002	1 < Transmitted carrier power of non-HSDPA codes ≤ 2	%
NON_HSDPA_UTRAN_TX_POWER_003	2 < Transmitted carrier power of non-HSDPA codes ≤ 3	%
…	…	…
NON_HSDPA_UTRAN_TX_POWER_098	97 < Transmitted carrier power of non-HSDPA codes ≤ 98	%
NON_HSDPA_UTRAN_TX_POWER_099	98 < Transmitted carrier power of non-HSDPA codes ≤ 99	%
NON_HSDPA_UTRAN_TX_POWER_100	99 < Transmitted carrier power of non-HSDPA codes ≤ 100	%

3GPP TSG RAN WG4 (Radio) Meeting #28 **R4-030711**

Sophia Antipolis, France 18 - 22 August 2003

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CHANGE REQUEST

⌘ **25.133** **CR** **606** ⌘ **rev** ⌘ Current version: **6.2.0** ⌘

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

Title:	⌘	Accuracy requirement of non-HSDPA transmit carrier power measurement
Source:	⌘	RAN WG4
Work item code:	⌘	TEI5
Date:	⌘	08/09/2003
Category:	⌘	**A**
Release:	⌘	Rel-6

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)*
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Use one of the following releases:
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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: ⌘

Transmit carrier power requirement

R99 and REL-4
- HSDPA transport channel is not supported
- Transmitted carrier power (DCH + CCH)
  - Measurement is used for RRM: admission & congestion control
  - Accuracy requirement: +/- 5% (5% ≤ Tx carrier pwr ≤95%)

REL-5 and Beyond
- HSDPA is supported
- Transmitted carrier power {DCH + CCH + (HS-PDSCH+HS-SCCH)}
  - Accuracy requirement: +/- 5% (5% ≤ Tx carrier pwr ≤95%)
- Non-HSDPA Transmit carrier power (DCH + CCH)
  - Measurement is used for RRM: admission & congestion control
  - Accuracy is not yet specified

The transmit carrier power measurement in R99/REL-4 and non-HSDPA transmit carrier power measurement in REL-5/REL-6 are the same measurements. Both are used for the same purpose, i.e. RRM. From RRM point of view, similar performance requirements need to be specified for the two measurements.

Definition of Non-HSDPA transmit carrier power was approved for TS 25.215 in CR134r1 at RAN#19. Measurement accuracy, measurement period, and report mapping is missing for the new Non-HSDPA transmit carrier power in TS 25.133.

Summary of change: ⌘ Introduction of measurement accuracy, measurement period, and report mapping for Non-HSDPA transmitted carrier power measurement.

		Isolated Impact This CR adds new accuracy requirement for the non HSDPA transmit carrier power measurement introduced in REL-5.
Consequences if not approved:	⌘	Measurement performance for Non-HSDPA transmit carrier power is not defined.

Clauses affected:	⌘	New chapter 9.2.xx.			
		Y	**N**		
Other specs affected:	⌘		**X**	Other core specifications	⌘
			X	Test specifications	
			X	O&M Specifications	
Other comments:	⌘				

9.2.xx Transmitted carrier power of all codes not used for HS-PDSCH or HS-SCCH transmission

The measurement period shall be 100 ms.

9.2.xx.1 Accuracy requirement

Table 9.yy

Parameter	Unit	Accuracy [% units]	Conditions Range
Ptot	%	± 5	For 5% ≤ Transmitted carrier power of non-HSDPA codes ≤95%

9.2.xx.2 Measurement report mapping for transmitted carrier power of all codes not used for HS-PDSCH or HS-SCCH transmission

The reporting range for *Transmitted carrier power of non-HSDPA codes* is from 0 ... 100 %.

In table 9.zz the mapping of measured quantity is defined. The range in the signalling may be larger than the guaranteed accuracy range.

Table 9.zz

Reported value	Measured quantity value	Unit
NON_HSDPA_UTRAN_TX_POWER_000	Transmitted carrier power of non-HSDPA codes = 0	%
NON_HSDPA_UTRAN_TX_POWER_001	0 < Transmitted carrier power of non-HSDPA codes ≤ 1	%
NON_HSDPA_UTRAN_TX_POWER_002	1 < Transmitted carrier power of non-HSDPA codes ≤ 2	%
NON_HSDPA_UTRAN_TX_POWER_003	2 < Transmitted carrier power of non-HSDPA codes ≤ 3	%
…	…	…
NON_HSDPA_UTRAN_TX_POWER_098	97 < Transmitted carrier power of non-HSDPA codes ≤ 98	%
NON_HSDPA_UTRAN_TX_POWER_099	98 < Transmitted carrier power of non-HSDPA codes ≤ 99	%
NON_HSDPA_UTRAN_TX_POWER_100	99 < Transmitted carrier power of non-HSDPA codes ≤ 100	%

3GPP TSG RAN WG4 (Radio) Meeting #28 **R4-030838**

Sophia Antipolis, France 18 - 22 August 2003

CR-Form-v7

CHANGE REQUEST

⌘ **25.133** **CR** **611** ⌘ **rev** **1** ⌘ Current version: **5.7.0** ⌘

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

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

Title:	⌘	FDD inter-frequency cell identification and measurement reporting test case
Source:	⌘	RAN WG4
Work item code:	⌘	TEI5
Date:	⌘	08/09/2003
Category:	⌘	**F**
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:	⌘	To modify the current fading test case in Rel-5 and beyond to specify the missing parameters, which would influence the inter-frequency measurement reporting capability.
Summary of change:	⌘	Table A.8.11: "General test parameters for Correct reporting of neighbours in Fading propagation condition", was modified to include the missing parameters. Table A.8.12: "Test parameters for Correct reporting of neighbours in Fading propagation condition", was modified to include the missing parameters. The test requirements in section A.8.2.2.2 were modified. Isolated impact: This CR has an isolated impact, as this is a correction to a testcase.
Consequences if not approved:	⌘	This could lead to different UE behavior in a network deployment depending on; a)Network configure parameters; Compressed mode parameters (TGL, TGD, TGPL1), common channel power (SCH and P-CPICH) and frequency offset (between the inter Node B(s) cells). b)Deployment scenario; (channel conditions-fading channels, UE speed) c)Implementation aspects; UE implementation (searcher performance in fading channel) d)Minimum performance; Expected network/UE performances in terms of inter-frequency handover, which has a corresponding implication for intra-frequency or Inter-RAT performance if the UE cannot successfully report a candidate inter-frequency cell. In the worse case this would increase the number of dropped call or reduced the network capacity if an inappropriate compressed mode pattern is chosen.

Clauses affected:	⌘	A.8.2.2				
Other specs affected:	⌘	**Y**	**N**		⌘	
			X	Other core specifications		
		X		Test specifications		34.121
			X	O&M Specifications		
Other comments:	⌘	Equivalent CRs in other Releases: CR612r1 cat. A to 25.133 v6.2.0				

How to create CRs using this form:

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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.8.2.2 Correct reporting of neighbours in Fading propagation condition

A.8.2.2.1 Test Purpose and Environment

The purpose of this test is to verify that the UE makes correct reporting of an event when doing inter frequency measurements. The test will partly verify the requirements in section 8.1.2.2.The test parameters are given in Table A.8.11 and A.8.12. In the measurement control information it is indicated to the UE that event-triggered reporting 2C shall be used. The test consists of two successive time periods, each with a time duration of T1 and T2 respectively.

Table A.8.11: General test parameters for Correct reporting of neighbours in Fading propagation condition

Parameter	Unit	Value	Comment
DCH parameters		DL Reference Measurement Channel 12.2 kbps	As specified in TS 25.101 section A.3.1
Power Control		On	
Compressed mode		~~Case 2.1~~A.22 set 2 (TGPL1=12)	As specified in TS 25.101 section A.5.
Active cell		Cell 1	
Absolute Threshold (Ec/N0) for Event 2c	dB	-18	
Hysteresis	dB	0	
Time to Trigger	ms	0	
Filter coefficient		0	
Monitored cell list size		Total 24 ~~X~~ 8 on frequency Channel 2	Measurement control information is sent before the compressed mode pattern starts.
Propagation Condition		Case 5	As specified in Annex B of TS 25.101.
Frequency offset	ppm	+/- 0.1	Frequency offset between Cell 1 and Cell 2.
T1	s	2	
T2	s	40	

Table A.8.12: Test parameters for Correct reporting of neighbours in Fading propagation condition

Parameter	Unit	Cell 1		Cell 2	
		T1	T2	T1	T2
UTRA RF Channel Number		Channel 1		Channel 2	
CPICH_Ec/Ior	DB	-10		-10	
PCCPCH_Ec/Ior	DB	-12		-12	
SCH_Ec/Ior	DB	-12		-12	
PICH_Ec/Ior	DB	-15		-15	
DPCH_Ec/Ior	DB	~~TBD~~ Note 1		~~TBD~~ N/A	
OCNS		~~[To Be Calculated]~~ Note 2		~~[To Be Calculated]~~ - 0.941	
$\hat{I}_{or}/I_{oc}$	DB	0		~~-1.8~~ Infinity	-1.8
I_{oc}	dBm/3.84 MHz	-70		-70	
CPICH_Ec/Io	DB	-13		~~-14~~ Infinity	-14
Propagation Condition	Case 5 as specified in Annex B of TS25.101				
Note 1: The DPCH level is controlled by the power control loop Note 2: The power of the OCNS channel that is added shall make the total power from the cell to be equal to I_{or}.					

A.8.2.2.2 Test Requirements

a) The UE shall send one Event 2C triggered measurement report, with a measurement reporting delay less than ~~5~~ 36 seconds from the ~~start of the test~~beginning of time period T2.

b) The UE shall not send any measurement reports, as long as the reporting criteria are not fulfilled.

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

3GPP TSG RAN WG4 (Radio) Meeting #28 **R4-030839**

Sophia Antipolis, France 18 - 22 August 2003

CR-Form-v7

CHANGE REQUEST

⌘ **25.133** **CR** **612** ⌘ **rev** **1** ⌘ Current version: **6.2.0** ⌘

*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:	⌘	FDD inter-frequency cell identification and measurement reporting test case
Source:	⌘	RAN WG4
Work item code:	⌘	TEI5
Date:	⌘	08/09/2003
Category:	⌘	**A**
Release:	⌘	Rel-6

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
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D *(editorial modification)*
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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:	⌘	To modify the current fading test case in Rel-5 and beyond to specify the missing parameters, which would influence the inter-frequency measurement reporting capability.
Summary of change:	⌘	Table A.8.11: "General test parameters for Correct reporting of neighbours in Fading propagation condition", was modified to include the missing parameters. Table A.8.12: "Test parameters for Correct reporting of neighbours in Fading propagation condition", was modified to include the missing parameters. The test requirements in section A.8.2.2.2 were modified. Isolated impact: This CR has an isolated impact, as this is a correction to a testcase.
Consequences if not approved:	⌘	This could lead to different UE behavior in a network deployment depending on; a)Network configure parameters; Compressed mode parameters (TGL, TGD, TGPL1), common channel power (SCH and P-CPICH) and frequency offset (between the inter Node B(s) cells). b)Deployment scenario; (channel conditions-fading channels, UE speed) c)Implementation aspects; UE implementation (searcher performance in fading channel) d)Minimum performance; Expected network/UE performances in terms of inter-frequency handover, which has a corresponding implication for intra-frequency or Inter-RAT performance if the UE cannot successfully report a candidate inter-frequency cell. In the worse case this would increase the number of dropped call or reduced the network capacity if an inappropriate compressed mode pattern is chosen.

Clauses affected:	⌘	A.8.2.2				
Other specs affected:	⌘	**Y**	**N**		⌘	
			X	Other core specifications		
		X		Test specifications		34.121
			X	O&M Specifications		
Other comments:	⌘	Equivalent CRs in other Releases: CR611r1 cat. F to 25.133 v5.7.0				

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A.8.2.2 Correct reporting of neighbours in Fading propagation condition

A.8.2.2.1 Test Purpose and Environment

The purpose of this test is to verify that the UE makes correct reporting of an event when doing inter frequency measurements. The test will partly verify the requirements in section 8.1.2.2.The test parameters are given in Table A.8.11 and A.8.12. In the measurement control information it is indicated to the UE that event-triggered reporting 2C shall be used. The test consists of two successive time periods, each with a time duration of T1 and T2 respectively.

Table A.8.11: General test parameters for Correct reporting of neighbours in Fading propagation condition

Parameter	Unit	Value	Comment
DCH parameters		DL Reference Measurement Channel 12.2 kbps	As specified in TS 25.101 section A.3.1
Power Control		On	
Compressed mode		~~Case 2.1~~A.22 set 2 (TGPL1=12)	As specified in TS 25.101 section A.5.
Active cell		Cell 1	
Absolute Threshold (Ec/N0) for Event 2c	dB	-18	
Hysteresis	dB	0	
Time to Trigger	ms	0	
Filter coefficient		0	
Monitored cell list size		Total 24 ~~X~~ 8 on frequency Channel 2	Measurement control information is sent before the compressed mode pattern starts.
Propagation Condition		Case 5	As specified in Annex B of TS 25.101.
Frequency offset	ppm	+/- 0.1	Frequency offset between Cell 1 and Cell 2.
T1	s	2	
T2	s	40	

Table A.8.12: Test parameters for Correct reporting of neighbours in Fading propagation condition

Parameter	Unit	Cell 1		Cell 2	
		T1	T2	T1	T2
UTRA RF Channel Number		Channel 1		Channel 2	
CPICH_Ec/Ior	DB	-10		-10	
PCCPCH_Ec/Ior	DB	-12		-12	
SCH_Ec/Ior	DB	-12		-12	
PICH_Ec/Ior	DB	-15		-15	
DPCH_Ec/Ior	DB	~~TBD~~Note 1		~~TBD~~ N/A	
OCNS		~~[To Be Calculated]~~Note 2		~~[To Be Calculated]~~ 0.941	
$\hat{I}_{or}/I_{oc}$	DB	0		~~-1.8~~ Infinity	-1.8
I_{oc}	dBm/3.84 MHz	-70		-70	
CPICH_Ec/Io	DB	-13		~~-14~~ Infinity	-14
Propagation Condition	Case 5 as specified in Annex B of TS25.101				
Note 1: The DPCH level is controlled by the power control loop Note 2: The power of the OCNS channel that is added shall make the total power from the cell to be equal to I_{or}.					

A.8.2.2.2 Test Requirements

a) The UE shall send one Event 2C triggered measurement report, with a measurement reporting delay less than ~~5~~ 36 seconds from the ~~start of the test~~beginning of time period T2.

b) The UE shall not send any measurement reports, as long as the reporting criteria are not fulfilled.

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