TSG RAN Meeting #20   **RP-030209**
Hämeenlinna, Finland, 3 - 6 June, 2003

Title	**CRs (R'99 and Rel-4/Rel-5/Rel-6 Category A) to TS 25.133 (1/2)**
Source	**TSG RAN WG4**
Agenda Item	**7.4.3**

RAN4 Tdoc	Spec	CR	R	Cat	Rel	Curr Ver	Title	Work Item
R4-020651	25.133	564	2	F	R99	3.13.0	UE soft handover delay requirements	TEI
R4-020652	25.133	565	2	A	Rel-4	4.8.0	UE soft handover delay requirements	TEI
R4-020653	25.133	566	2	A	Rel-5	5.6.0	UE soft handover delay requirements	TEI
R4-020654	25.133	567	2	A	Rel-6	6.1.0	UE soft handover delay requirements	TEI
R4-020594	25.133	570	1	F	R99	3.13.0	Correction to CPICH Ec/Io in correct reporting of neighbours in AWGN propagation condition test case	TEI
R4-020595	25.133	571	1	A	Rel-4	4.8.0	Correction to CPICH Ec/Io in correct reporting of neighbours in AWGN propagation condition test case	TEI
R4-020596	25.133	572	1	A	Rel-5	5.6.0	Correction to CPICH Ec/Io in correct reporting of neighbours in AWGN propagation condition test case	TEI
R4-020597	25.133	573	1	A	Rel-6	6.1.0	Correction to CPICH Ec/Io in correct reporting of neighbours in AWGN propagation condition test case	TEI
R4-020422	25.133	574		F	R99	3.13.0	SFN-SFN observed time difference type 1	TEI
R4-020423	25.133	575		A	Rel-4	4.8.0	SFN-SFN observed time difference type 1	TEI
R4-020424	25.133	576		A	Rel-5	5.6.0	SFN-SFN observed time difference type 1	TEI
R4-020425	25.133	597		A	Rel-6	6.1.0	SFN-SFN observed time difference type 1	TEI
R4-020480	25.133	577		F	R99	3.13.0	Correction to CPCH RSCP Test case A.9.1.1	TEI
R4-020481	25.133	578		A	Rel-4	4.8.0	Correction to CPCH RSCP Test case A.9.1.1	TEI

RAN4 Tdoc	Spec	CR	R	Cat	Rel	Curr Ver	Title	Work Item
R4-020482	25.133	579		A	Rel-5	5.6.0	Correction to CPCH RSCP Test case A.9.1.1	TEI
R4-020483	25.133	580		A	Rel-6	6.1.0	Correction to CPCH RSCP Test case A.9.1.1	TEI

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CHANGE REQUEST

⌘　　　**25.133** CR **564**　　⌘**rev** **2** ⌘　Current version: **3.13.0** ⌘

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

Title:	⌘	UE Soft Handover Delay requirements	
Source:	⌘	RAN WG4	
Work item code:	⌘	TEI	*Date:* ⌘ 27/05/2003
Category:	⌘ **F**		*Release:* ⌘ R99

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: ⌘	In the soft handover delay testcase, the test requirement is not valid. Currently in this test it is stated that the BLER performance shall be below 1% when the BLER target is 1%. But the BLER target shall be the target of the received quality, not the performance limit. In the power control constant BLER target performance requirement, see 25.101, paragraph 8.8.1, the BLER shall be within $0.01\pm30\%$ when the BLER target is 1%.

Therefore the test requirement is changed to in average be **BLER = $0.01\pm30\%$ to fulfil the soft handover delay requirements**.

Furthermore since the BLER must be estimated during a number of soft handovers, it is not possible to detect whether one certain soft handover is successfully performed. Therefore it does not make sense to have a requirement on the rate of successfully soft handovers, instead the requirement must be on the average BLER during a period after cell 1 is removed to be sure that demodulation of cell 2 is done.

.An extra time of 10 ms is added after cell1 is removed in order for the inner loop power control to adapt to that only cell 2 is received.

Isolated Impact: This CR will not have an impact on the UE or the network, it only change the testcase in order to make it relevant and reflecting the core spec. |
| *Summary of change:* ⌘ | The BLER performance requirement is changed from being maximum BLER= 0.01 to BLER=$0.01\pm30\%$ to fulfil the soft handover delay requirements. |

		The formulation of the rate of successful tests *"The rate of correct soft handovers observed during repeated tests shall be at least 90%"* is removed. The relative delay between paths of DPCH from cell 1 and cell 2 is also included in the testparameters.
Consequences if not approved:	⌘	The test requirement in the appendix set a requirement that is not valid according core requirement in 25.101.

Clauses affected:	⌘	A.5.1		

		Y	**N**			
Other specs affected:	⌘		**X**	Other core specifications	⌘	
		X		Test specifications		34.121
			X	O&M Specifications		

Other comments:	⌘	
		Equivalent CRs in other Releases: CR565r2 cat. A to 25.133 v4.8.0, CR566r2 cat. A to 25.133 v5.6.0, CR567r2 cat. A to 25.133 v6.1.0

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1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

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3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

A.5   UTRAN Connected Mode Mobility

A.5.1   FDD/FDD Soft Handover

A.5.1.1   Test Purpose and Environment

The purpose of this test is to verify the requirement for the soft handover delay in CELL_DCH state specified in section 5.1.2.

The test parameters are given in Table A.5A and A.5B below. In the measurement control information it is indicated to the UE that event-triggered reporting with Event 1A shall be used, and that CPICH Ec/Io and SFN-CFN observed time difference shall be reported together with Event 1A. The test consists of six five successive time periods, with a time duration of T1, T2, T3, T4, and T5 and T6 respectively. At the start of time duration T1, the UE may not have any timing information of cell 2.

Table A.5A: General test parameters for Soft handover

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	
Target quality value on DTCH		BLER	0.01	
Initial conditions	Active cell		Cell 1	
	Neighbouring cell		Cell 2	
Final condition	Active cell		Cell 2	
Reporting range		dB	3	Applicable for event 1A and 1B
Hysteresis		dB	0	
W			1	Applicable for event 1A and 1B
Reporting deactivation threshold			0	Applicable for event 1A
Time to Trigger		ms	0	
Filter coefficient			0	
T1		s	5	
T2		s	3	
T3		s	0.5	
T4		ms	60	This is the requirement on active set update delay, see section 5.1.2.2, where KC=1 and OC=0.
T5		ms	102	
T6		s	2	

Table A.5B: Cell specific test parameters for Soft handover

Parameter	Unit	Cell 1						Cell 2					
		T1	T2	T3	T4	T5	T6	T1	T2	T3	T4	T5	T6
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	Note1	Note1	Note1		N/A	N/A	N/A	N/A	Note3	Note1		Note1
OCNS		Note2	Note2	Note2		-0.94	-0.94	-0.94	-0.94	Note2	Note2		Note2
$\hat{I}_{or}/I_{oc}$	dB	0	2.91	2.91		2.91	2.91	-Inf	2.91	2.91	2.91		2.91
I_{oc}	dBm/ 3.84 MHz	-70											
CPICH_Ec/Io	dB	-13	-14	-14		-14	-14	-Inf	-14	-14	-14		-14
Propagation Condition		AWGN											
Relative delay of paths received from cell 2 with respect to cell 1	chips	{-148 … 148} Note 3											
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$_{or}$													
Note 3: The DPCH level is controlled by the power control loop. The initial power shall be set equal to the DPCH_Ec/Ior of Cell 1 at the end of T2.													
Note 3: The relative delay of the path from cell 2 with respect to cell 1 shall always be within ±148 chip.													

A.5.1.1.1 Test procedure

1) The test is started at the begining of T1.

2) During time period T2 an Event 1A triggered measurement report shall be sent by the UE containing the CFN-SFN observed time difference between cell 1 and cell 2.

3) At the beginning of T3 the downlink DPCH of cell 2 shall be activated.

4) UTRAN shall send a Active Set Update command with activation time now adding cell 2 to the active set. The Active Set Update message shall be sent to the UE so that the whole message is available at the UE at the beginning of T4.

5) At the beginning of T5 the DPCH from cell 1 shall be switched off.

A.5.1.2 Test Requirements

The measured quality on the DTCH of the UE downlink shall during T6 be BLER =0.01±30%. shall not exceed the downlink BLER target, i.e. 1%, during time period T5.

The rate of correct soft handover delays observed during repeated tests shall be at least 90%.

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CHANGE REQUEST

| ⌘ | **25.133** CR **565** | ⌘**rev** **2** ⌘ | Current version: | **4.8.0** | ⌘ |

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

Title:	⌘	UE Soft Handover Delay requirements
Source:	⌘	RAN WG4

Work item code:⌘	TEI	**Date:** ⌘	27/05/2003

Category:	⌘	**A**		**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:** | ⌘ | In the soft handover delay testcase, the test requirement is not valid. Currently in this test it is stated that the BLER performance shall be below 1% when the BLER target is 1%. But the BLER target shall be the target of the received quality, not the performance limit. In the power control constant BLER target performance requirement, see 25.101, paragraph 8.8.1, the BLER shall be within 0.01±30% when the BLER target is 1%.

Therefore the test requirement is changed to in average be **BLER= 0.01±30% to fulfil the soft handover delay requirements**.

Furthermore since the BLER must be estimated during a number of soft handovers, it is not possible to detect whether one certain soft handover is successfully performed. Therefore it does not make sense to have a requirement on the rate of successfully soft handovers, instead the requirement must be on the average BLER during a period after cell 1 is removed to be sure that demodulation of cell 2 is done.

.An extra time of 10 ms is added after cell1 is removed in order for the inner loop power control to adapt to that only cell 2 is received.

Isolated Impact: This CR will not have an impact on the UE or the network, it only change the testcase in order to make it relevant and reflecting the core spec. |
|---|---|---|

Summary of change:	⌘	The BLER performance requirement is changed from being maximum BLER= 0.01 to BLER=0.01±30% to fulfil the soft handover delay requirements.

		The formulation of the rate of successful tests *"The rate of correct soft handovers observed during repeated tests shall be at least 90%"* is removed. The relative delay between paths of DPCH from cell 1 and cell 2 is also included in the testparameters.
Consequences if not approved:	⌘	The test requirement in the appendix set a requirement that is not valid according core requirement in 25.101.

Clauses affected:	⌘	A.5.1		

		Y	**N**			
Other specs affected:	⌘		**X**	Other core specifications	⌘	
		X		Test specifications		34.121
			X	O&M Specifications		

Other comments:	⌘	
		Equivalent CRs in other Releases: CR564r2 cat. F to 25.133 v3.13.0, CR566r2 cat. A to 25.133 v5.6.0, CR567r2 cat. A to 25.133 v6.1.0

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3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

A.5 UTRAN Connected Mode Mobility

A.5.1 FDD/FDD Soft Handover

A.5.1.1 Test Purpose and Environment

The purpose of this test is to verify the requirement for the soft handover delay in CELL_DCH state specified in section 5.1.2.

The test parameters are given in Table A.5A and A.5B below. In the measurement control information it is indicated to the UE that event-triggered reporting with Event 1A shall be used, and that CPICH Ec/Io and SFN-CFN observed time difference shall be reported together with Event 1A. The test consists of ~~five~~ six successive time periods, with a time duration of T1, T2, T3, T4~~, and~~ T5 and T6 respectively. At the start of time duration T1, the UE may not have any timing information of cell 2.

Table A.5A: General test parameters for Soft handover

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	
Target quality value on DTCH		BLER	0.01	
Initial conditions	Active cell		Cell 1	
	Neighbouring cell		Cell 2	
Final condition	Active cell		Cell 2	
Reporting range		dB	3	Applicable for event 1A and 1B
Hysteresis		dB	0	
W			1	Applicable for event 1A and 1B
Reporting deactivation threshold			0	Applicable for event 1A
Time to Trigger		ms	0	
Filter coefficient			0	
T1		s	5	
T2		s	3	
T3		s	0.5	
T4		ms	60	This is the requirement on active set update delay, see section 5.1.2.2, where KC=1 and OC=0.
T5		ms	10~~2~~	
T6		s	2	

Table A.5B: Cell specific test parameters for Soft handover

Parameter	Unit	Cell 1						Cell 2					
		T1	T2	T3	T4	T5	T6	T1	T2	T3	T4	T5	T6
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	Note1	Note1	Note1		N/A	N/A	N/A	N/A	Note3	Note1		Note 1
OCNS		Note2	Note2	Note2		-0.94	-0.94	-0.94	-0.94	Note2	Note2		Note2
$\hat{I}_{or}/I_{oc}$	dB	0	2.91	2.91		2.91	2.91	-Inf	2.91	2.91	2.91		2.91
I_{oc}	dBm/3.84 MHz	-70											
CPICH_Ec/Io	dB	-13	-14	-14		-14	-14	-Inf	-14	-14	-14		-14
Propagation Condition		AWGN											
Relative delay of paths received from cell 2 with respect to cell 1	chips	{-148 … 148} Note 3											
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													
Note 3: The DPCH level is controlled by the power control loop. The initial power shall be set equal to the DPCH_Ec/Ior of Cell 1 at the end of T2.													
Note 3: The relative delay of the path from cell 2 with respect to cell 1 shall always be within ±148 chip.													

A.5.1.1.1   Test procedure

1) The test is started at the begining of T1.

2) During time period T2 an Event 1A triggered measurement report shall be sent by the UE containing the CFN-SFN observed time difference between cell 1 and cell 2.

3) At the beginning of T3 the downlink DPCH of cell 2 shall be activated.

4) UTRAN shall send a Active Set Update command with activation time now adding cell 2 to the active set. The Active Set Update message shall be sent to the UE so that the whole message is available at the UE at the beginning of T4.

5) At the beginning of T5 the DPCH from cell 1 shall be switched off.

A.5.1.2   Test Requirements

The measured quality on the DTCH of the UE downlink shall during T6 be BLER=0.01±30%. shall not exceed the downlink BLER target, i.e. 1%, during time period T5.

The rate of correct soft handover delays observed during repeated tests shall be at least 90%.

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CHANGE REQUEST

⌘　　　**25.133 CR 566**　　⌘**rev** **2** ⌘ Current version: **5.6.0** ⌘

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

Title: ⌘	UE Soft Handover Delay requirements
Source: ⌘	RAN WG4

Work item code:⌘ TEI　　　　　　　　　　　　　　　***Date:*** ⌘ 27/05/2003

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: ⌘ In the soft handover delay testcase, the test requirement is not valid. Currently in this test it is stated that the BLER performance shall be below 1% when the BLER target is 1%. But the BLER target shall be the target of the received quality, not the performance limit. In the power control constant BLER target performance requirement, see 25.101, paragraph 8.8.1, the BLER shall be within $0.01\pm30\%$ when the BLER target is 1%.

Therefore the test requirement is changed to in average be **BLER= $0.01\pm30\%$ to fulfil the soft handover delay requirements**.

Furthermore since the BLER must be estimated during a number of soft handovers, it is not possible to detect whether one certain soft handover is successfully performed. Therefore it does not make sense to have a requirement on the rate of successfully soft handovers, instead the requirement must be on the average BLER during a period after cell 1 is removed to be sure that demodulation of cell 2 is done.

.An extra time of 10 ms is added after cell1 is removed in order for the inner loop power control to adapt to that only cell 2 is received.

Isolated Impact: This CR will not have an impact on the UE or the network, it only change the testcase in order to make it relevant and reflecting the core spec.

Summary of change: ⌘ The BLER performance requirement is changed from being maximum BLER= 0.01 to
BLER=$0.01\pm30\%$ to fulfil the soft handover delay requirements.

		The formulation of the rate of successful tests
		"The rate of correct soft handovers observed during repeated tests shall be at least 90%." is removed.
		The relative delay between paths of DPCH from cell 1 and cell 2 is also included in the testparameters.
Consequences if not approved:	⌘	The test requirement in the appendix set a requirement that is not valid according core requirement in 25.101.

Clauses affected:	⌘	A.5.1	

		Y	**N**			
Other specs affected:	⌘		**X**	Other core specifications	⌘	
		X		Test specifications		34.121
			X	O&M Specifications		

Other comments:	⌘	
		Equivalent CRs in other Releases: CR564r2 cat. F to 25.133 v3.13.0, CR565r2 cat. A to 25.133 v4.8.0, CR567r2 cat. A to 25.133 v6.1.0

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3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

A.5 UTRAN Connected Mode Mobility

A.5.1 FDD/FDD Soft Handover

A.5.1.1 Test Purpose and Environment

The purpose of this test is to verify the requirement for the soft handover delay in CELL_DCH state specified in section 5.1.2.

The test parameters are given in Table A.5A and A.5B below. In the measurement control information it is indicated to the UE that event-triggered reporting with Event 1A shall be used, and that CPICH Ec/Io and SFN-CFN observed time difference shall be reported together with Event 1A. The test consists of ~~five~~ six successive time periods, with a time duration of T1, T2, T3, T4, ~~and~~ T5 and T6 respectively. At the start of time duration T1, the UE may not have any timing information of cell 2.

Table A.5A: General test parameters for Soft handover

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	
Target quality value on DTCH		BLER	0.01	
Initial conditions	Active cell		Cell 1	
	Neighbouring cell		Cell 2	
Final condition	Active cell		Cell 2	
Reporting range		dB	3	Applicable for event 1A and 1B
Hysteresis		dB	0	
W			1	Applicable for event 1A and 1B
Reporting deactivation threshold			0	Applicable for event 1A
Time to Trigger		ms	0	
Filter coefficient			0	
T1		s	5	
T2		s	3	
T3		s	0.5	
T4		ms	60	This is the requirement on active set update delay, see section 5.1.2.2, where KC=1 and OC=0.
T5		ms	~~2~~10	
T6		s	2	

Table A.5B: Cell specific test parameters for Soft handover

Parameter	Unit	Cell 1						Cell 2					
		T1	T2	T3	T4	T5	T6	T1	T2	T3	T4	T5	T6
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	Note1	Note1	Note1		N/A	N/A	N/A	N/A	Note3	Note1		Note1
OCNS		Note2	Note2	Note2		-0.94	-0.94	-0.94	-0.94	Note2	Note2		Note2
$\hat{I}_{or}/I_{oc}$	dB	0	2.91	2.91		2.91	2.91	-Inf	2.91	2.91	2.91		2.91
I_{oc}	dBm/3.84 MHz	-70											
CPICH_Ec/Io	dB	-13	-14	-14		-14	-14	-Inf	-14	-14	-14		-14
Propagation Condition		AWGN											
Relative delay of paths received from cell 2 with respect to cell 1	chips	{-148 … 148} Note 3											
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													
Note 3: The DPCH level is controlled by the power control loop. The initial power shall be set equal to the DPCH_Ec/Ior of Cell 1 at the end of T2.													
Note 3: The relative delay of the path from cell 2 with respect to cell 1 shall always be within ±148 chip.													

A.5.1.1.1 Test procedure

1) The test is started at the beginining of T1.

2) During time period T2 an Event 1A triggered measurement report shall be sent by the UE containing the CFN-SFN observed time difference between cell 1 and cell 2.

3) At the beginning of T3 the downlink DPCH of cell 2 shall be activated.

4) UTRAN shall send a Active Set Update command with activation time now adding cell 2 to the active set. The Active Set Update message shall be sent to the UE so that the whole message is available at the UE at the beginning of T4.

5) At the beginning of T5 the DPCH from cell 1 shall be switched off.

A.5.1.2 Test Requirements

The measured quality on the DTCH of the UE downlink shall during T6 be BLER =0.01±30%. shall not exceed the downlink BLER target, i.e. 1%, during time period T5.

The rate of correct soft handover delays observed during repeated tests shall be at least 90%.

CR-Form-v7

CHANGE REQUEST

⌘   **25.133** CR **567**   ⌘**rev** **2** ⌘   Current version: **6.1.0** ⌘

*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 **X** Radio Access Network ☐   Core Network ☐

Title: ⌘	UE Soft Handover Delay requirements
Source: ⌘	RAN WG4
Work item code:⌘	TEI ***Date:*** ⌘ 27/05/2003

Category: ⌘ **A**   ***Release:*** ⌘ Rel-6

Use <u>one</u> of the following categories:	Use <u>one</u> of the following releases:
F *(correction)*	*2 (GSM Phase 2)*
A *(corresponds to a correction in an earlier release)*	*R96 (Release 1996)*
B *(addition of feature),*	*R97 (Release 1997)*
C *(functional modification of feature)*	*R98 (Release 1998)*
D *(editorial modification)*	*R99 (Release 1999)*
Detailed explanations of the above categories can	*Rel-4 (Release 4)*
be found in 3GPP TR 21.900.	*Rel-5 (Release 5)*
	Rel-6 (Release 6)

Reason for change: ⌘	In the soft handover delay testcase, the test requirement is not valid. Currently in this test it is stated that the BLER performance shall be below 1% when the BLER target is 1%. But the BLER target shall be the target of the received quality, not the performance limit. In the power control constant BLER target performance requirement, see 25.101, paragraph 8.8.1, the BLER shall be within $0.01\pm30\%$ when the BLER target is 1%.

Therefore the test requirement is changed to in average be **BLER= $0.01\pm30\%$ to fulfil the soft handover delay requirements**.

Furthermore since the BLER must be estimated during a number of soft handovers, it is not possible to detect whether one certain soft handover is successfully performed. Therefore it does not make sense to have a requirement on the rate of successfully soft handovers, instead the requirement must be on the average BLER during a period after cell 1 is removed to be sure that demodulation of cell 2 is done.

.An extra time of 10 ms is added after cell1 is removed in order for the inner loop power control to adapt to that only cell 2 is received.

Isolated Impact: This CR will not have an impact on the UE or the network, it only change the testcase in order to make it relevant and reflecting the core spec. |
| ***Summary of change:***⌘ | The BLER performance requirement is changed from being maximum BLER= 0.01 to BLER=$0.01\pm30\%$ to fulfil the soft handover delay requirements. |

		The formulation of the rate of successful tests *"The rate of correct soft handovers observed during repeated tests shall be at least 90%"* is removed. The relative delay between paths of DPCH from cell 1 and cell 2 is also included in the testparameters.	
Consequences if not approved:	⌘	The test requirement in the appendix set a requirement that is not valid according core requirement in 25.101.	

Clauses affected:	⌘	A.5.1

		Y	N			
Other specs affected:	⌘		X	Other core specifications	⌘	
		X		Test specifications		34.121
			X	O&M Specifications		

Other comments:	⌘	
		Equivalent CRs in other Releases: CR564r2 cat. F to 25.133 v3.13.0, CR565r2 cat. A to 25.133 v4.8.0, CR566r2 cat. A to 25.133 v5.6.0

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.5 UTRAN Connected Mode Mobility

A.5.1 FDD/FDD Soft Handover

A.5.1.1 Test Purpose and Environment

The purpose of this test is to verify the requirement for the soft handover delay in CELL_DCH state specified in section 5.1.2.

The test parameters are given in Table A.5A and A.5B below. In the measurement control information it is indicated to the UE that event-triggered reporting with Event 1A shall be used, and that CPICH Ec/Io and SFN-CFN observed time difference shall be reported together with Event 1A. The test consists of ~~five~~ six successive time periods, with a time duration of T1, T2, T3, T4~~, and~~ T5 and T6 respectively. At the start of time duration T1, the UE may not have any timing information of cell 2.

Table A.5A: General test parameters for Soft handover

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	
Target quality value on DTCH		BLER	0.01	
Initial conditions	Active cell		Cell 1	
	Neighbouring cell		Cell 2	
Final condition	Active cell		Cell 2	
Reporting range		dB	3	Applicable for event 1A and 1B
Hysteresis		dB	0	
W			1	Applicable for event 1A and 1B
Reporting deactivation threshold			0	Applicable for event 1A
Time to Trigger		ms	0	
Filter coefficient			0	
T1		s	5	
T2		s	3	
T3		s	0.5	
T4		ms	60	This is the requirement on active set update delay, see section 5.1.2.2, where KC=1 and OC=0.
T5		s	2	

Table A.5B: Cell specific test parameters for Soft handover

Parameter	Unit	Cell 1						Cell 2					
		T1	T2	T3	T4	T5	T6	T1	T2	T3	T4	T5	T6
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	Note1	Note1	Note1		N/A	N/A	N/A	N/A	Note3	Note1		Note1
OCNS		Note2	Note2	Note2		-0.94	-0.94	-0.941	-0.94	Note2	Note2		Note2
$\hat{I}_{or}/I_{oc}$	dB	0	2.91	2.91		2.91	2.91	-Inf	2.91	2.91	2.91		2.91
I_{oc}	dBm/3.84 MHz	-70											
CPICH_Ec/Io	dB	-13	-14	-14		-14	-14	-Inf	-14	-14	-14		-14
Propagation Condition		AWGN											
Relative delay of paths received from cell 2 with respect to cell 1	chips	{-148 … 148} Note 3											

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

Note 3: The DPCH level is controlled by the power control loop. The initial power shall be set equal to the DPCH_Ec/Ior of Cell 1 at the end of T2.

Note 3: The relative delay of the path from cell 2 with respect to cell 1 shall always be within ±148 chip.

A.5.1.1.1   Test procedure

1) The test is started at the begining of T1.

2) During time period T2 an Event 1A triggered measurement report shall be sent by the UE containing the CFN-SFN observed time difference between cell 1 and cell 2.

3) At the beginning of T3 the downlink DPCH of cell 2 shall be activated.

4) UTRAN shall send a Active Set Update command with activation time now adding cell 2 to the active set. The Active Set Update message shall be sent to the UE so that the whole message is available at the UE at the beginning of T4.

5) At the beginning of T5 the DPCH from cell 1 shall be switched off.

A.5.1.2   Test Requirements

The measured quality on the DTCH of the UE downlink shall during T6 be BLER =0.01±30%. shall not exceed the downlink BLER target, i.e. 1%, during time period T5.

The rate of correct soft handover delays observed during repeated tests shall be at least 90%.

CR-Form-v7

CHANGE REQUEST

⌘	**25.133** CR **570**	⌘**rev** **1** ⌘	Current version: **3.13.0** ⌘

*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 **X** Radio Access Network ☐   Core Network ☐

Title: ⌘	Correction to CPICH Ec/Io in correct reporting of neighbours in AWGN propagation condition test case	
Source: ⌘	RAN WG4	
Work item code:⌘	TEI	***Date:*** ⌘ 27/05/2003
Category: ⌘	**F**	***Release:*** ⌘ R99

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: ⌘	There is no margin taken into account for this testcase for period T2. The CPICH Ec/Io in Cell 1 period T2 is set to –13 dB and the CPICH Ec/Io in Cell 2 was set to –15 dB. The reporting range is 4 dB. This meets the measurement accuracy requirement of 2 dB however no margin is given which could cause UE's to fail if on the border since uncertainly have not been taken into account. Therefore the CPICH Ec/Io in Cell 2 period T2 is changed to –14.5 dB giving a margin of 0.5 dB. Typically other testcases take into account a 0.5 dB margin.
Summary of change:⌘	Changed the CPICH Ec/Io parameter to increase by a factor of 0.5 dB to include the margin in Cell 2 for time period T2. Isolated impact: This CR has an isolated impact, as this is a correction to a testcase.
Consequences if not approved: ⌘	It is possible for UE's on the border to fail this testcase if no margin is specified.

Clauses affected: ⌘	A.8.2

Other specs affected: ⌘	Y	N	
		X	Other core specifications ⌘
	X		Test specifications 34.121
		X	O&M Specifications

Other comments: ⌘	

CR page 1

How to create CRs using this form:

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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.8.2.1   Correct reporting of neighbours in AWGN propagation condition

A.8.2.1.1   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 and section 8.1.2.3.

The test consists of two successive time periods, with a time duration T1 and T2. The test parameters are given in tables A.8.9 and A.8.10 below. In the measurement control information it is indicated to the UE that event-triggered reporting with Event 1A and 2C shall be used. The CPICH Ec/I0 of the best cell on the unused frequency shall be reported together with Event 2C reporting.

Table A.8.9: General test parameters for Correct reporting of neighbours in AWGN 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		A.22 set 1	As specified in TS 25.101 section A.5.
Active cell		Cell 1	
Threshold non used frequency	dB	-18	Absolute Ec/I0 threshold for event 2C
Reporting range	dB	4	Applicable for event 1A
Hysteresis	dB	0	
W		1	Applicable for event 1A
W non-used frequency		1	Applicable for event 2C
Reporting deactivation threshold		0	Applicable for event 1A
Time to Trigger	ms	0	
Filter coefficient		0	
Monitored cell list size		24 on channel 1 16 on channel 2	Measurement control information is sent before the compressed mode pattern starts.
T1	s	10	
T2	s	5	

TableA.8.10: Cell Specific parameters for Correct reporting of neighbours in AWGN propagation condition

Parameter	Unit	Cell 1		Cell 2		Cell 3	
		T1	T2	T1	T2	T1	T2
UTRA RF Channel Number		Channel 1		Channel 1		Channel 2	
CPICH_Ec/Ior	dB	-10		-10		-10	
PCCPCH_Ec/Ior	dB	-12		-12		-12	
SCH_Ec/Ior	dB	-12		-12		-12	
PICH_Ec/Ior	dB	-15		-15		-15	
DPCH_Ec/Ior	dB	-17		N/A		N/A	
OCNS		-1.049		−0.941		−0.941	
$\hat{I}_{or}/I_{oc}$	dB	0	~~4.39~~5.42	- Infinity	~~2.39~~3.92	-1.8	-1.8
I_{oc}	dBm/3.84 MHz	-70		-70		-70	
CPICH_Ec/Io	dB	-13	-13	- Infinity	~~-15~~14.5	-14	-14
Propagation Condition		AWGN					

CR-Form-v7

CHANGE REQUEST

⌘   **25.133** CR **571**   ⌘rev **1** ⌘   Current version: **4.8.0** ⌘

*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 **X** Radio Access Network ☐   Core Network ☐

Title: ⌘	Correction to CPICH Ec/Io in correct reporting of neighbours in AWGN propagation condition test case
Source: ⌘	RAN WG4
Work item code:⌘ TEI	**Date:** ⌘ 27/05/2003

Category: ⌘ **A**   **Release:** ⌘ Rel-4

Use one of the following categories:	*Use one of the following releases:*
F (correction)	*2 (GSM Phase 2)*
A (corresponds to a correction in an earlier release)	*R96 (Release 1996)*
B (addition of feature),	*R97 (Release 1997)*
C (functional modification of feature)	*R98 (Release 1998)*
D (editorial modification)	*R99 (Release 1999)*
Detailed explanations of the above categories can	*Rel-4 (Release 4)*
be found in 3GPP TR 21.900.	*Rel-5 (Release 5)*
	Rel-6 (Release 6)

Reason for change: ⌘	There is no margin taken into account for this testcase for period T2. The CPICH Ec/Io in Cell 1 period T2 is set to –13 dB and the CPICH Ec/Io in Cell 2 was set to –15 dB. The reporting range is 4 dB. This meets the measurement accuracy requirement of 2 dB however no margin is given which could cause UE's to fail if on the border since uncertainly have not been taken into account. Therefore the CPICH Ec/Io in Cell 2 period T2 is changed to –14.5 dB giving a margin of 0.5 dB. Typically other testcases take into account a 0.5 dB margin.
Summary of change:⌘	Changed the CPICH Ec/Io parameter to increase by a factor of 0.5 dB to include the margin in Cell 2 for time period T2. Isolated impact: This CR has an isolated impact, as this is a correction to a testcase.
Consequences if ⌘ **not approved:**	It is possible for UE's on the border to fail this testcase if no margin is specified.

Clauses affected: ⌘	A.8.2

	Y	N		
Other specs ⌘		X	Other core specifications ⌘	
affected:	X		Test specifications	34.121
		X	O&M Specifications	

Other comments: ⌘	

How to create CRs using this form:

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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.8.2.1   Correct reporting of neighbours in AWGN propagation condition

A.8.2.1.1   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 and section 8.1.2.3.

The test consists of two successive time periods, with a time duration T1 and T2. The test parameters are given in tables A.8.9 and A.8.10 below. In the measurement control information it is indicated to the UE that event-triggered reporting with Event 1A and 2C shall be used. The CPICH Ec/I0 of the best cell on the unused frequency shall be reported together with Event 2C reporting.

Table A.8.9: General test parameters for Correct reporting of neighbours in AWGN 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		A.22 set 1	As specified in TS 25.101 section A.5.
Active cell		Cell 1	
Threshold non used frequency	dB	-18	Absolute Ec/I0 threshold for event 2C
Reporting range	dB	4	Applicable for event 1A
Hysteresis	dB	0	
W		1	Applicable for event 1A
W non-used frequency		1	Applicable for event 2C
Reporting deactivation threshold		0	Applicable for event 1A
Time to Trigger	ms	0	
Filter coefficient		0	
Monitored cell list size		24 on channel 1 16 on channel 2	Measurement control information is sent before the compressed mode pattern starts.
T1	s	10	
T2	s	5	

TableA.8.10: Cell Specific parameters for Correct reporting of neighbours in AWGN propagation condition

Parameter	Unit	Cell 1		Cell 2		Cell 3	
		T1	T2	T1	T2	T1	T2
UTRA RF Channel Number		Channel 1		Channel 1		Channel 2	
CPICH_Ec/Ior	dB	-10		-10		-10	
PCCPCH_Ec/Ior	dB	-12		-12		-12	
SCH_Ec/Ior	dB	-12		-12		-12	
PICH_Ec/Ior	dB	-15		-15		-15	
DPCH_Ec/Ior	dB	-17		N/A		N/A	
OCNS		-1.049		−0.941		−0.941	
$\hat{I}_{or}/I_{oc}$	dB	0	~~4.39~~5.42	- Infinity	~~2.39~~3.92	-1.8	-1.8
I_{oc}	dBm/3.84 MHz	-70				-70	
CPICH_Ec/Io	dB	-13	-13	- Infinity	~~-15~~14.5	-14	-14
Propagation Condition		AWGN					

CR-Form-v7

CHANGE REQUEST

| ⌘ | **25.133** CR **572** | ⌘**rev** | **1** | ⌘ | Current version: | **5.6.0** | ⌘ |

*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 **X** Radio Access Network ☐　　Core Network ☐

Title: ⌘	Correction to CPICH Ec/Io in correct reporting of neighbours in AWGN propagation condition test case	
Source: ⌘	RAN WG4	
Work item code:⌘	TEI	**Date:** ⌘ 27/05/2003
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: ⌘	There is no margin taken into account for this testcase for period T2. The CPICH Ec/Io in Cell 1 period T2 is set to –13 dB and the CPICH Ec/Io in Cell 2 was set to –15 dB. The reporting range is 4 dB. This meets the measurement accuracy requirement of 2 dB however no margin is given which could cause UE's to fail if on the border since uncertainly have not been taken into account. Therefore the CPICH Ec/Io in Cell 2 period T2 is changed to –14.5 dB giving a margin of 0.5 dB. Typically other testcases take into account a 0.5 dB margin.
Summary of change:⌘	Changed the CPICH Ec/Io parameter to increase by a factor of 0.5 dB to include the margin in Cell 2 for time period T2. Isolated impact: This CR has an isolated impact, as this is a correction to a testcase.
Consequences if not approved: ⌘	It is possible for UE's on the border to fail this testcase if no margin is specified.

Clauses affected: ⌘	A.8.2

Other specs ⌘ **affected:**		**Y**	**N**		⌘	
			X	Other core specifications	⌘	
		X		Test specifications		34.121
			X	O&M Specifications		

Other comments: ⌘	

How to create CRs using this form:

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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.8.2.1   Correct reporting of neighbours in AWGN propagation condition

A.8.2.1.1   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 and section 8.1.2.3.

The test consists of two successive time periods, with a time duration T1 and T2. The test parameters are given in tables A.8.9 and A.8.10 below. In the measurement control information it is indicated to the UE that event-triggered reporting with Event 1A and 2C shall be used. The CPICH Ec/I0 of the best cell on the unused frequency shall be reported together with Event 2C reporting.

Table A.8.9: General test parameters for Correct reporting of neighbours in AWGN 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		A.22 set 1	As specified in TS 25.101 section A.5.
Active cell		Cell 1	
Threshold non used frequency	dB	-18	Absolute Ec/I0 threshold for event 2C
Reporting range	dB	4	Applicable for event 1A
Hysteresis	dB	0	
W		1	Applicable for event 1A
W non-used frequency		1	Applicable for event 2C
Reporting deactivation threshold		0	Applicable for event 1A
Time to Trigger	ms	0	
Filter coefficient		0	
Monitored cell list size		24 on channel 1 16 on channel 2	Measurement control information is sent before the compressed mode pattern starts.
T1	s	10	
T2	s	5	

TableA.8.10: Cell Specific parameters for Correct reporting of neighbours in AWGN propagation condition

Parameter	Unit	Cell 1		Cell 2		Cell 3	
		T1	T2	T1	T2	T1	T2
UTRA RF Channel Number		Channel 1		Channel 1		Channel 2	
CPICH_Ec/Ior	dB	-10		-10		-10	
PCCPCH_Ec/Ior	dB	-12		-12		-12	
SCH_Ec/Ior	dB	-12		-12		-12	
PICH_Ec/Ior	dB	-15		-15		-15	
DPCH_Ec/Ior	dB	-17		N/A		N/A	
OCNS		-1.049		−0.941		−0.941	
$\hat{I}_{or}/I_{oc}$	dB	0	~~4.39~~5.42	- Infinity	~~2.39~~3.92	-1.8	-1.8
I_{oc}	dBm/3.84 MHz	-70				-70	
CPICH_Ec/Io	dB	-13	-13	- Infinity	~~-15~~14.5	-14	-14
Propagation Condition		AWGN					

CR-Form-v7

CHANGE REQUEST

⌘   **25.133** CR **573**   ⌘**rev** **1** ⌘   Current version: **6.1.0** ⌘

*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 **X** Radio Access Network ☐   Core Network ☐

Title: ⌘	Correction to CPICH Ec/Io in correct reporting of neighbours in AWGN propagation condition test case
Source: ⌘	RAN WG4

Work item code:⌘	TEI	**Date:** ⌘	27/05/2003

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)*
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: ⌘	There is no margin taken into account for this testcase for period T2. The CPICH Ec/Io in Cell 1 period T2 is set to –13 dB and the CPICH Ec/Io in Cell 2 was set to –15 dB. The reporting range is 4 dB. This meets the measurement accuracy requirement of 2 dB however no margin is given which could cause UE's to fail if on the border since uncertainly have not been taken into account. Therefore the CPICH Ec/Io in Cell 2 period T2 is changed to –14.5 dB giving a margin of 0.5 dB. Typically other testcases take into account a 0.5 dB margin.
Summary of change:⌘	Changed the CPICH Ec/Io parameter to increase by a factor of 0.5 dB to include the margin in Cell 2 for time period T2. <u>Isolated impact:</u> This CR has an isolated impact, as this is a correction to a testcase.
Consequences if ⌘ **not approved:**	It is possible for UE's on the border to fail this testcase if no margin is specified.

Clauses affected: ⌘	A.8.2

	Y	**N**	
Other specs ⌘ **affected:**		X	Other core specifications ⌘	
	X		Test specifications	34.121
		X	O&M Specifications	

Other comments: ⌘	

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.8.2.1   Correct reporting of neighbours in AWGN propagation condition

A.8.2.1.1   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 and section 8.1.2.3.

The test consists of two successive time periods, with a time duration T1 and T2. The test parameters are given in tables A.8.9 and A.8.10 below. In the measurement control information it is indicated to the UE that event-triggered reporting with Event 1A and 2C shall be used. The CPICH Ec/I0 of the best cell on the unused frequency shall be reported together with Event 2C reporting.

Table A.8.9: General test parameters for Correct reporting of neighbours in AWGN 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		A.22 set 1	As specified in TS 25.101 section A.5.
Active cell		Cell 1	
Threshold non used frequency	dB	-18	Absolute Ec/I0 threshold for event 2C
Reporting range	dB	4	Applicable for event 1A
Hysteresis	dB	0	
W		1	Applicable for event 1A
W non-used frequency		1	Applicable for event 2C
Reporting deactivation threshold		0	Applicable for event 1A
Time to Trigger	ms	0	
Filter coefficient		0	
Monitored cell list size		24 on channel 1 16 on channel 2	Measurement control information is sent before the compressed mode pattern starts.
T1	s	10	
T2	s	5	

TableA.8.10: Cell Specific parameters for Correct reporting of neighbours in AWGN propagation condition

Parameter	Unit	Cell 1		Cell 2		Cell 3	
		T1	T2	T1	T2	T1	T2
UTRA RF Channel Number		Channel 1		Channel 1		Channel 2	
CPICH_Ec/Ior	dB	-10		-10		-10	
PCCPCH_Ec/Ior	dB	-12		-12		-12	
SCH_Ec/Ior	dB	-12		-12		-12	
PICH_Ec/Ior	dB	-15		-15		-15	
DPCH_Ec/Ior	dB	-17		N/A		N/A	
OCNS		-1.049		−0.941		−0.941	
$\hat{I}_{or}/I_{oc}$	dB	0	4.39 5.42	- Infinity	2.39 3.92	-1.8	-1.8
I_{oc}	dBm/3.84 MHz	-70				-70	
CPICH_Ec/Io	dB	-13	-13	- Infinity	-15 14.5	-14	-14
Propagation Condition		AWGN					

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CHANGE REQUEST

⌘   **25.133** CR **574**   ⌘ **rev**   ⌘ Current version: **3.13.0** ⌘

*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 **X** Radio Access Network ☐   Core Network ☐

Title: ⌘	Correction to SFN-SFN observed time difference type 1
Source: ⌘	RAN WG4
Work item code: ⌘	TEI ***Date:*** ⌘ 27/05/2003

Category: ⌘ **F**	***Release:*** ⌘ R99

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: ⌘	In 25.215 section 5.1.9, SFN-SFN observed time difference type 1 is not applicable for CELL_DCH state.
Summary of change: ⌘	The CELL_DCH state have been removed from SFN-SFN observed time difference type 1 measurement requirements and testcase.
Consequences if not approved: ⌘	The requirements and testcase for SFN-SFN observed time difference type 1 would not be aligned with the UE measurement abilities defined in 25.215. Isolated impact: This CR has an isolated impact, as this is a correction of a misalignment between specifications.

Clauses affected: ⌘	9.1, 9.1.8.1.1, A.9, A.9.1.5.1.1

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

Other comments: ⌘	Equivalent CRs in other Releases: CR575 cat. A to 25.133 v4.8.0, CR576 cat. A to 25.133 v5.6.0, CR597 cat. A to 25.133 v6.1.0

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   Measurements Performance Requirements

One of the key services provided by the physical layer is the measurement of various quantities which are used to trigger or perform a multitude of functions. Both the UE and the UTRAN are required to perform a variety of measurements. The physical layer measurement model and a complete list of measurements is specified in TS 25.302 "Services Provided by Physical Layer". The physical layer measurements for FDD are described and defined in TS25.215 "Physical layer - Measurements (FDD)". In this clause for each measurement the relevant requirements on the measurement period, reporting range, granularity and performance in terms of accuracy are specified.

The accuracy requirements in this clause are applicable for AWGN radio propagation conditions.

9.1   Measurement Performance for UE

The requirements in this clause are applicable for a UE:

-   in state CELL_DCH and/or state CELL_FACH.

-   performing measurements according to section 8.

-   that is synchronised to the cell that is measured.

The reported measurement result after layer 1 filtering shall be an estimate of the average value of the measured quantity over the measurement period. The reference point for the measurement result after layer 1 filtering is referred to as point B in the measurement model described in TS25.302.

The accuracy requirements in this clause are valid for the reported measurement result after layer 1 filtering. The accuracy requirements are verified from the measurement report at point D in the measurement model having the layer 3 filtering disabled.

   NOTE: It needs to be clarified how the accuracy requirements shall be handled when the UE is measuring on cells using IPDL.

9.1.8   SFN-SFN observed time difference

9.1.8.1   SFN-SFN observed time difference type 1

NOTE: This measurement is for identifying time difference between two cells.

9.1.8.1.1   Measurement requirement

~~The measurement period for CELL_DCH state can be found in sub clause 8.1.2.2.~~ The measurement period for CELL_FACH state can be found in sub clause 8.4.2.2.

The accuracy requirement in table 9.19 is valid under the following conditions:

CPICH_RSCP1,2$|_{\text{dBm}}$ ≥ -114 dBm.

$$\left| CPICH\_RSCP1 \big|_{in\ dBm} - CPICH\_RSCP2 \big|_{in\ dBm} \right| \le 20dB$$

$$\left. \frac{I_o}{\left(\hat{I}_{or}\right)} \right|_{in\ dB} - \left. \left(\frac{CPICH\_E_c}{I_{or}} \right) \right|_{in\ dB} \le 20dB$$

$$\left. \frac{I_o}{\left(\hat{I}_{or}\right)} \right|_{in\ dB} - \left. \left(\frac{P-CCPCH\_E_c}{I_{or}} \right) \right|_{in\ dB} \text{ is low enough to ensure successful SFN decoding.}$$

A.9 Measurement Performance Requirements

Unless explicitly stated:

- Reported measurements shall be within defined range in 90 % of the cases.

- Measurement channel is 12.2 kbps as defined in TS 25.101 annex A, sub-clause A.3.1. This measurement channel is used both in active cell and cells to be measured.

- Physical channels used as defined in TS 25.101 annex C.

- Cell 1 is the active cell when in CELL_DCH state.

- Single task reporting.

- Power control is active.

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A.9.1.5   SFN-SFN observed time difference

A.9.1.5.1   SFN-SFN observed time difference type 1

A.9.1.5.1.1   Test Purpose and Environment

The purpose of this test is to verify that the SFN-SFN observed time difference type 1 measurement accuracy is within the specified limits. This test will verify the requirements in section 9.1.8.1.

During the test the timing difference between Cell 1 and 2 can be set to value from 0…9830399 chips.

In this case all cells are in the same frequency. Table A.9.8 defines the limits of signal strengths and code powers, where the requirements are applicable.

Table A.9.8: SFN-SFN observed time difference type 1 Intra frequency test parameters

Parameter	Unit	Cell 1	Cell 2
UTRA RF Channel number		Channel 1	Channel 1
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~~S-CCPCH_Ec/Ior	dB	-~~15~~12	-~~15~~12
OCNS	dB	-~~1.11~~1.29	-~~1.11~~1.29
Îor/Ioc	dB	10.5	10.5
Ioc	dBm/ 3.84 MHz	*Io -13.7 dB = Ioc,* Note 1	*Io -13.7 dB = Ioc,* Note 1
Range 1:Io Range 2: Io	dBm/3.84 MHz	-94…-70 -94…-50	-94…-70 -94…-50
Propagation condition	-	AWGN	
NOTE 1: *Ioc* level shall be adjusted according the total signal power spectral density *Io* at receiver input and the geometry factor *Îor/Ioc*.			

A.9.1.5.1.2   Test Requirements

The SFN-SFN observed time difference type 1 measurement accuracy shall meet the requirements in section 9.1.8.1

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CHANGE REQUEST

⌘   **25.133** CR **575**   ⌘**rev**   ⌘ Current version: **4.8.0** ⌘

*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 **X** Radio Access Network ☐   Core Network ☐

Title: ⌘	Correction to SFN-SFN observed time difference type 1	
Source: ⌘	RAN WG4	
Work item code: ⌘	TEI	***Date:*** ⌘ 27/05/2003

Category: ⌘ **A**   ***Release:*** ⌘ Rel-4

Use one of the following categories:	*Use one of the following releases:*
F (correction)	*2 (GSM Phase 2)*
A (corresponds to a correction in an earlier release)	*R96 (Release 1996)*
B (addition of feature),	*R97 (Release 1997)*
C (functional modification of feature)	*R98 (Release 1998)*
D (editorial modification)	*R99 (Release 1999)*
Detailed explanations of the above categories can	*Rel-4 (Release 4)*
be found in 3GPP TR 21.900.	*Rel-5 (Release 5)*
	Rel-6 (Release 6)

Reason for change: ⌘	In 25.215 section 5.1.9, SFN-SFN observed time difference type 1 is not applicable for CELL_DCH state.
Summary of change: ⌘	The CELL_DCH state have been removed from SFN-SFN observed time difference type 1 measurement requirements and testcase.
Consequences if not approved: ⌘	The requirements and testcase for SFN-SFN observed time difference type 1 would not be aligned with the UE measurement abilities defined in 25.215. Isolated impact: This CR has an isolated impact, as this is a correction of a misalignment between specifications.

Clauses affected: ⌘	9.1, 9.1.8.1.1, A.9, A.9.1.5.1.1

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

Other comments: ⌘	Equivalent CRs in other Releases: CR574 cat. F to 25.133 v3.13.0, CR576 cat. A to 25.133 v5.6.0, CR597 cat. A to 25.133 v6.1.0

How to create CRs using this form:

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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   Measurements Performance Requirements

One of the key services provided by the physical layer is the measurement of various quantities which are used to trigger or perform a multitude of functions. Both the UE and the UTRAN are required to perform a variety of measurements. The physical layer measurement model and a complete list of measurements is specified in TS 25.302 "Services Provided by Physical Layer". The physical layer measurements for FDD are described and defined in TS25.215 "Physical layer - Measurements (FDD)". In this clause for each measurement the relevant requirements on the measurement period, reporting range, granularity and performance in terms of accuracy are specified.

The accuracy requirements in this clause are applicable for AWGN radio propagation conditions.

9.1   Measurement Performance for UE

The requirements in this clause are applicable for a UE:

-    in state CELL_DCH and/or state CELL_FACH.

-    performing measurements according to section 8.

-    that is synchronised to the cell that is measured.

The reported measurement result after layer 1 filtering shall be an estimate of the average value of the measured quantity over the measurement period. The reference point for the measurement result after layer 1 filtering is referred to as point B in the measurement model described in TS25.302.

The accuracy requirements in this clause are valid for the reported measurement result after layer 1 filtering. The accuracy requirements are verified from the measurement report at point D in the measurement model having the layer 3 filtering disabled.

   NOTE: It needs to be clarified how the accuracy requirements shall be handled when the UE is measuring on
             cells using IPDL.

9.1.8 SFN-SFN observed time difference

9.1.8.1 SFN-SFN observed time difference type 1

NOTE: This measurement is for identifying time difference between two cells.

9.1.8.1.1 Measurement requirement

~~The measurement period for CELL_DCH state can be found in sub clause 8.1.2.2.~~ The measurement period for CELL_FACH state can be found in sub clause 8.4.2.2.

The accuracy requirement in table 9.19 is valid under the following conditions:

CPICH_RSCP1,2|$_{dBm}$ ≥ -114 dBm.

$$\left| CPICH\_RSCP1 \right|_{in\ dBm} - CPICH\_RSCP2 \Big|_{in\ dBm} \le 20dB$$

$$\left. \frac{I_o}{\left(\hat{I}_{or} \right)} \right|_{in\ dB} - \left. \left(\frac{CPICH\_E_c}{I_{or}} \right) \right|_{in\ dB} \le 20dB$$

$$\left. \frac{I_o}{\left(\hat{I}_{or} \right)} \right|_{in\ dB} - \left. \left(\frac{P-CCPCH\_E_c}{I_{or}} \right) \right|_{in\ dB} \text{ is low enough to ensure successful SFN decoding.}$$

A.9   Measurement Performance Requirements

Unless explicitly stated:

-   Reported measurements shall be within defined range in 90 % of the cases.

-   Measurement channel is 12.2 kbps as defined in TS 25.101 annex A, sub-clause A.3.1. This measurement channel is used both in active cell and cells to be measured.

-   Physical channels used as defined in TS 25.101 annex C.

-   Cell 1 is the active cell when in CELL_DCH state.

-   Single task reporting.

-   Power control is active.

A.9.1.5   SFN-SFN observed time difference

A.9.1.5.1   SFN-SFN observed time difference type 1

A.9.1.5.1.1   Test Purpose and Environment

The purpose of this test is to verify that the SFN-SFN observed time difference type 1 measurement accuracy is within the specified limits. This test will verify the requirements in section 9.1.8.1.

During the test the timing difference between Cell 1 and 2 can be set to value from 0…9830399 chips.

In this case all cells are in the same frequency. Table A.9.8 defines the limits of signal strengths and code powers, where the requirements are applicable.

Table A.9.8: SFN-SFN observed time difference type 1 Intra frequency test parameters

Parameter	Unit	Cell 1	Cell 2
UTRA RF Channel number		Channel 1	Channel 1
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~~S-CCPCH_Ec/Ior	dB	-~~15~~12	-~~15~~12
OCNS	dB	-~~1.11~~1.29	-~~1.11~~1.29
Îor/Ioc	dB	10.5	10.5
Ioc	dBm/ 3.84 MHz	*Io -13.7 dB = Ioc,* Note 1	*Io -13.7 dB = Ioc,* Note 1
Range 1:Io Range 2: Io	dBm/3.84 MHz	-94…-70 -94…-50	-94…-70 -94…-50
Propagation condition	-	AWGN	
NOTE 1: *Ioc* level shall be adjusted according the total signal power spectral density *Io* at receiver input and the geometry factor Îor/Ioc.			

A.9.1.5.1.2   Test Requirements

The SFN-SFN observed time difference type 1 measurement accuracy shall meet the requirements in section 9.1.8.1

CR-Form-v7

CHANGE REQUEST

| | ⌘ | **25.133** CR **576** | ⌘**rev** | | ⌘ | Current version: | **5.6.0** | ⌘ |

*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 **X** Radio Access Network ☐   Core Network ☐

Title:	⌘	Correction to SFN-SFN observed time difference type 1
Source:	⌘	RAN WG4
Work item code:⌘	TEI	*Date:* ⌘ 27/05/2003

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:	⌘	In 25.215 section 5.1.9, SFN-SFN observed time difference type 1 is not applicable for CELL_DCH state.
Summary of change:	⌘	The CELL_DCH state have been removed from SFN-SFN observed time difference type 1 measurement requirements and testcase.
Consequences if not approved:	⌘	The requirements and testcase for SFN-SFN observed time difference type 1 would not be aligned with the UE measurement abilities defined in 25.215. Isolated impact: This CR has an isolated impact, as this is a correction of a misalignment between specifications.

Clauses affected:	⌘	9.1, 9.1.8.1.1, A.9, A.9.1.5.1.1

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

Other comments:	⌘	
		Equivalent CRs in other Releases: CR574 cat. F to 25.133 v3.13.0, CR575 cat. A to 25.133 v4.8.0, CR597 cat. A to 25.133 v6.1.0

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 Measurements Performance Requirements

One of the key services provided by the physical layer is the measurement of various quantities which are used to trigger or perform a multitude of functions. Both the UE and the UTRAN are required to perform a variety of measurements. The physical layer measurement model and a complete list of measurements is specified in TS 25.302 "Services Provided by Physical Layer". The physical layer measurements for FDD are described and defined in TS25.215 "Physical layer - Measurements (FDD)". In this clause for each measurement the relevant requirements on the measurement period, reporting range, granularity and performance in terms of accuracy are specified.

The accuracy requirements in this clause are applicable for AWGN radio propagation conditions.

9.1 Measurement Performance for UE

The requirements in this clause are applicable for a UE:

- in state CELL_DCH and/or state CELL_FACH.

- performing measurements according to section 8.

- that is synchronised to the cell that is measured.

The reported measurement result after layer 1 filtering shall be an estimate of the average value of the measured quantity over the measurement period. The reference point for the measurement result after layer 1 filtering is referred to as point B in the measurement model described in TS25.302.

The accuracy requirements in this clause are valid for the reported measurement result after layer 1 filtering. The accuracy requirements are verified from the measurement report at point D in the measurement model having the layer 3 filtering disabled.

> NOTE: It needs to be clarified how the accuracy requirements shall be handled when the UE is measuring on cells using IPDL.

9.1.8   SFN-SFN observed time difference

9.1.8.1   SFN-SFN observed time difference type 1

NOTE: This measurement is for identifying time difference between two cells.

9.1.8.1.1   Measurement requirement

~~The measurement period for CELL_DCH state can be found in sub clause 8.1.2.2.~~ The measurement period for CELL_FACH state can be found in sub clause 8.4.2.2.

The accuracy requirement in table 9.19 is valid under the following conditions:

CPICH_RSCP1,2$|_{dBm}$ ≥ -114 dBm.

$$\left| CPICH\_RSCP1 \right|_{in\ dBm} - CPICH\_RSCP2 \Big|_{in\ dBm} \right| \le 20 dB$$

$$\frac{I_o}{\left(\hat{I}_{or} \right)}\Bigg|_{in\ dB} - \left(\frac{CPICH\_E_c}{I_{or}} \right)\Bigg|_{in\ dB} \le 20 dB$$

$$\frac{I_o}{\left(\hat{I}_{or} \right)}\Bigg|_{in\ dB} - \left(\frac{P - CCPCH\_E_c}{I_{or}} \right)\Bigg|_{in\ dB} \text{ is low enough to ensure successful SFN decoding.}$$

A.9 Measurement Performance Requirements

Unless explicitly stated:

- Reported measurements shall be within defined range in 90 % of the cases.

- Measurement channel is 12.2 kbps as defined in TS 25.101 annex A, sub-clause A.3.1. This measurement channel is used both in active cell and cells to be measured.

- Physical channels used as defined in TS 25.101 annex C.

- Cell 1 is the active cell when in CELL_DCH state.

- Single task reporting.

- Power control is active.

A.9.1.5   SFN-SFN observed time difference

A.9.1.5.1   SFN-SFN observed time difference type 1

A.9.1.5.1.1   Test Purpose and Environment

The purpose of this test is to verify that the SFN-SFN observed time difference type 1 measurement accuracy is within the specified limits. This test will verify the requirements in section 9.1.8.1.

During the test the timing difference between Cell 1 and 2 can be set to value from 0…9830399 chips.

In this case all cells are in the same frequency. Table A.9.8 defines the limits of signal strengths and code powers, where the requirements are applicable.

Table A.9.8: SFN-SFN observed time difference type 1 Intra frequency test parameters

Parameter	Unit	Cell 1	Cell 2
UTRA RF Channel number		Channel 1	Channel 1
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~~S-CCPCH_Ec/Ior	dB	-~~15~~12	-~~15~~12
OCNS	dB	-~~1.11~~1.29	-~~1.11~~1.29
Îor/Ioc	dB	10.5	10.5
Ioc	dBm/ 3.84 MHz	*Io -13.7 dB = Ioc,* Note 1	*Io -13.7 dB = Ioc,* Note 1
Range 1:Io Range 2: Io	dBm/3.84 MHz	-94…-70 -94…-50	-94…-70 -94…-50
Propagation condition	-	AWGN	
NOTE 1: *Ioc* level shall be adjusted according the total signal power spectral density *Io* at receiver input and the geometry factor *Îor/Ioc*.			

A.9.1.5.1.2   Test Requirements

The SFN-SFN observed time difference type 1 measurement accuracy shall meet the requirements in section 9.1.8.1

CR-Form-v7

CHANGE REQUEST

<table>
<tr><td>⌘</td><td colspan="2">25.133 CR</td><td>577 ⌘rev</td><td></td><td>⌘</td><td>Current version:</td><td>3.13.0</td><td>⌘</td></tr>
</table>

*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 **X** Radio Access Network ☐   Core Network ☐

<table>
<tr><td><i>Title:</i></td><td>⌘</td><td colspan="3">Correction to CPCH RSCP Test case A.9.1.1</td></tr>
<tr><td><i>Source:</i></td><td>⌘</td><td colspan="3">RAN WG4</td></tr>
<tr><td><i>Work item code:</i></td><td>⌘</td><td>TEI</td><td><i>Date:</i> ⌘</td><td>27/05/2003</td></tr>
<tr><td><i>Category:</i></td><td>⌘</td><td>F</td><td><i>Release:</i> ⌘</td><td>R99</td></tr>
</table>

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

<table>
<tr><td><i>Reason for change:</i> ⌘</td><td>The Ioc and CPICH RSCP values are corrected in order to make sure that T1 can correctly implement the CPICH RSCP test case "Test3".</td></tr>
<tr><td><i>Summary of change:</i> ⌘</td><td>The Ioc and CPICH RSCP values are corrected in the CPICH RSCP Test 3.

<u>Isolated Impact Analysis:</u>

The CR does not affect UE and UTRAN implementations, since it only corrects a test case not the actual core requirement.</td></tr>
<tr><td><i>Consequences if
not approved:</i> ⌘</td><td>T1 may not be able to implement the test case correctly when also test tolerances caused by test equipment uncertainties are applied. Furthernore, this may cause a terminal fulfilling the core requirement to fail the test case.</td></tr>
</table>

<table>
<tr><td><i>Clauses affected:</i></td><td>⌘</td><td colspan="3">A.9.1.1.1.1</td></tr>
<tr><td rowspan="3"><i>Other specs
affected:</i></td><td rowspan="3">⌘</td><td>Y</td><td>N</td><td></td><td></td></tr>
<tr><td></td><td>X</td><td>Other core specifications ⌘</td><td></td></tr>
<tr><td>X</td><td></td><td>Test specifications</td><td>TS34.121</td></tr>
</table>

O&M Specifications: **X**

<table>
<tr><td><i>Other comments:</i></td><td>⌘</td></tr>
<tr><td colspan="2">Equivalent CRs in other Releases: CR578 cat. A to 25.133 v4.8.0, CR579 cat. A to 25.133 v5.6.0, CR580 cat. A to 25.133 v6.1.0</td></tr>
</table>

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.

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3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

A.9.1.1   CPICH RSCP

A.9.1.1.1   Test Purpose and Environment

The purpose of this test is to verify that the CPICH RSCP measurement accuracy is within the specified limits. This test will verify the requirements in section 9.1.1.

A.9.1.1.1.1   Intra frequency test parameters

In this case all cells are on the same frequency. Both CPICH RSCP intra frequency absolute and relative accuracy requirements are tested by using test parameters in Table A.9.1.

Table A.9.1: CPICH RSCP Intra frequency test parameters

Parameter	Unit	Test 1		Test 2		Test 3	
		Cell 1	Cell 2	Cell 1	Cell 2	Cell 1	Cell 2
UTRA RF Channel number		Channel 1		Channel 1		Channel 1	
CPICH_Ec/Ior	dB	-10		-10		-10	
PCCPCH_Ec/Ior	dB	-12		-12		-12	
SCH_Ec/Ior	dB	-12		-12		-12	
PICH_Ec/Ior	dB	-15		-15		-15	
DPCH_Ec/Ior	dB	-15	-	-15	-	-15	-
OCNS_Ec/Ior	dB	-1.11	-0.94	-1.11	-0.94	-1.11	-0.94
Ioc	dBm/ 3.84 MHz	-75.54		-59.98		-97.4752	
Ior/Ioc	dB	4	0	9	0	0	-6.53
CPICH RSCP, Note 1	dBm	-81.5	-85.5	-60.98	-69.88	-107.475	-114.0
Io, Note 1	dBm/3.84 MHz	-69		-50		-94	
Propagation condition	-	AWGN		AWGN		AWGN	
NOTE 1: CPICH RSCP and Io levels have been calculated from other parameters for information purposes. They are not settable parameters themselves.							
Tests shall be done sequentially. Test 1 shall be done first. After test 1 has been executed test parameters for tests 2 and 3 shall be set within 5 seconds so that UE does not loose the Cell 2 in between the tests.							

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CHANGE REQUEST

| ⌘ | **25.133 CR** | **578** | ⌘**rev** | | ⌘ | Current version: | **4.8.0** | ⌘ |

*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 **X** Radio Access Network ☐ Core Network ☐

Title: ⌘	Correction to CPCH RSCP Test case A.9.1.1	
Source: ⌘	RAN WG4	
Work item code:⌘	TEI	*Date:* ⌘ 27/05/2003
Category: ⌘	**A**	*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)
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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 Ioc and CPICH RSCP values are corrected in order to make sure that T1 can correctly implement the CPICH RSCP test case "Test3".
Summary of change: ⌘	The Ioc and CPICH RSCP values are corrected in the CPICH RSCP Test 3. Isolated Impact Analysis: The CR does not affect UE and UTRAN implementations, since it only corrects a test case not the actual core requirement.
Consequences if not approved: ⌘	T1 may not be able to implement the test case correctly when also test tolerances caused by test equipment uncertainties are applied. Furthernore, this may cause a terminal fulfilling the core requirement to fail the test case.

Clauses affected: ⌘	A.9.1.1.1.1

	Y	N		
Other specs affected: ⌘		X	Other core specifications ⌘	
	X		Test specifications	TS34.121
		X	O&M Specifications	

Other comments: ⌘	Equivalent CRs in other Releases: CR577 cat. F to 25.133 v3.13.0, CR579 cat. A to 25.133 v5.6.0, CR580 cat. A to 25.133 v6.1.0

How to create CRs using this form:

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3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

A.9.1.1 CPICH RSCP

A.9.1.1.1 Test Purpose and Environment

The purpose of this test is to verify that the CPICH RSCP measurement accuracy is within the specified limits. This test will verify the requirements in section 9.1.1.

A.9.1.1.1.1 Intra frequency test parameters

In this case all cells are on the same frequency. Both CPICH RSCP intra frequency absolute and relative accuracy requirements are tested by using test parameters in Table A.9.1.

Table A.9.1: CPICH RSCP Intra frequency test parameters

Parameter	Unit	Test 1		Test 2		Test 3	
		Cell 1	Cell 2	Cell 1	Cell 2	Cell 1	Cell 2
UTRA RF Channel number		Channel 1		Channel 1		Channel 1	
CPICH_Ec/Ior	dB	-10		-10		-10	
PCCPCH_Ec/Ior	dB	-12		-12		-12	
SCH_Ec/Ior	dB	-12		-12		-12	
PICH_Ec/Ior	dB	-15		-15		-15	
DPCH_Ec/Ior	dB	-15	-	-15	-	-15	-
OCNS_Ec/Ior	dB	-1.11	-0.94	-1.11	-0.94	-1.11	-0.94
Ioc	dBm/ 3.84 MHz	-75.54		-59.98		-97.~~52~~47	
Îor/Ioc	dB	4	0	9	0	0	-6.53
CPICH RSCP, Note 1	dBm	-81.5	-85.5	-60.98	-69.88	-107.~~5~~47	-114.0
Io, Note 1	dBm/3.84 MHz	-69		-50		-94	
Propagation condition	-	AWGN		AWGN		AWGN	
NOTE 1: CPICH RSCP and Io levels have been calculated from other parameters for information purposes. They are not settable parameters themselves.							
Tests shall be done sequentially. Test 1 shall be done first. After test 1 has been executed test parameters for tests 2 and 3 shall be set within 5 seconds so that UE does not loose the Cell 2 in between the tests.							

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CHANGE REQUEST

⌘   **25.133** CR   **579** ⌘ **rev**   ⌘ Current version: **5.6.0** ⌘

*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 **X** Radio Access Network ☐   Core Network ☐

Title: ⌘	Correction to CPCH RSCP Test case A.9.1.1
Source: ⌘	RAN WG4
Work item code: ⌘ TEI	**Date:** ⌘ 27/05/2003

Category: ⌘ **A**

Use <u>one</u> 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.

Release: ⌘ Rel-5

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

Reason for change: ⌘	The Ioc and CPICH RSCP values are corrected in order to make sure that T1 can correctly implement the CPICH RSCP test case "Test3".
Summary of change: ⌘	The Ioc and CPICH RSCP values are corrected in the CPICH RSCP Test 3.
Consequences if not approved: ⌘	T1 may not be able to implement the test case correctly when also test tolerances caused by test equipment uncertainties are applied. Furthernore, this may cause a terminal fulfilling the core requirement to fail the test case.

Clauses affected: ⌘	A.9.1.1.1.1

Other specs affected: ⌘	Y	N		⌘	
		X	Other core specifications		
	X		Test specifications		TS34.121
		X	O&M Specifications		

Other comments: ⌘	Equivalent CRs in other Releases: CR577 cat. F to 25.133 v3.13.0, CR578 cat. A to 25.133 v4.8.0, CR580 cat. A to 25.133 v6.1.0

How to create CRs using this form:

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1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

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3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

A.9.1.1   CPICH RSCP

A.9.1.1.1   Test Purpose and Environment

The purpose of this test is to verify that the CPICH RSCP measurement accuracy is within the specified limits. This test will verify the requirements in section 9.1.1.

A.9.1.1.1.1   Intra frequency test parameters

In this case all cells are on the same frequency. Both CPICH RSCP intra frequency absolute and relative accuracy requirements are tested by using test parameters in Table A.9.1.

Table A.9.1: CPICH RSCP Intra frequency test parameters

Parameter	Unit	Test 1		Test 2		Test 3	
		Cell 1	Cell 2	Cell 1	Cell 2	Cell 1	Cell 2
UTRA RF Channel number		Channel 1		Channel 1		Channel 1	
CPICH_Ec/Ior	dB	-10		-10		-10	
PCCPCH_Ec/Ior	dB	-12		-12		-12	
SCH_Ec/Ior	dB	-12		-12		-12	
PICH_Ec/Ior	dB	-15		-15		-15	
DPCH_Ec/Ior	dB	-15	-	-15	-	-15	-
OCNS_Ec/Ior	dB	-1.11	-0.94	-1.11	-0.94	-1.11	-0.94
Ioc	dBm/ 3.84 MHz	-75.54		-59.98		-97.~~47~~52	
Îor/Ioc	dB	4	0	9	0	0	-6.53
CPICH RSCP, Note 1	dBm	-81.5	-85.5	-60.98	-69.88	-107.~~47~~5	-114.0
Io, Note 1	dBm/3.84 MHz	-69		-50		-94	
Propagation condition	-	AWGN		AWGN		AWGN	
NOTE 1: CPICH RSCP and Io levels have been calculated from other parameters for information purposes. They are not settable parameters themselves.							
Tests shall be done sequentially. Test 1 shall be done first. After test 1 has been executed test parameters for tests 2 and 3 shall be set within 5 seconds so that UE does not loose the Cell 2 in between the tests.							

CR-Form-v7

CHANGE REQUEST

| ⌘ | **25.133** CR | **580** ⌘ **rev** | | ⌘ | Current version: | **6.1.0** | ⌘ |

*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 **X** Radio Access Network ☐   Core Network ☐

Title: ⌘	Correction to CPCH RSCP Test case A.9.1.1	
Source: ⌘	RAN WG4	
Work item code: ⌘	TEI	***Date:*** ⌘ 27/05/2003
Category: ⌘ **A**		***Release:*** ⌘ Rel-6

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

Reason for change: ⌘	The Ioc and CPICH RSCP values are corrected in order to make sure that T1 can correctly implement the CPICH RSCP test case "Test3".
Summary of change: ⌘	The Ioc and CPICH RSCP values are corrected in the CPICH RSCP Test 3
Consequences if not approved: ⌘	T1 may not be able to implement the test case correctly when also test tolerances caused by test equipment uncertainties are applied. Furthernore, this may cause a terminal fulfilling the core requirement to fail the test case.

Clauses affected: ⌘	A.9.1.1.1.1

	Y	N			
Other specs affected: ⌘		X	Other core specifications	⌘	
	X		Test specifications		TS34.121
		X	O&M Specifications		

Other comments: ⌘	Equivalent CRs in other Releases: CR577 cat. F to 25.133 v3.13.0, CR578 cat. A to 25.133 v4.8.0, CR579 cat. A to 25.133 v5.6.0

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A.9.1.1 CPICH RSCP

A.9.1.1.1 Test Purpose and Environment

The purpose of this test is to verify that the CPICH RSCP measurement accuracy is within the specified limits. This test will verify the requirements in section 9.1.1.

A.9.1.1.1.1 Intra frequency test parameters

In this case all cells are on the same frequency. Both CPICH RSCP intra frequency absolute and relative accuracy requirements are tested by using test parameters in Table A.9.1.

Table A.9.1: CPICH RSCP Intra frequency test parameters

Parameter	Unit	Test 1		Test 2		Test 3	
		Cell 1	Cell 2	Cell 1	Cell 2	Cell 1	Cell 2
UTRA RF Channel number		Channel 1		Channel 1		Channel 1	
CPICH_Ec/Ior	dB	-10		-10		-10	
PCCPCH_Ec/Ior	dB	-12		-12		-12	
SCH_Ec/Ior	dB	-12		-12		-12	
PICH_Ec/Ior	dB	-15		-15		-15	
DPCH_Ec/Ior	dB	-15	-	-15	-	-15	-
OCNS_Ec/Ior	dB	-1.11	-0.94	-1.11	-0.94	-1.11	-0.94
Ioc	dBm/ 3.84 MHz	-75.54		-59.98		-97.~~52~~47	
Ior/Ioc	dB	4	0	9	0	0	-6.53
CPICH RSCP, Note 1	dBm	-81.5	-85.5	-60.98	-69.88	-107.~~5~~47	-114.0
Io, Note 1	dBm/3.84 MHz	-69		-50		-94	
Propagation condition	-	AWGN		AWGN		AWGN	
NOTE 1: CPICH RSCP and Io levels have been calculated from other parameters for information purposes. They are not settable parameters themselves.							
Tests shall be done sequentially. Test 1 shall be done first. After test 1 has been executed test parameters for tests 2 and 3 shall be set within 5 seconds so that UE does not loose the Cell 2 in between the tests.							

CR-Form-v7

CHANGE REQUEST

⌘　　**25.133** CR **597**　　⌘**rev**　　⌘ Current version: **6.1.0** ⌘

*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** **X** Radio Access Network ☐　　Core Network ☐

Title: ⌘	Correction to SFN-SFN observed time difference type 1
Source: ⌘	RAN WG4
Work item code:⌘	TEI　　　　　　　　　**Date:** ⌘ 27/05/2003
Category: ⌘ **A**	**Release:** ⌘ Rel-6

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

Reason for change: ⌘	In 25.215 section 5.1.9, SFN-SFN observed time difference type 1 is not applicable for CELL_DCH state.
Summary of change: ⌘	The CELL_DCH state have been removed from SFN-SFN observed time difference type 1 measurement requirements and testcase.
Consequences if not approved: ⌘	The requirements and testcase for SFN-SFN observed time difference type 1 would not be aligned with the UE measurement abilities defined in 25.215. <u>Isolated impact:</u> This CR has an isolated impact, as this is a correction of a misalignment between specifications.

Clauses affected: ⌘	9.1, 9.1.8.1.1, A.9, A.9.1.5.1.1

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

Other comments: ⌘	Equivalent CRs in other Releases: CR574 cat. F to 25.133 v3.13.0, CR575 cat. A to 25.133 v4.8.0, CR576 cat. A to 25.133 v5.6.0

How to create CRs using this form:
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9   Measurements Performance Requirements

One of the key services provided by the physical layer is the measurement of various quantities which are used to trigger or perform a multitude of functions. Both the UE and the UTRAN are required to perform a variety of measurements. The physical layer measurement model and a complete list of measurements is specified in TS 25.302 "Services Provided by Physical Layer". The physical layer measurements for FDD are described and defined in TS25.215 "Physical layer - Measurements (FDD)". In this clause for each measurement the relevant requirements on the measurement period, reporting range, granularity and performance in terms of accuracy are specified.

The accuracy requirements in this clause are applicable for AWGN radio propagation conditions.

9.1   Measurement Performance for UE

The requirements in this clause are applicable for a UE:

-    in state CELL_DCH and/or state CELL_FACH.

-    performing measurements according to section 8.

-    that is synchronised to the cell that is measured.

The reported measurement result after layer 1 filtering shall be an estimate of the average value of the measured quantity over the measurement period. The reference point for the measurement result after layer 1 filtering is referred to as point B in the measurement model described in TS25.302.

The accuracy requirements in this clause are valid for the reported measurement result after layer 1 filtering. The accuracy requirements are verified from the measurement report at point D in the measurement model having the layer 3 filtering disabled.

NOTE: It needs to be clarified how the accuracy requirements shall be handled when the UE is measuring on cells using IPDL.

9.1.8   SFN-SFN observed time difference

9.1.8.1   SFN-SFN observed time difference type 1

NOTE: This measurement is for identifying time difference between two cells.

9.1.8.1.1   Measurement requirement

~~The measurement period for CELL_DCH state can be found in sub clause 8.1.2.2.~~ The measurement period for CELL_FACH state can be found in sub clause 8.4.2.2.

The accuracy requirement in table 9.19 is valid under the following conditions:

$CPICH\_RSCP1,2|_{dBm} \geq -114$ dBm.

$$\left| CPICH\_RSCP1 \big|_{in\ dBm} - CPICH\_RSCP2 \big|_{in\ dBm} \right| \leq 20 dB$$

$$\left. \frac{I_o}{\left(\hat{I}_{or}\right)} \right|_{in\ dB} - \left. \left(\frac{CPICH\_E_c}{I_{or}} \right) \right|_{in\ dB} \leq 20 dB$$

$$\left. \frac{I_o}{\left(\hat{I}_{or}\right)} \right|_{in\ dB} - \left. \left(\frac{P-CCPCH\_E_c}{I_{or}} \right) \right|_{in\ dB} \text{ is low enough to ensure successful SFN decoding.}$$

A.9   Measurement Performance Requirements

Unless explicitly stated:

- Reported measurements shall be within defined range in 90 % of the cases.

- Measurement channel is 12.2 kbps as defined in TS 25.101 annex A, sub-clause A.3.1. This measurement channel is used both in active cell and cells to be measured.

- Physical channels used as defined in TS 25.101 annex C.

- Cell 1 is the active cell when in CELL_DCH state.

- Single task reporting.

- Power control is active.

A.9.1.5   SFN-SFN observed time difference

A.9.1.5.1   SFN-SFN observed time difference type 1

A.9.1.5.1.1   Test Purpose and Environment

The purpose of this test is to verify that the SFN-SFN observed time difference type 1 measurement accuracy is within the specified limits. This test will verify the requirements in section 9.1.8.1.

During the test the timing difference between Cell 1 and 2 can be set to value from 0…9830399 chips.

In this case all cells are in the same frequency. Table A.9.8 defines the limits of signal strengths and code powers, where the requirements are applicable.

Table A.9.8: SFN-SFN observed time difference type 1 Intra frequency test parameters

Parameter	Unit	Cell 1	Cell 2
UTRA RF Channel number		Channel 1	Channel 1
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~~S-CCPCH_Ec/Ior	dB	-~~15~~12	-~~15~~12
OCNS	dB	-~~1.11~~1.29	-~~1.11~~1.29
Îor/Ioc	dB	10.5	10.5
Ioc	dBm/ 3.84 MHz	*Io -13.7 dB = Ioc,* Note 1	*Io -13.7 dB = Ioc,* Note 1
Range 1:Io Range 2: Io	dBm/3.84 MHz	-94…-70 -94…-50	-94…-70 -94…-50
Propagation condition	-	AWGN	
NOTE 1: *Ioc* level shall be adjusted according the total signal power spectral density *Io* at receiver input and the geometry factor *Îor/Ioc*.			

A.9.1.5.1.2   Test Requirements

The SFN-SFN observed time difference type 1 measurement accuracy shall meet the requirements in section 9.1.8.1