Title   **CRs (R'99 and Rel-4/Rel-5/Rel-6 Category A) to TS 25.101**
Source   **TSG RAN WG4**
Agenda Item   **7.4.3**

RAN4 Tdoc	Spec	CR	R	Cat	Rel	Curr Ver	Title	Work Item
R4-020623	25.101	235	1	F	R99	3.13.0	Problems with "Out of sync" in Initial convergence test	TEI
R4-020624	25.101	236	1	A	Rel-4	4.7.0	Problems with "Out of sync" in Initial convergence test	TEI
R4-020625	25.101	237	1	A	Rel-5	5.6.0	Problems with "Out of sync" in Initial convergence test	TEI
R4-020626	25.101	238	1	A	Rel-6	6.0.0	Problems with "Out of sync" in Initial convergence test	TEI
R4-020580	25.101	240	1	F	R99	3.13.0	Correction of SSDT performance requirements	TEI
R4-020581	25.101	241	1	A	Rel-4	4.7.0	Correction of SSDT performance requirements	TEI
R4-020582	25.101	242	1	A	Rel-5	5.6.0	Correction of SSDT performance requirements	TEI
R4-020583	25.101	243	1	A	Rel-6	6.0.0	Correction of SSDT performance requirements	TEI

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CHANGE REQUEST

| ⌘ | **25.101** CR **235** | ⌘ **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: ⌘	Problems with "Out of sync" in Initial Convergence test	
Source: ⌘	RAN WG4	
Work item code: ⌘	TEI	***Date:*** ⌘ 27/05/2003
Category: ⌘ **F**		***Release:*** ⌘ R99

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: ⌘	It has been detected that in the "Power control initial convergence" testcase in paragraph 8.8.2 in 25.101 when starting at the lowest level the downlink DPCH will never be established and therefore the uplink will never be transmitted according paragraph 6.4.4, "Out-of-synchronization handling of output power" **Isolated Impact:** This CR will not have an impact on the UE or the network behaviour, it only change the testcase in order to make it relevant and reflecting the core spec.
Summary of change: ⌘	The Initial values of the DPCH_Ec/Ior is changed to –18 dB, since this is the lowest level where the insync is specified.
Consequences if not approved: ⌘	The tests with the initial power lower than –18 dB will not be possible to run since it is not guaranteed that the downlink DPCH is considered as established.

Clauses affected: ⌘	8.8.2

	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: CR236r1 cat. A to 25.101 v4.7.0, CR237r1 cat. A to 25.101 v5.6.0, CR238r1 cat. A to 25.101 v6.0.0

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.

8.8.2   Power control in the downlink, initial convergence

This requirement verifies that DL power control works properly during the first seconds after DPCH connection is established

8.8.2.1   Minimum requirements

For the parameters specified in Table 8.31 the downlink DPCH_Ec/Ior power ratio measured values, which are averaged over 50 ms, shall be within the range specified in Table 8.32 more than 90% of the time. T1 equals to 500 ms and it starts 10 ms after the DPDCH connection is initiated. T2 equals to 500 ms and it starts when T1 has expired. Power control is ON during the test.

The first 10 ms shall not be used for averaging, ie the first sample to be input to the averaging filter is at the beginning of T1. The averaging shall be performed with a sliding rectangular window averaging filter. The window size of the averaging filter is linearly increased from 0 up to 50 ms during the first 50 ms of T1, and then kept equal to 50ms.

Table 8.31: Test parameters for downlink power control

Parameter	Unit	Test 1	Test 2	Test 3	Test 4
Target quality value on DTCH	BLER	0.01	0.01	0.1	0.1
Initial DPCH_Ec/Ior	dB	-5.9	~~-25.9~~ -18	-3	~~-22.1~~ -18
Information Data Rate	kbps	12.2	12.2	64	64
$\hat{I}_{or}/I_{oc}$	dB	-1			
I_{oc}	dBm/3.84 MHz	-60			
Propagation condition		Static			
Maximum_DL_Power	dB	7			
Minimum_DL_Power	dB	-18			
DL Power Control step size, Δ_{TPC}	dB	1			
Limited Power Increase	-	"Not used"			

Table 8.32: Requirements in downlink power control

Parameter	Unit	Test 1 and Test 2	Test 3 and Test 4
$\dfrac{DPCH\_E_c}{I_{or}}$ during T1	dB	-18.9 ≤ DPCH_Ec/Ior ≤ -11.9	-15.1 ≤ DPCH_Ec/Ior ≤ -8.1
$\dfrac{DPCH\_E_c}{I_{or}}$ during T2	dB	-18.9 ≤ DPCH_Ec/Ior ≤ -14.9	-15.1 ≤ DPCH_Ec/Ior ≤ -11.1

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CHANGE REQUEST

| ⌘ | **25.101** CR **236** | ⌘**rev** **1** ⌘ | Current version: | **4.7.0** ⌘ |

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

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

Title: ⌘	Problems with "Out of sync" in Initial Convergence test		
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: ⌘	It has been detected that in the "Power control initial convergence" testcase in paragraph 8.8.2 in 25.101 when starting at the lowest level the downlink DPCH will never be established and therefore the uplink will never be transmitted according paragraph 6.4.4, "Out-of-synchronization handling of output power" **Isolated Impact:** This CR will not have an impact on the UE or the network behaviour, it only change the testcase in order to make it relevant and reflecting the core spec.
Summary of change: ⌘	The Initial values of the DPCH_Ec/Ior is changed to –18 dB, since this is the lowest level where the insync is specified.
Consequences if not approved: ⌘	The tests with the initial power lower than –18 dB will not be possible to run since it is not guaranteed that the downlink DPCH is considered as established.

Clauses affected: ⌘	8.8.2

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

Other comments: ⌘	Equivalent CRs in other Releases: CR235r1 cat. F to 25.101 v3.13.0, CR237r1 cat. A to 25.101 v5.6.0, CR238r1 cat. A to 25.101 v6.0.0

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8.8.2　Power control in the downlink, initial convergence

This requirement verifies that DL power control works properly during the first seconds after DPCH connection is established.

8.8.2.1　Minimum requirements

For the parameters specified in Table 8.31 the downlink DPCH_Ec/Ior power ratio measured values, which are averaged over 50 ms, shall be within the range specified in Table 8.32 more than 90% of the time. T1 equals to 500 ms and it starts 10 ms after the DPDCH connection is initiated. T2 equals to 500 ms and it starts when T1 has expired. Power control is ON during the test.

The first 10 ms shall not be used for averaging, ie the first sample to be input to the averaging filter is at the beginning of T1. The averaging shall be performed with a sliding rectangular window averaging filter. The window size of the averaging filter is linearly increased from 0 up to 50 ms during the first 50 ms of T1, and then kept equal to 50ms.

Table 8.31: Test parameters for downlink power control

Parameter	Unit	Test 1	Test 2	Test 3	Test 4
Target quality value on DTCH	BLER	0.01	0.01	0.1	0.1
Initial DPCH_Ec/Ior	dB	-5.9	~~-25.9~~-18	-3	~~-22.1~~-18
Information Data Rate	kbps	12.2	12.2	64	64
$\hat{I}_{or}/I_{oc}$	dB	-1			
I_{oc}	dBm/3.84 MHz	-60			
Propagation condition		Static			
Maximum_DL_Power	dB	7			
Minimum_DL_Power	dB	-18			
DL Power Control step size, Δ_{TPC}	dB	1			
Limited Power Increase	-	"Not used"			

Table 8.32: Requirements in downlink power control

Parameter	Unit	Test 1 and Test 2	Test 3 and Test 4
$\dfrac{DPCH\_E_c}{I_{or}}$ during T1	dB	-18.9 ≤ DPCH_Ec/Ior ≤ -11.9	-15.1 ≤ DPCH_Ec/Ior ≤ -8.1
$\dfrac{DPCH\_E_c}{I_{or}}$ during T2	dB	-18.9 ≤ DPCH_Ec/Ior ≤ -14.9	-15.1 ≤ DPCH_Ec/Ior ≤ -11.1

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CHANGE REQUEST

| ⌘ | **25.101** CR **237** | ⌘ **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: ⌘	Problems with "Out of sync" in Initial Convergence test	
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: ⌘	It has been detected that in the "Power control initial convergence" testcase in paragraph 8.8.2 in 25.101 when starting at the lowest level the downlink DPCH will never be established and therefore the uplink will never be transmitted according paragraph 6.4.4, "Out-of-synchronization handling of output power"

Isolated Impact: This CR will not have an impact on the UE or the network behaviour, it only change the testcase in order to make it relevant and reflecting the core spec. |
| **Summary of change:** ⌘ | The Initial values of the DPCH_Ec/Ior is changed to –18 dB, since this is the lowest level where the insync is specified. |
| **Consequences if not approved:** ⌘ | The tests with the initial power lower than –18 dB will not be possible to run since it is not guaranteed that the downlink DPCH is considered as established. |

Clauses affected: ⌘	8.8.2

	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: CR235r1 cat. F to 25.101 v3.13.0, CR236r1 cat. A to 25.101 v4.7.0, CR238r1 cat. A to 25.101 v6.0.0

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8.8.2   Power control in the downlink, initial convergence

This requirement verifies that DL power control works properly during the first seconds after DPCH connection is established

8.8.2.1   Minimum requirements

For the parameters specified in Table 8.31 the downlink DPCH_Ec/Ior power ratio measured values, which are averaged over 50 ms, shall be within the range specified in Table 8.32 more than 90% of the time. T1 equals to 500 ms and it starts 10 ms after the DPDCH connection is initiated. T2 equals to 500 ms and it starts when T1 has expired. Power control is ON during the test.

The first 10 ms shall not be used for averaging, ie the first sample to be input to the averaging filter is at the beginning of T1. The averaging shall be performed with a sliding rectangular window averaging filter. The window size of the averaging filter is linearly increased from 0 up to 50 ms during the first 50 ms of T1, and then kept equal to 50ms.

Table 8.31: Test parameters for downlink power control

Parameter	Unit	Test 1	Test 2	Test 3	Test 4
Target quality value on DTCH	BLER	0.01	0.01	0.1	0.1
Initial DPCH_Ec/Ior	DB	-5.9	~~-25.9~~-18	-3	~~-22.1~~-18
Information Data Rate	Kbps	12.2	12.2	64	64
$\hat{I}_{or}/I_{oc}$	DB	-1			
I_{oc}	dBm/3.84 MHz	-60			
Propagation condition		Static			
Maximum_DL_Power	DB	7			
Minimum_DL_Power	DB	-18			
DL Power Control step size, Δ_{TPC}	DB	1			
Limited Power Increase	-	"Not used"			

Table 8.32: Requirements in downlink power control

Parameter	Unit	Test 1 and Test 2	Test 3 and Test 4
$\dfrac{DPCH\_E_c}{I_{or}}$ during T1	dB	-18.9 ≤ DPCH_Ec/Ior ≤ -11.9	-15.1 ≤ DPCH_Ec/Ior ≤ -8.1
$\dfrac{DPCH\_E_c}{I_{or}}$ during T2	dB	-18.9 ≤ DPCH_Ec/Ior ≤ -14.9	-15.1 ≤ DPCH_Ec/Ior ≤ -11.1

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CHANGE REQUEST

| ⌘ | **25.101** CR **238** | ⌘ **rev** | **1** | ⌘ | Current version: | **6.0.0** | ⌘ |

*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: ⌘	Problems with "Out of sync" in Initial Convergence test	
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: ⌘	It has been detected that in the "Power control initial convergence" testcase in paragraph 8.8.2 in 25.101 when starting at the lowest level the downlink DPCH will never be established and therefore the uplink will never be transmitted according paragraph 6.4.4, "Out-of-synchronization handling of output power" **Isolated Impact:** This CR will not have an impact on the UE or the network behaviour, it only change the testcase in order to make it relevant and reflecting the core spec.
Summary of change: ⌘	The Initial values of the DPCH_Ec/Ior is changed to –18 dB, since this is the lowest level where the insync is specified.
Consequences if not approved: ⌘	The tests with the initial power lower than –18 dB will not be possible to run since it is not guaranteed that the downlink DPCH is considered as established.

Clauses affected: ⌘	8.8.2

	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: CR235r1 cat. F to 25.101 v3.13.0, CR236r1 cat. A to 25.101 v4.7.0, CR237r1 cat. A to 25.101 v5.6.0

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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.

8.8.2 Power control in the downlink, initial convergence

This requirement verifies that DL power control works properly during the first seconds after DPCH connection is established

8.8.2.1 Minimum requirements

For the parameters specified in Table 8.31 the downlink DPCH_Ec/Ior power ratio measured values, which are averaged over 50 ms, shall be within the range specified in Table 8.32 more than 90% of the time. T1 equals to 500 ms and it starts 10 ms after the DPDCH connection is initiated. T2 equals to 500 ms and it starts when T1 has expired. Power control is ON during the test.

The first 10 ms shall not be used for averaging, ie the first sample to be input to the averaging filter is at the beginning of T1. The averaging shall be performed with a sliding rectangular window averaging filter. The window size of the averaging filter is linearly increased from 0 up to 50 ms during the first 50 ms of T1, and then kept equal to 50ms.

Table 8.31: Test parameters for downlink power control

Parameter	Unit	Test 1	Test 2	Test 3	Test 4
Target quality value on DTCH	BLER	0.01	0.01	0.1	0.1
Initial DPCH_Ec/Ior	dB	-5.9	~~-25.9~~-18	-3	~~-22.1~~-18
Information Data Rate	kbps	12.2	12.2	64	64
$\hat{I}_{or}/I_{oc}$	dB	-1			
I_{oc}	dBm/3.84 MHz	-60			
Propagation condition		Static			
Maximum_DL_Power	dB	7			
Minimum_DL_Power	dB	-18			
DL Power Control step size, Δ_{TPC}	dB	1			
Limited Power Increase	-	"Not used"			

Table 8.32: Requirements in downlink power control

Parameter	Unit	Test 1 and Test 2	Test 3 and Test 4
$\frac{DPCH\_E_c}{I_{or}}$ during T1	dB	-18.9 ≤ DPCH_Ec/Ior ≤ -11.9	-15.1 ≤ DPCH_Ec/Ior ≤ -8.1
$\frac{DPCH\_E_c}{I_{or}}$ during T2	dB	-18.9 ≤ DPCH_Ec/Ior ≤ -14.9	-15.1 ≤ DPCH_Ec/Ior ≤ -11.1

CR-Form-v7

CHANGE REQUEST

⌘	**25.101 CR 240**	⌘**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 of SSDT performance requirements	
Source: ⌘	RAN WG4	
Work item code: ⌘	TEI	***Date:*** ⌘ 27/05/2003

Category: ⌘	**F**		***Release:*** ⌘ R99
	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: ⌘	When the SSDT performance requirements were defined, the implementation margins allocated in SSDT test cases 1 and 2 were based on analysis made on test cases 3 and 4. As the SSDT update rate is 5 times slower in test cases 1 and 2 than in test cases 3 and 4, more implementation margin is needed to take into account a realistic receiver based on the simulation results shown in R4-030430. **Isolated Impact** This CR corrects the value of DPCH_Ec/Ior in DCH demodulation test in site Selection Diversity Transmission Power Control mode. A UE conforming to the original requirement will not be affected. This CR do not affect the actual performance of SSDT.
Summary of change: ⌘	The requirements for SSDT test cases 1 and 2 in Table 8.24 of Section 8.6.3 are corrected to take account the needed implementation margin for realistic receiver, thus the requirement is relaxed by 1.5dB.
Consequences if not approved: ⌘	UE functioning correctly as specified in 25.214 may not be able to pass the test cases 1 and 2 and thus unfairly fail the 25.101 requirements.

Clauses affected: ⌘	8.6.3

		Y	N			
Other specs	⌘		X	Other core specifications	⌘	

| *affected:* | X | | Test specifications | 34.121 |
| | | X | O&M Specifications | |

| *Other comments:* | ⌘ | |
| | | Equivalent CRs in other Releases: CR241r1 cat. A to 25.101 v4.7.0, CR242r1 cat. A to 25.101 v5.6.0, CR243r1 cat. A to 25.101 v6.0.0 |

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8.6.3 Demodulation of DCH in Site Selection Diversity Transmission Power Control mode

The bit error characteristics of UE receiver is determined in Site Selection Diversity Transmission power control (SSDT) mode. Two Node B emulators are required for this performance test. The delay profiles of signals received from different Node Bs are assumed to be the same but time shifted by 10 chip periods (2604 ns).

8.6.3.1 Minimum requirements

The downlink physical channels and their relative power to Ior are the same as those specified in clause C.3.2 irrespective of Node Bs and the test cases. DPCH_Ec/Ior value applies whenever DPDCH in the cell is transmitted. In Test 1 and Test 3, the received powers at UE from two Node Bs are the same, while 3dB offset is given to one that comes from one of Node Bs for Test 2 and Test 4 as specified in Table 8.23.

For the parameters specified in Table 8.23 the average downlink $\dfrac{DPCH\_E_c}{I_{or}}$ power ratio shall be below the specified

value for the BLER shown in Table 8.24.

Table 8.23: DCH parameters in multi-path propagation conditions during SSDT mode (Propagation condition: Case 1)

Parameter	Unit	Test 1	Test 2	Test 3	Test 4
Phase reference		P-CPICH			
$\hat{I}_{or1}/I_{oc}$	dB	0	-3	0	0
$\hat{I}_{or2}/I_{oc}$	dB	0	0	0	-3
I_{oc}	dBm/3.84 MHz	-60			
Information Data Rate	kbps	12.2	12.2	12.2	12.2
Cell ID code word error ratio in uplink	%	1	1	1	1
Number of FBI bits assigned to "S" Field		1	1	2	2
Code word Set		Long	Long	Short	Short
UL DPCCH slot Format		#2		#5	

NOTE: The code word errors are introduced independently in both uplink channels.

Table 8.24: DCH requirements in multi-path propagation conditions during SSDT Mode

Test Number	$\dfrac{DPCH\_E_c}{I_{or}}$	BLER
1	-6.0~~7.5~~ dB	10^{-2}
2	-5.0~~6.5~~ dB	10^{-2}
3	-10.5 dB	10^{-2}
4	-9.2 dB	10^{-2}

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CHANGE REQUEST

| ⌘ | **25.101** CR **241** | ⌘ | **1** | **1** | ⌘ | Current version: | **4.7.0** | ⌘ |

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

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

Title: ⌘	Correction of SSDT performance 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: ⌘	When the SSDT performance requirements were defined, the implementation margins allocated in SSDT test cases 1 and 2 were based on analysis made on test cases 3 and 4. As the SSDT update rate is 5 times slower in test cases 1 and 2 than in test cases 3 and 4, more implementation margin is needed to take into account a realistic receiver based on the simulation results shown in R4-030430. **Isolated Impact** This CR corrects the value of DPCH_Ec/Ior in DCH demodulation test in site Selection Diversity Transmission Power Control mode. A UE conforming to the original requirement will not be affected. This CR do not affect the actual performance of SSDT.
Summary of change: ⌘	The requirements for SSDT test cases 1 and 2 in Table 8.24 of Section 8.6.3 are corrected to take account the needed implementation margin for realistic receiver, thus the requirement is relaxed by 1.5dB.
Consequences if not approved: ⌘	UE functioning correctly as specified in 25.214 may not be able to pass the test cases 1 and 2 and thus unfairly fail the 25.101 requirements.

Clauses affected: ⌘	8.6.3

	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: CR240r1 cat. F to 25.101 v3.13.0, CR242r1 cat. A to 25.101 v5.6.0, CR243r1 cat. A to 25.101 v6.0.0	

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at http://www.3gpp.org/specs/CR.htm. Below is a brief summary:

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

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

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

8.6.3 Demodulation of DCH in Site Selection Diversity Transmission Power Control mode

The bit error characteristics of UE receiver is determined in Site Selection Diversity Transmission power control (SSDT) mode. Two Node B emulators are required for this performance test. The delay profiles of signals received from different Node Bs are assumed to be the same but time shifted by 10 chip periods (2604 ns).

8.6.3.1 Minimum requirements

The downlink physical channels and their relative power to Ior are the same as those specified in clause C.3.2 irrespective of Node Bs and the test cases. DPCH_Ec/Ior value applies whenever DPDCH in the cell is transmitted. In Test 1 and Test 3, the received powers at UE from two Node Bs are the same, while 3dB offset is given to one that comes from one of Node Bs for Test 2 and Test 4 as specified in Table 8.23.

For the parameters specified in Table 8.23 the average downlink $\dfrac{DPCH\_E_c}{I_{or}}$ power ratio shall be below the specified

value for the BLER shown in Table 8.24.

Table 8.23: DCH parameters in multi-path propagation conditions during SSDT mode (Propagation condition: Case 1)

Parameter	Unit	Test 1	Test 2	Test 3	Test 4
Phase reference		P-CPICH			
$\hat{I}_{or1}/I_{oc}$	dB	0	-3	0	0
$\hat{I}_{or2}/I_{oc}$	dB	0	0	0	-3
I_{oc}	dBm/3.84 MHz	-60			
Information Data Rate	kbps	12.2	12.2	12.2	12.2
Cell ID code word error ratio in uplink	%	1	1	1	1
Number of FBI bits assigned to "S" Field		1	1	2	2
Code word Set		Long	Long	Short	Short
UL DPCCH slot Format		#2		#5	

NOTE: The code word errors are introduced independently in both uplink channels.

Table 8.24: DCH requirements in multi-path propagation conditions during SSDT Mode

Test Number	$\dfrac{DPCH\_E_c}{I_{or}}$	BLER
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CHANGE REQUEST

⌘	**25.101** CR **242**	⌘**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 of SSDT performance 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: ⌘	When the SSDT performance requirements were defined, the implementation margins allocated in SSDT test cases 1 and 2 were based on analysis made on test cases 3 and 4. As the SSDT update rate is 5 times slower in test cases 1 and 2 than in test cases 3 and 4, more implementation margin is needed to take into account a realistic receiver based on the simulation results shown in R4-030430. **Isolated Impact** This CR corrects the value of DPCH_Ec/Ior in DCH demodulation test in site Selection Diversity Transmission Power Control mode. A UE conforming to the original requirement will not be affected. This CR do not affect the actual performance of SSDT.
Summary of change: ⌘	The requirements for SSDT test cases 1 and 2 in Table 8.24 of Section 8.6.3 are corrected to take account the needed implementation margin for realistic receiver, thus the requirement is relaxed by 1.5dB.
Consequences if not approved: ⌘	UE functioning correctly as specified in 25.214 may not be able to pass the test cases 1 and 2 and thus unfairly fail the 25.101 requirements.

Clauses affected: ⌘	8.6.3

	Y	**N**	
Other specs ⌘		**X**	Other core specifications ⌘
affected:	**X**		Test specifications 34.121

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	X	O&M Specifications	

Other comments: ⌘	
	Equivalent CRs in other Releases: CR240r1 cat. F to 25.101 v3.13.0, CR241r1 cat. A to 25.101 v4.7.0, CR243r1 cat. A to 25.101 v6.0.0

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8.6.3 Demodulation of DCH in Site Selection Diversity Transmission Power Control mode

The bit error characteristics of UE receiver is determined in Site Selection Diversity Transmission power control (SSDT) mode. Two Node B emulators are required for this performance test. The delay profiles of signals received from different Node Bs are assumed to be the same but time shifted by 10 chip periods (2604 ns).

8.6.3.1 Minimum requirements

The downlink physical channels and their relative power to Ior are the same as those specified in clause C.3.2 irrespective of Node Bs and the test cases. DPCH_Ec/Ior value applies whenever DPDCH in the cell is transmitted. In Test 1 and Test 3, the received powers at UE from two Node Bs are the same, while 3dB offset is given to one that comes from one of Node Bs for Test 2 and Test 4 as specified in Table 8.23.

For the parameters specified in Table 8.23 the average downlink $\dfrac{DPCH\_E_c}{I_{or}}$ power ratio shall be below the specified value for the BLER shown in Table 8.24.

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$\hat{I}_{or2}/I_{oc}$	dB	0	0	0	-3
I_{oc}	dBm/3.84 MHz	-60			
Information Data Rate	kbps	12.2	12.2	12.2	12.2
Cell ID code word error ratio in uplink	%	1	1	1	1
Number of FBI bits assigned to "S" Field		1	1	2	2
Code word Set		Long	Long	Short	Short
UL DPCCH slot Format		#2		#5	

NOTE: The code word errors are introduced independently in both uplink channels.

Table 8.24: DCH requirements in multi-path propagation conditions during SSDT Mode

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CHANGE REQUEST

| ⌘ | **25.101 CR 243** | ⌘ | **1 1** | ⌘ | Current version: | **6.0.0** | ⌘ |

*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 of SSDT performance 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:
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)
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Rel-6   (Release 6)

Reason for change: ⌘	When the SSDT performance requirements were defined, the implementation margins allocated in SSDT test cases 1 and 2 were based on analysis made on test cases 3 and 4. As the SSDT update rate is 5 times slower in test cases 1 and 2 than in test cases 3 and 4, more implementation margin is needed to take into account a realistic receiver based on the simulation results shown in R4-030430. <u>Isolated Impact</u> This CR corrects the value of DPCH_Ec/Ior in DCH demodulation test in site Selection Diversity Transmission Power Control mode. A UE conforming to the original requirement will not be affected. This CR do not affect the actual performance of SSDT.
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Consequences if not approved: ⌘	UE functioning correctly as specified in 25.214 may not be able to pass the test cases 1 and 2 and thus unfairly fail the 25.101 requirements.

Clauses affected: ⌘	8.6.3

	Y	N	
Other specs ⌘		X	Other core specifications ⌘

affected:	X		Test specifications	34.121
		X	O&M Specifications	
Other comments:	⌘			
		Equivalent CRs in other Releases: CR240r1 cat. F to 25.101 v3.13.0, CR241r1 cat. A to 25.101 v4.7.0, CR242r1 cat. A to 25.101 v5.6.0		

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