3GPP TSG RAN Meeting #28 **RP-050211**
Quebec, Canada, 1 - 3 June 2005

Title **CRs (Rel-5 & Rel-6) to 25.101, 25.104 & 25.141 for the removal of SSDT**
Source **3GPP TSG RAN WG4 (Radio)**
Agenda Item **7.7.2**

WG Tdoc	Spec	CR	R	Cat	Rel	Curr Ver	Title	Work Item
R4-050401	25.101	412		C	Rel-5	5.14.0	Feature Clean Up: Removal of SSDT	TEI5
R4-050402	25.101	413		C	Rel-6	6.7.0	Feature Clean Up: Removal of SSDT	TEI6
R4-050383	25.104	235		C	Rel-5	5.9.0	Feature Clean Up: Removal of SSDT	TEI5
R4-050384	25.104	236		C	Rel-6	6.8.0	Feature Clean Up: Removal of SSDT	TEI6
R4-050385	25.141	368		C	Rel-5	5.9.0	Feature Clean Up: Removal of SSDT	TEI5
R4-050386	25.141	369		C	Rel-6	6.9.0	Feature Clean Up: Removal of SSDT	TEI6

3GPP TSG RAN WG4 (Radio) Meeting #35 **R4-050401**

Athens, Greece 9 - 13 May 2005

CR-Form-v7

CHANGE REQUEST

⌘ **25.101** **CR** **412** ⌘ **rev** ⌘ Current version: **5.14.0** ⌘

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

Title:	⌘	Feature Clean Up: Removal of SSDT
Source:	⌘	3GPP TSG RAN WG4 (Radio)
Work item code:	⌘	TEI5
Date:	⌘	16/05/2005
Category:	⌘	**C**
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:	⌘	RAN#27 decision on Feature Clean-up
Summary of change:	⌘	Abbreviation of SSDT removed from Section 3.2 Sub section 8.6.3 “Demodulation of DCH in Site Selection Diversity Transmission Power Control mode” removed **Isolated Impact Analysis** Functionality removed: SSDT Isolated impact statement: Since functionality is removed, UE implementations are not affected. Would affect UTRAN implementations supporting the removed functionality.
Consequences if not approved:	⌘	Introduction of new features and evolution of the existing feature remain slow also in the future.

Clauses affected:	⌘	3.2, 8.6			
Other specs affected:	⌘	Y / N		⌘	
		X /	Other core specifications		25.211, 25.214, 25.331, 25.423, 25.433
		X /	Test specifications		34.121
		/ X	O&M Specifications		
Other comments:	⌘				

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.

3.2 Abbreviations

For the purposes of the present document, the following abbreviations apply:

ACLR	Adjacent Channel Leakage power Ratio
ACS	Adjacent Channel Selectivity
AICH	Acquisition Indication Channel
BER	Bit Error Ratio
BLER	Block Error Ratio
CQI	Channel Quality Indicator
CW	Continuous Wave (un-modulated signal)
DCH	Dedicated Channel, which is mapped into Dedicated Physical Channel.
DL	Down Link (forward link)
DTX	Discontinuous Transmission
DPCCH	Dedicated Physical Control Channel
DPCH	Dedicated Physical Channel
$DPCH\_E_c$	Average energy per PN chip for DPCH.
$\frac{DPCH\_E_c}{I_{or}}$	The ratio of the transmit energy per PN chip of the DPCH to the total transmit power spectral density at the Node B antenna connector.
DPDCH	Dedicated Physical Data Channel
EIRP	Effective Isotropic Radiated Power
E_c	Average energy per PN chip.
$\frac{E_c}{I_{or}}$	The ratio of the average transmit energy per PN chip for different fields or physical channels to the total transmit power spectral density.
FACH	Forward Access Channel
FDD	Frequency Division Duplex
FDR	False transmit format Detection Ratio. A false Transport Format detection occurs when the receiver detects a different TF to that which was transmitted, and the decoded transport block(s) for this incorrect TF passes the CRC check(s).
F_{uw}	Frequency of unwanted signal. This is specified in bracket in terms of an absolute frequency(s) or a frequency offset from the assigned channel frequency.
HSDPA	High Speed Downlink Packet Access
HS-DSCH	High Speed Downlink Shared Channel
HS-PDSCH	High Speed Physical Downlink Shared Channel
HARQ	Hybrid ARQ sequence
Information Data Rate	Rate of the user information, which must be transmitted over the Air Interface. For example, output rate of the voice codec.
I_o	The total received power spectral density, including signal and interference, as measured at the UE antenna connector.
I_{oc}	The power spectral density (integrated in a noise bandwidth equal to the chip rate and normalized to the chip rate) of a band limited white noise source (simulating interference from cells, which are not defined in a test procedure) as measured at the UE antenna connector.
I_{or}	The total transmit power spectral density (integrated in a bandwidth of (1+α) times the chip rate and normalized to the chip rate)of the downlink signal at the Node B antenna connector.
$\hat{I}_{or}$	The received power spectral density (integrated in a bandwidth of (1+α) times the chip rate and normalized to the chip rate) of the downlink signal as measured at the UE antenna connector.
MER	Message Error Ratio
Node B	A logical node responsible for radio transmission / reception in one or more cells to/from the User Equipment. Terminates the Iub interface towards the RNC
OCNS	Orthogonal Channel Noise Simulator, a mechanism used to simulate the users or control signals on the other orthogonal channels of a downlink link.

$OCNS\_E_c$	Average energy per PN chip for the OCNS.
$\frac{OCNS\_E_c}{I_{or}}$	The ratio of the average transmit energy per PN chip for the OCNS to the total transmit power spectral density.
P-CCPCH	Primary Common Control Physical Channel
PCH	Paging Channel
$P-CCPCH\ \frac{E_c}{I_o}$	The ratio of the received P-CCPCH energy per chip to the total received power spectral density at the UE antenna connector.
$\frac{P-CCPCH\_E_c}{I_{or}}$	The ratio of the average transmit energy per PN chip for the P-CCPCH to the total transmit power spectral density.
P-CPICH	Primary Common Pilot Channel
PICH	Paging Indicator Channel
PPM	Parts Per Million
R	Number of information bits per second excluding CRC bits successfully received on HS-DSCH by a HSDPA capable UE.
<REFSENS>	Reference sensitivity
<REF $\hat{I}_{or}$ >	Reference $\hat{I}_{or}$
RACH	Random Access Channel
SCH	Synchronization Channel consisting of Primary and Secondary synchronization channels
$S-CCPCH$	Secondary Common Control Physical Channel.
$S-CCPCH\_E_c$	Average energy per PN chip for S-CCPCH.
SIR	Signal to Interference ratio
~~SSDT~~	~~Site Selection Diversity Transmission~~
STTD	Space Time Transmit Diversity
TDD	Time Division Duplexing
TFC	Transport Format Combination
TFCI	Transport Format Combination Indicator
TPC	Transmit Power Control
TSTD	Time Switched Transmit Diversity
UE	User Equipment
UL	Up Link (reverse link)
UTRA	UMTS Terrestrial Radio Access

---- Change of Section ----

8.6 Demodulation of DCH in downlink Transmit diversity modes

8.6.1 Demodulation of DCH in open-loop transmit diversity mode

The receive characteristic of the Dedicated Channel (DCH) in open loop transmit diversity mode is determined by the Block Error Ratio (BLER). DCH is mapped into in Dedicated Physical Channel (DPCH).

8.6.1.1 Minimum requirement

For the parameters specified in Table 8.19 the average downlink $\frac{DPCH\_E_c}{I_{or}}$ power ratio shall be below the specified value for the BLER shown in Table 8.20.

Table 8.19: Test parameters for DCH reception in an open loop transmit diversity scheme. (Propagation condition: Case 1)

Parameter	Unit	Test 1
Phase reference		P-CPICH
$\hat{I}_{or}/I_{oc}$	dB	9
I_{oc}	dBm/3.84 MHz	-60
Information data rate	kbps	12.2

Table 8.20: Test requirements for DCH reception in open loop transmit diversity scheme

Test Number	$\frac{DPCH\_E_c}{I_{or}}$ (antenna 1/2)	BLER
1	-16.8 dB	10^{-2}

8.6.2 Demodulation of DCH in closed loop transmit diversity mode

The receive characteristic of the dedicated channel (DCH) in closed loop transmit diversity mode is determined by the Block Error Ratio (BLER). DCH is mapped into in Dedicated Physical Channel (DPCH).

8.6.2.1 Minimum requirement

For the parameters specified in Table 8.21 the average downlink $\frac{DPCH\_E_c}{I_{or}}$ power ratio shall be below the specified value for the BLER shown in Table 8.22.

Table 8.21: Test Parameters for DCH Reception in closed loop transmit diversity mode (Propagation condition: Case 1)

Parameter	Unit	Test 1 (Mode 1)	Test 2 (Mode 2)
$\hat{I}_{or}/I_{oc}$	dB	9	9
I_{oc}	dBm/3.84 MHz	-60	-60
Information data rate	kbps	12.2	12.2
Feedback error rate	%	4	4
Closed loop timing adjustment mode	-	1	1

Table 8.22: Test requirements for DCH reception in closed loop transmit diversity mode

Test Number	$\frac{DPCH\_E_c}{I_{or}}$ (see note)	BLER
1	-18.0 dB	10^{-2}
2	-18.3 dB	10^{-2}
NOTE: This is the total power from both antennas. Power sharing between antennas are feedback mode dependent as specified in TS25.214.		

8.6.3 (Void)~~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 $\frac{DPCH\_E_c}{I_{or}}$ power ratio shall be below the specified value for the BLER shown in Table 8.24.

Table 8.23: (Void)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: (Void)DCH requirements in multi-path propagation conditions during SSDT Mode

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

3GPP TSG RAN WG4 (Radio) Meeting #35 **R4-050402**

Athens, Greece 9 - 13 May 2005

CR-Form-v7

CHANGE REQUEST

⌘ **25.101** **CR** **413** ⌘ **rev** ⌘ Current version: **6.7.0** ⌘

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

Title:	⌘	Feature Clean Up: Removal of SSDT
Source:	⌘	3GPP TSG RAN WG4 (Radio)
Work item code:	⌘	TEI6
Date:	⌘	16/05/2005
Category:	⌘	**C**
Release:	⌘	Rel-6

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R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*

Reason for change:	⌘	RAN#27 decision on Feature Clean-up
Summary of change:	⌘	Abbreviation of SSDT removed from Section 3.2 Sub section 8.6.3 “Demodulation of DCH in Site Selection Diversity Transmission Power Control mode” removed **Isolated Impact Analysis** Functionality removed: SSDT Isolated impact statement: Since functionality is removed, UE implementations are not affected. Would affect UTRAN implementations supporting the removed functionality.
Consequences if not approved:	⌘	Introduction of new features and evolution of the existing feature remain slow also in the future.

Clauses affected:	⌘	3.2, 8.6			
Other specs affected:	⌘	**Y** / **N**		⌘	
		X /	Other core specifications		25.211, 25.214, 25.331, 25.423, 25.433
		X /	Test specifications		34.121
		/ **X**	O&M Specifications		
Other comments:	⌘				

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For the purposes of the present document, the following abbreviations apply:

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ACS	Adjacent Channel Selectivity
AICH	Acquisition Indication Channel
BER	Bit Error Ratio
BLER	Block Error Ratio
CQI	Channel Quality Indicator
CW	Continuous Wave (un-modulated signal)
DCH	Dedicated Channel, which is mapped into Dedicated Physical Channel.
DL	Down Link (forward link)
DTX	Discontinuous Transmission
DPCCH	Dedicated Physical Control Channel
DPCH	Dedicated Physical Channel
$DPCH\_E_c$	Average energy per PN chip for DPCH.
$\frac{DPCH\_E_c}{I_{or}}$	The ratio of the transmit energy per PN chip of the DPCH to the total transmit power spectral density at the Node B antenna connector.
DPDCH	Dedicated Physical Data Channel
EIRP	Effective Isotropic Radiated Power
E_c	Average energy per PN chip.
$\frac{E_c}{I_{or}}$	The ratio of the average transmit energy per PN chip for different fields or physical channels to the total transmit power spectral density.
FACH	Forward Access Channel
FDD	Frequency Division Duplex
FDR	False transmit format Detection Ratio. A false Transport Format detection occurs when the receiver detects a different TF to that which was transmitted, and the decoded transport block(s) for this incorrect TF passes the CRC check(s).
F_{uw}	Frequency of unwanted signal. This is specified in bracket in terms of an absolute frequency(s) or a frequency offset from the assigned channel frequency.
HARQ	Hybrid Automatic Repeat Request
HSDPA	High Speed Downlink Packet Access
HS-DSCH	High Speed Downlink Shared Channel
HS-PDSCH	High Speed Physical Downlink Shared Channel
HS-SCCH	High Speed Shared Control Channel
Information Data Rate	Rate of the user information, which must be transmitted over the Air Interface. For example, output rate of the voice codec.
I_o	The total received power spectral density, including signal and interference, as measured at the UE antenna connector.
I_{oc}	The power spectral density (integrated in a noise bandwidth equal to the chip rate and normalized to the chip rate) of a band limited white noise source (simulating interference from cells, which are not defined in a test procedure) as measured at the UE antenna connector.
I_{or}	The total transmit power spectral density (integrated in a bandwidth of (1+α) times the chip rate and normalized to the chip rate)of the downlink signal at the Node B antenna connector.
$\hat{I}_{or}$	The received power spectral density (integrated in a bandwidth of (1+α) times the chip rate and normalized to the chip rate) of the downlink signal as measured at the UE antenna connector.
MER	Message Error Ratio
Node B	A logical node responsible for radio transmission / reception in one or more cells to/from the User Equipment. Terminates the Iub interface towards the RNC
OCNS	Orthogonal Channel Noise Simulator, a mechanism used to simulate the users or control signals on the other orthogonal channels of a downlink link.
$OCNS\_E_c$	Average energy per PN chip for the OCNS.

$\frac{OCNS\_E_c}{I_{or}}$	The ratio of the average transmit energy per PN chip for the OCNS to the total transmit power spectral density.
P-CCPCH	Primary Common Control Physical Channel
PCH	Paging Channel
$P-CCPCH\ \frac{E_C}{I_O}$	The ratio of the received P-CCPCH energy per chip to the total received power spectral density at the UE antenna connector.
$\frac{P-CCPCH\_E_C}{I_{or}}$	The ratio of the average transmit energy per PN chip for the P-CCPCH to the total transmit power spectral density.
P-CPICH	Primary Common Pilot Channel
PICH	Paging Indicator Channel
PPM	Parts Per Million
R	Number of information bits per second excluding CRC bits successfully received on HS-DSCH by a HSDPA capable UE.
<REFSENS>	Reference sensitivity
<REF $\hat{I}_{or}$ >	Reference $\hat{I}_{or}$
RACH	Random Access Channel
SCH	Synchronization Channel consisting of Primary and Secondary synchronization channels
$S-CCPCH$	Secondary Common Control Physical Channel.
$S-CCPCH\_E_C$	Average energy per PN chip for S-CCPCH.
SIR	Signal to Interference ratio
SML	Soft Metric Location (Soft channel bit)
~~SSDT~~	~~Site Selection Diversity Transmission~~
STTD	Space Time Transmit Diversity
TDD	Time Division Duplexing
TFC	Transport Format Combination
TFCI	Transport Format Combination Indicator
TPC	Transmit Power Control
TSTD	Time Switched Transmit Diversity
UE	User Equipment
UL	Up Link (reverse link)
UTRA	UMTS Terrestrial Radio Access

---- Change of Section ----

8.6 Demodulation of DCH in downlink Transmit diversity modes

8.6.1 Demodulation of DCH in open-loop transmit diversity mode

The receive characteristic of the Dedicated Channel (DCH) in open loop transmit diversity mode is determined by the Block Error Ratio (BLER). DCH is mapped into in Dedicated Physical Channel (DPCH).

8.6.1.1 Minimum requirement

For the parameters specified in Table 8.19 the average downlink $\frac{DPCH\_E_c}{I_{or}}$ power ratio shall be below the specified value for the BLER shown in Table 8.20.

Table 8.19: Test parameters for DCH reception in an open loop transmit diversity scheme. (Propagation condition: Case 1)

Parameter	Unit	Test 1
Phase reference		P-CPICH
$\hat{I}_{or}/I_{oc}$	dB	9
I_{oc}	dBm/3.84 MHz	-60
Information data rate	kbps	12.2

Table 8.20: Test requirements for DCH reception in open loop transmit diversity scheme

Test Number	$\frac{DPCH\_E_c}{I_{or}}$ (antenna 1/2)	BLER
1	-16.8 dB	10^{-2}

8.6.2 Demodulation of DCH in closed loop transmit diversity mode

The receive characteristic of the dedicated channel (DCH) in closed loop transmit diversity mode is determined by the Block Error Ratio (BLER). DCH is mapped into in Dedicated Physical Channel (DPCH).

8.6.2.1 Minimum requirement

For the parameters specified in Table 8.21 the average downlink $\frac{DPCH\_E_c}{I_{or}}$ power ratio shall be below the specified value for the BLER shown in Table 8.22.

Table 8.21: Test Parameters for DCH Reception in closed loop transmit diversity mode (Propagation condition: Case 1)

Parameter	Unit	Test 1 (Mode 1)	Test 2 (Mode 2)
$\hat{I}_{or}/I_{oc}$	dB	9	9
I_{oc}	dBm/3.84 MHz	-60	-60
Information data rate	kbps	12.2	12.2
Feedback error rate	%	4	4
Closed loop timing adjustment mode	-	1	1

Table 8.22: Test requirements for DCH reception in closed loop transmit diversity mode

Test Number	$\frac{DPCH\_E_c}{I_{or}}$ (see note)	BLER
1	-18.0 dB	10^{-2}
2	-18.3 dB	10^{-2}
NOTE: This is the total power from both antennas. Power sharing between antennas are feedback mode dependent as specified in TS25.214.		

8.6.3 (Void)~~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 $\frac{DPCH\_E_c}{I_{or}}$ power ratio shall be below the specified value for the BLER shown in Table 8.24.

Table 8.23: (Void)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: (Void)DCH requirements in multi-path propagation conditions during SSDT Mode

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

3GPP TSG RAN WG4 (Radio) Meeting #35 **R4-050383**

Athens, Greece 9 - 13 May 2005

CR-Form-v7

CHANGE REQUEST

⌘ **25.104** **CR** **235** ⌘ **rev** ⌘ Current version: **5.9.0** ⌘

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

Title:	⌘	Feature Clean Up: Removal of SSDT
Source:	⌘	3GPP TSG RAN WG4 (Radio)
Work item code:	⌘	TEI5
Date:	⌘	16/05/2005
Category:	⌘	**C**
Release:	⌘	Rel-5

Use one of the following categories:
F *(correction)*
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R96 (Release 1996)
R97 (Release 1997)
R98 (Release 1998)
R99 (Release 1999)
Rel-4 (Release 4)
Rel-5 (Release 5)
Rel-6 (Release 6)

Reason for change:	⌘	In RAN#27 removal of some UTRAN features was agreed in order to simplify the specifications.
Summary of change:	⌘	SSDT is removed from the specification. **Isolated Impact Analysis** Functionality removed: SSDT Isolated impact statement: Since functionality is removed, UE implementations are not affected. Would affect UTRAN implementations supporting the removed functionality.
Consequences if not approved:	⌘	

Clauses affected:	⌘	8.9			
		Y	**N**		
Other specs affected:	⌘	**X**		Other core specifications	25.211, 25.214, 25.331, 25.423, 25.433, 25.922
		X		Test specifications	25.141
			X	O&M Specifications	
Other comments:	⌘				

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8.9 ~~BS Functionality in Site Selection Diversity Transmission (SSDT) Mode~~Void

~~Site Selection Diversity Transmission (SSDT) is an optional feature of BS. This requirement for SSDT mode ensures that BS correctly reacts to Layer 1 feedback signalling messages from UE.~~

~~8.9.1 Minimum requirements~~

~~For the conditions specified, the BS shall transmit or not transmit the downlink DPDCH channel.~~

~~Table 8.15: Parameters for SSDT mode test~~

~~Parameter~~	~~Unit~~	~~Test 1~~	~~Test 2~~	~~Test 3~~	~~Test 4~~
~~Cell ID of BS under test~~	~~-~~	~~A~~	~~A~~	~~A~~	~~A~~
~~SSDT Quality threshold, $Q_{th,}$ set for radio link under test~~	~~dB~~	~~-3~~			
~~Target SIR, $SIR_{target,}$ set for radio link under test~~	~~dB~~	~~3~~			
~~Uplink SIR~~	~~dB~~	~~SIR_{target} + Q_{th} + 7.5~~	~~SIR_{target} + Q_{th} + 7.5~~	~~SIR_{target} + Q_{th} – 7.5~~	~~SIR_{target} + Q_{th} – 7.5~~
~~Cell ID transmitted by UE~~	~~-~~	~~A~~	~~B~~	~~A~~	~~B~~
~~Transmission of downlink DPCCH~~	~~-~~	~~Yes~~	~~Yes~~	~~Yes~~	~~Yes~~
~~Transmission of downlink DPDCH~~	~~-~~	~~Yes~~	~~No~~	~~Yes~~	~~Yes~~

~~The above test should be for repeated for each of the three code sets "long", "medium" and "short" Cell ID code sets.~~

Annex A (normative): Measurement channels

3GPP TSG RAN WG4 (Radio) Meeting #35 **R4-050384**

Athens, Greece 9 - 13 May 2005

CR-Form-v7

CHANGE REQUEST

⌘ **25.104** **CR** **236** ⌘ **rev** ⌘ Current version: **6.8.0** ⌘

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

Title:	⌘	Feature Clean Up: Removal of SSDT
Source:	⌘	3GPP TSG RAN WG4 (Radio)
Work item code:	⌘	TEI6
Date:	⌘	16/05/2005
Category:	⌘	**C**
Release:	⌘	Rel-6

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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 RAN#27 removal of some UTRAN features was agreed in order to simplify the specifications.
Summary of change:	⌘	SSDT is removed from the specification. **Isolated Impact Analysis** Functionality removed: SSDT Isolated impact statement: Since functionality is removed, UE implementations are not affected. Would affect UTRAN implementations supporting the removed functionality.
Consequences if not approved:	⌘	

Clauses affected:	⌘	8.9			
		Y	**N**		
Other specs affected:	⌘	**X**		Other core specifications	25.211, 25.214, 25.331, 25.423, 25.433, 25.922
		X		Test specifications	25.141
			X	O&M Specifications	
Other comments:	⌘				

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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.

8.9 ~~BS Functionality in Site Selection Diversity Transmission (SSDT) Mode~~Void

~~Site Selection Diversity Transmission (SSDT) is an optional feature of BS. This requirement for SSDT mode ensures that BS correctly reacts to Layer 1 feedback signalling messages from UE.~~

~~8.9.1 Minimum requirements~~

~~For the conditions specified, the BS shall transmit or not transmit the downlink DPDCH channel.~~

~~Table 8.15: Parameters for SSDT mode test~~

~~Parameter~~	~~Unit~~	~~Test 1~~	~~Test 2~~	~~Test 3~~	~~Test 4~~
~~Cell ID of BS under test~~	~~-~~	~~A~~	~~A~~	~~A~~	~~A~~
~~SSDT Quality threshold, $Q_{th,}$ set for radio link under test~~	~~dB~~	~~-3~~			
~~Target SIR, $SIR_{target,}$ set for radio link under test~~	~~dB~~	~~3~~			
~~Uplink SIR~~	~~dB~~	~~SIR_{target} + Q_{th} + 7.5~~	~~SIR_{target} + Q_{th} + 7.5~~	~~SIR_{target} + Q_{th} – 7.5~~	~~SIR_{target} + Q_{th} – 7.5~~
~~Cell ID transmitted by UE~~	~~-~~	~~A~~	~~B~~	~~A~~	~~B~~
~~Transmission of downlink DPCCH~~	~~-~~	~~Yes~~	~~Yes~~	~~Yes~~	~~Yes~~
~~Transmission of downlink DPDCH~~	~~-~~	~~Yes~~	~~No~~	~~Yes~~	~~Yes~~

~~The above test shall be for repeated for each of the three code sets "long", "medium" and "short" Cell ID code sets.~~

8.10 Performance of ACK/NACK detection for HS-DPCCH

3GPP TSG RAN WG4 (Radio) Meeting #35 **R4-050385**

Athens, Greece 9 - 13 May 2005

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CHANGE REQUEST

⌘ **25.141** **CR** **368** ⌘ **rev** ⌘ Current version: **5.9.0** ⌘

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

Title:	⌘	Feature Clean Up: Removal of SSDT
Source:	⌘	3GPP TSG RAN WG4 (Radio)
Work item code:	⌘	TEI5
Date:	⌘	16/05/2005
Category:	⌘	**C**
Release:	⌘	Rel-5

Use one of the following categories:
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R98	*(Release 1998)*
R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*

Reason for change:	⌘	In RAN#27 removal of some UTRAN features was agreed in order to simplify the specifications
Summary of change:	⌘	SSDT is removed from the specification. **Isolated Impact Analysis** Functionality removed: SSDT Isolated impact statement: Since functionality is removed, UE implementations are not affected. Would affect UTRAN implementations supporting the removed functionality.
Consequences if not approved:	⌘	

Clauses affected:	⌘	4.1.4; 4.2.3; 8.10; Annex F			
		Y	**N**		
Other specs affected:	⌘		**X**	Other core specifications	⌘ 25.211, 25.214, 25.331, 25.423, 25.433, 25.922
			X	Test specifications	
			X	O&M Specifications	
Other comments:	⌘				

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4.1.4 Measurement of performance requirement

Table 4.1B: Maximum Test System Uncertainty for Performance Requirements

Subclause	Maximum Test System Uncertainty[1]	Derivation of Test System Uncertainty
8.2, Demodulation in static propagation condition	± 0.4dB	Wanted/AWGN: ± 0.4dB (relative uncertainty for E_b/N_0) (AWGN: ±1dB)
8.3, Demodulation of DCH in multiplath fading conditions	± 0.6dB	Fader: ± 0.5dB Wanted/AWGN: ± 0.4dB (relative) Combined relative uncertainty for E_b/N_0: ± 0.6dB
8.4 Demodulation of DCH in moving propagation conditions	± 0.6dB	Fader: ± 0.5dB Wanted/AWGN: ± 0.4dB (relative) Combined relative uncertainty for E_b/N_0: ± 0.6dB
8.5 Demodulation of DCH in birth/death propagation conditions	± 0.6dB	Fader: ± 0.5dB Wanted/AWGN: ± 0.4dB (relative) Combined relative uncertainty for E_b/N_0: ± 0.6dB
8.8.1 RACH preamble detection in static propagation conditions	± 0.4dB	Wanted/AWGN: ± 0.4dB (relative uncertainty for E_c/N_0) (AWGN: ±1dB)
8.8.2 RACH preamble detection in multipath fading case 3	± 0.6dB	Fader: ± 0.5dB Wanted/AWGN: ± 0.4dB (relative) Combined relative uncertainty for E_c/N_0: ± 0.6dB
8.8.3 Demodulation of RACH message in static propagation conditions	± 0.4dB	Wanted/AWGN: ± 0.4dB (relative uncertainty for E_b/N_0) (AWGN: ±1dB)
8.8.4 Demodulation of RACH message in multipath fading case 3	± 0.6dB	Fader: ± 0.5dB Wanted/AWGN: ± 0.4dB (relative) Combined relative uncertainty for E_b/N_0: ± 0.6dB
8.9.3 Demodulation of CPCH message in static propagation conditions	± 0.4 dB	Wanted/AWGN: ± 0.4dB (relative uncertainty for E_b/N_0) (AWGN: ±1dB
8.9.4 Demodulation of CPCH message in multipath fading case 3	± 0.6 dB	Fader: ± 0.5dB Wanted/AWGN: ± 0.4dB (relative) Combined relative uncertainty for E_b/N_0: ± 0.6dB
~~8.10 Site Selection Diversity Transmission (SSDT) Mode~~	~~± 0.4dB~~	~~Wanted/AWGN: ± 0.4dB (relative) (AWGN: ±1dB)~~
Note 1: Only the overall stimulus error is considered here. The effect of errors in the BER/FER measurements due to finite test duration is not considered.		

--- next changed section ---

4.2.3 Performance requirement

Table 4.1E: Test Tolerances for Performance Requirements.

Subclause	Test Tolerance[1]
8.2, Demodulation in static propagation condtion	0.4dB
8.3, Demodulation of DCH in multiplath fading conditons	0.6dB
8.4 Demodulation of DCH in moving propagation conditions	0.6dB
8.5 Demodulation of DCH in birth/death propagation conditions	0.6dB
8.8.1 RACH preamble detection in static propagation conditions	0.4dB
8.8.2 RACH preamble detection in multipath fading case 3	0.6dB
8.8.3 Demodulation of RACH message in static propagation conditions	0.4dB
8.8.4 Demodulation of RACH message in multipath fading case 3	0.6dB
8.9.3 Demodulation of CPCH message in static propagation conditions	0.4dB
8.9.4 Demodulation of CPCH message in multipath fading case 3	0.6dB
~~8.10 Site Selection Diversity Transmission (SSDT) Mode~~	~~0.4dB~~
Note 1: Unless otherwise stated, the Test Tolerances are applied to the stimulus signal(s). See Annex F.	

--- next changed section ---

8.10 ~~Site Selection Diversity Transmission (SSDT) Mode~~Void

~~8.10.1 Definition and applicability~~

~~Site Selection Diversity Transmission (SSDT) mode is an optional feature of BS and is a macro diversity method in soft handover mode. In SSDT mode, the UE selects one of the cells from its active set to be "primary", all other active cells are classed as "non primary". The non primary cells switch off the DCH transmission. The primary cell ID code is delivered to active cells using uplink FBI field of DPCCH.~~

~~The requirements and this test apply only to Base Station, which has a function of SSDT mode.~~

~~8.10.2 Minimum requirements~~

~~According to the conditions specified in Table 8.28, the downlink DPDCH and DPCCH are properly transmitted or stopped.~~

~~Table 8.28: Parameters for SSDT mode test~~

~~Parameter~~	~~Unit~~	~~Test 1~~	~~Test 2~~	~~Test 3~~	~~Test 4~~
~~Cell ID of BS under test~~	~~-~~	~~A~~	~~A~~	~~A~~	~~A~~
~~SSDT Quality threshold, Q_{th}, set for radio link under test~~	~~dB~~	~~-3~~			
~~Target SIR, SIR_{target}, set for radio link under test~~	~~dB~~	~~3~~			
~~Uplink SIR~~	~~dB~~	~~SIR_{target} + Q_{th} +7.5~~	~~SIR_{target} + Q_{th} +7.5~~	~~SIR_{target} + Q_{th} -7.5~~	~~SIR_{target} + Q_{th} -7.5~~
~~Cell ID transmitted by UE~~	~~-~~	~~A~~	~~B~~	~~A~~	~~B~~
~~Transmission of downlink DPCCH~~	~~-~~	~~Yes~~	~~Yes~~	~~Yes~~	~~Yes~~
~~Transmission of downlink DPDCH~~	~~-~~	~~Yes~~	~~No~~	~~Yes~~	~~Yes~~

~~The reference for this requirement is in TS 25.104 clause 8.9.~~

8.10.3 Test purpose

To verify that downlink transmission reaction of BS to Layer 1 feedback signalling messages from UE.

8.10.4 Method of test

8.10.4.1 Initial conditions

Test environment: normal; see subclause 4.4.1.

RF channels to be tested: B, M and T; see subclause 4.8

1) Connect BS tester generating the wanted signal and an AWGN generator to the BS antenna connector as shown in Figure B. 13.

2) Disable inner loop power control.

3) Activate SSDT function using parameters specified in Table .8.28.

8.10.4.2 Procedure

1) Adjust the AWGN generator to -84 dBm/3.84 MHz at the BS input.

2) The characteristics of the wanted signal shall be configured as a UL reference measurement channel for 12.2kbps defined in annex A.

3) Adjust the level of the wanted signal so that required Uplink SIR specified in table 8.29 is achieved. The wanted signal level at the BS input should be adjusted to: -84-10*Log_{10}(SF)+10*Log_{10}(Uplink SIR to set) [dBm], where SF = 256.

4) Check downlink DCH, properly transmitted on or off, according to Table 8.29 under conditions of Test1 through Test4 with 3 types of Cell ID sets, “long”, ”medium” and “short”, respectively.

8.10.5 Test Requirements

According to the conditions specified in Table 8.29, the downlink DPDCH and DPCCH are properly transmitted or stopped.

Table 8.29: Parameters for SSDT mode test

Parameter	Unit	Test 1	Test 2	Test 3	Test 4
Cell ID of BS under test	-	A	A	A	A
SSDT Quality threshold, Q_{th}, set for radio link under test	dB	-3			
Target SIR, SIR_{target}, set in BS	dB	3			
Uplink SIR	dB	SIR_{target} + Q_{th} + 7.9	SIR_{target} + Q_{th} + 7.9	SIR_{target} +Q_{th} - 7.9	SIR_{target} + Q_{th} - 7.9
Cell ID transmitted by UE	-	A	B	A	B
Transmission of downlink DPCCH	-	Yes	Yes	Yes	Yes
Transmission of downlink DPDCH	-	Yes	No	Yes	Yes

--- next changed section ---

Annex F (informative): Derivation of Test Requirements

The Test Requirements in this specification have been calculated by relaxing the Minimum Requirements of the core specification using the Test Tolerances defined in subclause 4.2. When the Test Tolerance is zero, the Test Requirement will be the same as the Minimum Requirement. When the Test Tolerance is non-zero, the Test Requirements will differ from the Minimum Requirements, and the formula used for this relaxation is given in tables F.1, F.2 and F.3

Note that a formula for applying Test Tolerances is provided for all tests, even those with a test tolerance of zero. This is necessary in the case that the Test System uncertainty is greater than that allowed in subclause 4.1. In this event, the excess error shall be subtracted from the defined test tolerance in order to generate the correct tightened Test Requirements as defined in subclause 4.3.

For example, a Test System having 0.9 dB accuracy for test 6.2.1 Base Station maximum output power (which is 0.2 dB above the limit specified in subclause 4.) would subtract 0.2 dB from the Test Tolerance of 0.7 dB defined in subclause 4.2. This new test tolerance of 0.5 dB would then be applied to the Minimum Requirement using the formula defined in Table F.1 to give a new range of ±2.5 dB of the manufacturer's rated output power.

Using this same approach for the case where a test had a test tolerance of 0 dB, an excess error of 0.2 dB would result in a modified test tolerance of –0.2 dB.

Table F.1: Derivation of Test Requirements (Transmitter tests)

Test	Minimum Requirement in TS 25.104	Test Tolerance (TT)	Test Requirement in TS 25.141
6.2.1 Base station maximum output power	In normal conditions … within +2 dB and -2 dB of the manufacturer's rated output power In extreme conditions… within +2.5 dB and –2.5 dB of the manufacturer's rated output power	0.7 dB	Formula: Upper limit + TT Lower limit – TT In normal conditions … within +2.7 dB and –2.7 dB of the manufacturer's rated output power In extreme conditions… within +3.2 dB and –3.2 dB of the manufacturer's rated output power
6.2.2 CPICH Power accuracy	CPICH power shall be within ±2.1dB	0.8 dB	Formula: Upper limit + TT Lower limit – TT CPICH power shall be within ±2.9dB
6.3 Frequency error	Frequency error limit = 0.05 ppm	12 Hz	Formula: Frequency Error limit + TT Frequency Error limit = 0.05 ppm + 12 Hz
6.4.2 Power control steps	Lower and upper limits as specified in tables 6.9 and 6.10a	0.1 dB	Formula: Upper limits + TT Lower limits – TT 0.1 dB applied as above to tables 6.9 and 6.10a
6.4.3 Power control dynamic range	maximum power limit = BS maximum output power -3 dB minimum power limit = BS maximum output power –28 dB	1.1 dB	Formula: maximum power limit – TT minimum power limit + TT maximum power limit = BS maximum output power –4.1 dB minimum power limit = BS maximum output power –26.9 dB
6.4.4 Total power dynamic range	total power dynamic range limit = 18 dB	0.3 dB	Formula: total power dynamic range limit – TT total power dynamic range limit = 17.7 dB
6.4.5. IPDL time mask	maximum power limit = BS maximum output power –35 dB	0.7 dB	Formula: maximum power limit + TT maximum power limit = BS maximum output power – 34.3 dB
6.5.1 Occupied Bandwidth	occupied bandwidth limit = 5 MHz	0 kHz	Formula: Occupied bandwidth limit + TT Occupied bandwidth limit = 5 MHz
6.5.2.1 Spectrum emission mask	Maximum level defined in tables 6.11, 6.12, 6.13 and 6.14:	1.5 dB(0 dB for the additional Band II requirements)	Formula: Maximum level + TT Add 1.5 to Maximum level entries in tables 6.11, 6.12, 6.13 and 6.14.
6.5.2.2 Adjacent Channel Leakage power Ratio (ACLR)	ACLR limit = 45 dB at 5 MHz ACLR limit = 50 dB at 10 MHz	0.8 dB	Formula: ACLR limit – TT ACLR limit = 44.2 dB at 5 MHz ACLR limit = 49.2 dB at 10 MHz
6.5.3 Spurious emissions	Maximum level defined in tables 6.16 to 6.26	0 dB	Formula: Maximum limit + TT Add 0 to Maximum level in tables 6.16 to 6.26
6.6 Transmit intermodulation (interferer requirements) This tolerance applies to the stimulus and not the measurements defined in 6.5.2.1, 6.5.2.2 and 6.5.3.	Wanted signal level – interferer level = 30 dB	0 dB	Formula: Ratio + TT Wanted signal level – interferer level = 30 + 0 dB
6.7.1 EVM	EVM limit =17.5 % for a composite signal modulated only by QPSK EVM limit = 12.5 % for a composite signal modulated by QPSK and 16QAM	0 %	Formula: EVM limit + TT EVM limit = 17.5% for a composite signal modulated only by QPSK EVM limit = 12.5 % for a composite signal modulated by QPSK and 16QAM

6.7.2 Peak code Domain error	Peak code domain error limit = -33 dB	1.0 dB	Formula: Peak code domain error limit + TT Peak code domain error limit = -32 dB
6.7.3 Time alignment error in TX diversity	Max time alignment error = 0.25 T_c Min time alignment error = -0.25 T_c	0.1 T_c	Formula: Max time alignment error + TT Min time alignment error – TT Max time alignment error = 0.35 T_c Min time alignment error = -0.35 T_c
Annex H.3 Transmitted code power (absolute)	Absolute accuracy limit = Pout,code – 3 dB Pout,code + 3 dB	0.9 dB	Formula: Absolute accuracy limit –TT Absolute accuracy limit +TT Absolute accuracy limit: minimum power limit = -3.9 dB maximum power limit = +3.9 dB
Annex H.3 Transmitted code power (relative)	Relative accuracy limit = $\lvert P_{out,code1} - P_{out,code2} \rvert \leq$ 2 dB	0.2 dB	Formula: Relative accuracy limit + TT Relative accuracy limit = 2.2 dB
Annex H.4 Transmitted carrier power	total power dynamic range limit = 18 dB	0.3 dB	Formula: total power dynamic range limit – TT total power dynamic range limit = 17.7 dB

Table F.2: Derivation of Test Requirements (Receiver tests)

Test	Minimum Requirement in TS 25.104	Test Tolerance (TT)	Test Requirement in TS 25.141
7.2 Reference sensitivity	Reference sensitivity level = -121 dBm FER/BER limit = 0.001	0.7 dB	Formula: Reference sensitivity level + TT Reference sensitivity level = -120.3 dBm FER/BER limit is not changed
7.3 Dynamic range	Wanted signal level = -91 dBm AWGN level = -73 dBm/3.84 MHz	1.2 dB	Formula: Wanted signal level + TT AWGN level unchanged Wanted signal level = -89.8 dBm
7.4 Adjacent channel selectivity	Wanted signal level = -115 dBm W-CDMA interferer level = -52 dBm	0 dB	Formula: Wanted signal level + TT W-CDMA interferer level unchanged Wanted signal level = -115 dBm
7.5 Blocking characteristics	Wanted signal level = -115 dBm Interferer level See table 7.4a / 7.4b	0 dB	Formula: Wanted signal level + TT Interferer level unchanged Wanted signal level = -115 dBm
7.6 Intermod Characteristics	Wanted signal level = -115 dBm Interferer1 level (10 MHz offset CW) = -48 dBm Interferer2 level (20 MHz offset W-CDMA Modulated) = -48 dBm	0 dB	Formula: Wanted signal level + TT Interferer1 level unchanged Interferer2 level unchanged Wanted signal level = -115 dBm
7.7 Spurious Emissions	Maximum level defined in Table 7.7	0 dB	Formula: Maximum level + TT Add TT to Maximum level in table 7.7

Table F.3: Derivation of Test Requirements (Performance tests)

Test	Minimum Requirement in TS 25.104	Test Tolerance (TT)	Test Requirement in TS 25.141
8.2, Demodulation in static propagation condtion	Received E_b/N_0 values	0.4 dB	Minimum requirement + TT
8.3, Demodulation of DCH in multiplath fading conditons	Received E_b/N_0 values	0.6 dB	Minimum requirement + TT
8.4 Demodulation of DCH in moving propagation conditions	Received E_b/N_0 values	0.6 dB	Minimum requirement + TT
8.5 Demodulation of DCH in birth/death propagation conditions	Received E_b/N_0 values	0.6 dB	Minimum requirement + TT
8.8.1 RACH preamble detection in static propagation conditions	Received E_c/N_0 values	0.4dB	Minimum requirement + TT
8.8.2 RACH preamble detection in multipath fading case 3	Received E_c/N_0 values	0.6dB	Minimum requirement + TT
8.8.3 Demodulation of RACH message in static propagation conditions	Received E_b/N_0 values	0.4dB	Minimum requirement + TT
8.8.4 Demodulation of RACH message in multipath fading case 3	Received E_b/N_0 values	0.6dB	Minimum requirement + TT
8.9.3 Demodulation of CPCH message in static propagation conditions	Received E_b/N_0 values	0.4 dB	Minimum requirement + TT
8.9.4 Demodulation of CPCH message in multipath fading case 3	Received E_b/N_0 values	0.6 dB	Minimum requirement + TT
~~8.10 Site Selection Diversity Transmission (SSDT) Mode~~	~~$SIR_{target} + Q_{th} + 7.5$~~ ~~$SIR_{target} + Q_{th} - 7.5$~~	~~0.4 dB~~	~~$Q_{th} + 7.5 + TT$~~ ~~$Q_{th} + 7.5 - TT$~~

3GPP TSG RAN WG4 (Radio) Meeting #35 **R4-050386**

Athens, Greece 9 - 13 May 2005

CR-Form-v7

CHANGE REQUEST

⌘ **25.141** **CR** **369** ⌘ **rev** ⌘ Current version: **6.9.0** ⌘

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

Title:	⌘	Feature Clean Up: Removal of SSDT
Source:	⌘	3GPP TSG RAN WG4 (Radio)
Work item code:	⌘	TEI6
Date:	⌘	16/05/2005
Category:	⌘	**C**
Release:	⌘	Rel-6

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Rel-5	*(Release 5)*
Rel-6	*(Release 6)*

Reason for change:	⌘	In RAN#27 removal of some UTRAN features was agreed in order to simplify the specifications.
Summary of change:	⌘	SSDT is removed from the specification. **Isolated Impact Analysis** Functionality removed: SSDT Isolated impact statement: Since functionality is removed, UE implementations are not affected. Would affect UTRAN implementations supporting the removed functionality.
Consequences if not approved:	⌘	

Clauses affected:	⌘	4.1.4; 4.2.3; 8.10; Annex F			
		Y	**N**		
Other specs affected:	⌘		**X**	Other core specifications	⌘ 25.211, 25.214, 25.331, 25.423, 25.433, 25.922
			X	Test specifications	
			X	O&M Specifications	
Other comments:	⌘				

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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.

4.1.4 Measurement of performance requirement

Table 4.1B: Maximum Test System Uncertainty for Performance Requirements

Subclause	Maximum Test System Uncertainty[1]	Derivation of Test System Uncertainty
8.2, Demodulation in static propagation condition	± 0.4dB	Wanted/AWGN: ± 0.4dB (relative uncertainty for E_b/N_0) (AWGN: ±1dB)
8.3, Demodulation of DCH in multiplath fading conditions	± 0.6dB	Fader: ± 0.5dB Wanted/AWGN: ± 0.4dB (relative) Combined relative uncertainty for E_b/N_0: ± 0.6dB
8.4 Demodulation of DCH in moving propagation conditions	± 0.6dB	Fader: ± 0.5dB Wanted/AWGN: ± 0.4dB (relative) Combined relative uncertainty for E_b/N_0: ± 0.6dB
8.5 Demodulation of DCH in birth/death propagation conditions	± 0.6dB	Fader: ± 0.5dB Wanted/AWGN: ± 0.4dB (relative) Combined relative uncertainty for E_b/N_0: ± 0.6dB
8.8.1 RACH preamble detection in static propagation conditions	± 0.4dB	Wanted/AWGN: ± 0.4dB (relative uncertainty for E_c/N_0) (AWGN: ±1dB)
8.8.2 RACH preamble detection in multipath fading case 3	± 0.6dB	Fader: ± 0.5dB Wanted/AWGN: ± 0.4dB (relative) Combined relative uncertainty for E_c/N_0: ± 0.6dB
8.8.3 Demodulation of RACH message in static propagation conditions	± 0.4dB	Wanted/AWGN: ± 0.4dB (relative uncertainty for E_b/N_0) (AWGN: ±1dB)
8.8.4 Demodulation of RACH message in multipath fading case 3	± 0.6dB	Fader: ± 0.5dB Wanted/AWGN: ± 0.4dB (relative) Combined relative uncertainty for E_b/N_0: ± 0.6dB
8.9.3 Demodulation of CPCH message in static propagation conditions	± 0.4 dB	Wanted/AWGN: ± 0.4dB (relative uncertainty for E_b/N_0) (AWGN: ±1dB
8.9.4 Demodulation of CPCH message in multipath fading case 3	± 0.6 dB	Fader: ± 0.5dB Wanted/AWGN: ± 0.4dB (relative) Combined relative uncertainty for E_b/N_0: ± 0.6dB
~~8.10 Site Selection Diversity Transmission (SSDT) Mode~~	~~± 0.4dB~~	~~Wanted/AWGN: ± 0.4dB (relative) (AWGN: ±1dB)~~
Note 1: Only the overall stimulus error is considered here. The effect of errors in the BER/FER measurements due to finite test duration is not considered.		

--- next changed section ---

4.2.3 Performance requirement

Table 4.1E: Test Tolerances for Performance Requirements.

Subclause	Test Tolerance[1]
8.2, Demodulation in static propagation condtion	0.4dB
8.3, Demodulation of DCH in multiplath fading conditons	0.6dB
8.4 Demodulation of DCH in moving propagation conditions	0.6dB
8.5 Demodulation of DCH in birth/death propagation conditions	0.6dB
8.8.1 RACH preamble detection in static propagation conditions	0.4dB
8.8.2 RACH preamble detection in multipath fading case 3	0.6dB
8.8.3 Demodulation of RACH message in static propagation conditions	0.4dB
8.8.4 Demodulation of RACH message in multipath fading case 3	0.6dB
8.9.3 Demodulation of CPCH message in static propagation conditions	0.4dB
8.9.4 Demodulation of CPCH message in multipath fading case 3	0.6dB
~~8.10 Site Selection Diversity Transmission (SSDT) Mode~~	~~0.4dB~~
8.11.1 ACK false alarm in static propagation conditions	0.4dB
8.11.2 ACK false alarm in multipath fading conditions	0.6dB
8.11.3 ACK mis-detection in static propagation conditions	0.4dB
8.11.4 ACK mis-detection in multipath fading conditions	0.6dB
Note 1: Unless otherwise stated, the Test Tolerances are applied to the stimulus signal(s). See Annex F.	

--- next changed section ---

8.10 ~~Site Selection Diversity Transmission (SSDT) Mode~~Void

~~8.10.1 Definition and applicability~~

~~Site Selection Diversity Transmission (SSDT) mode is an optional feature of BS and is a macro diversity method in soft handover mode. In SSDT mode, the UE selects one of the cells from its active set to be "primary", all other active cells are classed as "non primary". The non primary cells switch off the DCH transmission. The primary cell ID code is delivered to active cells using uplink FBI field of DPCCH.~~

~~The requirements and this test apply only to Base Station, which has a function of SSDT mode.~~

~~8.10.2 Minimum requirements~~

~~According to the conditions specified in Table 8.28, the downlink DPDCH and DPCCH are properly transmitted or stopped.~~

Table 8.28: Parameters for SSDT mode test

Parameter	Unit	Test 1	Test 2	Test 3	Test 4
Cell ID of BS under test	-	A	A	A	A
SSDT Quality threshold, Q_{th}, set for radio link under test	dB	-3			
Target SIR, SIR_{target}, set for radio link under test	dB	3			
Uplink SIR	dB	SIR_{target} + Q_{th} +7.5	SIR_{target} + Q_{th} +7.5	SIR_{target} + Q_{th} -7.5	SIR_{target} + Q_{th} -7.5
Cell ID transmitted by UE	-	A	B	A	B
Transmission of downlink DPCCH	-	Yes	Yes	Yes	Yes
Transmission of downlink DPDCH	-	Yes	No	Yes	Yes

The reference for this requirement is in TS 25.104 clause 8.9.

8.10.3 Test purpose

To verify that downlink transmission reaction of BS to Layer 1 feedback signalling messages from UE.

8.10.4 Method of test

8.10.4.1 Initial conditions

Test environment: normal; see subclause 4.4.1.

RF channels to be tested: B, M and T; see subclause 4.8

1) Connect BS tester generating the wanted signal and an AWGN generator to the BS antenna connector as shown in Figure B. 13.

2) Disable inner loop power control.

3) Activate SSDT function using parameters specified in Table .8.28.

8.10.4.2 Procedure

1) Adjust the AWGN generator depending on the BS class under test at the BS input as follows:.

Wide Area: -84 dBm/3.84 MHz

Medium Range: -74 dBm/3.84 MHz

Local Area: -70 dBm/3.84 MHz

2) The characteristics of the wanted signal shall be configured as a UL reference measurement channel for 12.2kbps defined in annex A.

3) Adjust the level of the wanted signal so that required Uplink SIR specified in table 8.29 is achieved. The wanted signal level at the BS input should be adjusted to: -84-10*Log_{10}(SF)+10*Log_{10}(Uplink SIR to set) [dBm], where SF = 256.

4) Check downlink DCH, properly transmitted on or off, according to Table 8.29 under conditions of Test1 through Test4 with 3 types of Cell ID sets, “long”, ”medium” and “short”, respectively.

8.10.5 Test Requirements

According to the conditions specified in Table 8.29, the downlink DPDCH and DPCCH are properly transmitted or stopped.

Table 8.29: Parameters for SSDT mode test

Parameter	Unit	Test 1	Test 2	Test 3	Test 4
Cell ID of BS under test	-	A	A	A	A
SSDT Quality threshold, $Q_{th,}$ set for radio link under test	dB	-3			
Target SIR, $SIR_{target,}$ set in BS	dB	3			
Uplink SIR	dB	SIR_{target} + Q_{th} + 7.9	SIR_{target} + Q_{th} + 7.9	SIR_{target} + Q_{th} – 7.9	SIR_{target} + Q_{th} – 7.9
Cell ID transmitted by UE	-	A	B	A	B
Transmission of downlink DPCCH	-	Yes	Yes	Yes	Yes
Transmission of downlink DPDCH	-	Yes	No	Yes	Yes

--- next changed section ---

Annex F (informative): Derivation of Test Requirements

The Test Requirements in this specification have been calculated by relaxing the Minimum Requirements of the core specification using the Test Tolerances defined in subclause 4.2. When the Test Tolerance is zero, the Test Requirement will be the same as the Minimum Requirement. When the Test Tolerance is non-zero, the Test Requirements will differ from the Minimum Requirements, and the formula used for this relaxation is given in tables F.1, F.2 and F.3

Note that a formula for applying Test Tolerances is provided for all tests, even those with a test tolerance of zero. This is necessary in the case that the Test System uncertainty is greater than that allowed in subclause 4.1. In this event, the excess error shall be subtracted from the defined test tolerance in order to generate the correct tightened Test Requirements as defined in subclause 4.3.

For example, a Test System having 0.9 dB accuracy for test 6.2.1 Base Station maximum output power (which is 0.2 dB above the limit specified in subclause 4.) would subtract 0.2 dB from the Test Tolerance of 0.7 dB defined in subclause 4.2. This new test tolerance of 0.5 dB would then be applied to the Minimum Requirement using the formula defined in Table F.1 to give a new range of ±2.5 dB of the manufacturer's rated output power.

Using this same approach for the case where a test had a test tolerance of 0 dB, an excess error of 0.2 dB would result in a modified test tolerance of –0.2 dB.

Table F.1: Derivation of Test Requirements (Transmitter tests)

Test	Minimum Requirement in TS 25.104	Test Tolerance (TT)	Test Requirement in TS 25.141
6.2.1 Base station maximum output power	In normal conditions … within +2 dB and -2 dB of the manufacturer's rated output power In extreme conditions… within +2.5 dB and –2.5 dB of the manufacturer's rated output power	0.7 dB	Formula: Upper limit + TT Lower limit – TT In normal conditions … within +2.7 dB and –2.7 dB of the manufacturer's rated output power In extreme conditions… within +3.2 dB and –3.2 dB of the manufacturer's rated output power
6.2.2 CPICH Power accuracy	CPICH power shall be within ±2.1dB	0.8 dB	Formula: Upper limit + TT Lower limit – TT CPICH power shall be within ±2.9dB
6.3 Frequency error	Frequency error limit = 0.05 ppm	12 Hz	Formula: Frequency Error limit + TT Frequency Error limit = 0.05 ppm + 12 Hz
6.4.2 Power control steps	Lower and upper limits as specified in tables 6.9 and 6.10a	0.1 dB	Formula: Upper limits + TT Lower limits – TT 0.1 dB applied as above to tables 6.9 and 6.10a
6.4.3 Power control dynamic range	maximum power limit = BS maximum output power -3 dB minimum power limit = BS maximum output power –28 dB	1.1 dB	Formula: maximum power limit – TT minimum power limit + TT maximum power limit = BS maximum output power –4.1 dB minimum power limit = BS maximum output power –26.9 dB
6.4.4 Total power dynamic range	total power dynamic range limit = 18 dB	0.3 dB	Formula: total power dynamic range limit – TT total power dynamic range limit = 17.7 dB
6.4.5. IPDL time mask	maximum power limit = BS maximum output power –35 dB	0.7 dB	Formula: maximum power limit + TT maximum power limit = BS maximum output power – 34.3 dB
6.5.1 Occupied Bandwidth	occupied bandwidth limit = 5 MHz	0 kHz	Formula: Occupied bandwidth limit + TT Occupied bandwidth limit = 5 MHz
6.5.2.1 Spectrum emission mask	Maximum level defined in tables 6.11, 6.12, 6.13 and 6.14:	1.5 dB(0 dB for the additional Band II requirements)	Formula: Maximum level + TT Add 1.5 to Maximum level entries in tables 6.11, 6.12, 6.13 and 6.14.
6.5.2.2 Adjacent Channel Leakage power Ratio (ACLR)	ACLR limit = 45 dB at 5 MHz ACLR limit = 50 dB at 10 MHz	0.8 dB	Formula: ACLR limit – TT ACLR limit = 44.2 dB at 5 MHz ACLR limit = 49.2 dB at 10 MHz
6.5.3 Spurious emissions	Maximum level defined in tables 6.16 to 6.26	0 dB	Formula: Maximum limit + TT Add 0 to Maximum level in tables 6.16 to 6.26
6.6 Transmit intermodulation (interferer requirements) This tolerance applies to the stimulus and not the measurements defined in 6.5.2.1, 6.5.2.2 and 6.5.3.	Wanted signal level – interferer level = 30 dB	0 dB	Formula: Ratio + TT Wanted signal level – interferer level = 30 + 0 dB
6.7.1 EVM	EVM limit =17.5 % for a composite signal modulated only by QPSK EVM limit = 12.5 % for a composite signal modulated by QPSK and 16QAM	0 %	Formula: EVM limit + TT EVM limit = 17.5% for a composite signal modulated only by QPSK EVM limit = 12.5 % for a composite signal modulated by QPSK and 16QAM

6.7.2 Peak code Domain error	Peak code domain error limit = -33 dB	1.0 dB	Formula: Peak code domain error limit + TT Peak code domain error limit = -32 dB
6.7.3 Time alignment error in TX diversity	Max time alignment error = 0.25 T_c Min time alignment error = -0.25 T_c	0.1 T_c	Formula: Max time alignment error + TT Min time alignment error – TT Max time alignment error = 0.35 T_c Min time alignment error = -0.35 T_c
Annex H.3 Transmitted code power (absolute)	Absolute accuracy limit = Pout,code – 3 dB Pout,code + 3 dB	0.9 dB	Formula: Absolute accuracy limit –TT Absolute accuracy limit +TT Absolute accuracy limit: minimum power limit = -3.9 dB maximum power limit = +3.9 dB
Annex H.3 Transmitted code power (relative)	Relative accuracy limit = $\lvert P_{out,code1} - P_{out,code2} \rvert \leq 2$ dB	0.2 dB	Formula: Relative accuracy limit + TT Relative accuracy limit = 2.2 dB
Annex H.4 Transmitted carrier power	total power dynamic range limit = 18 dB	0.3 dB	Formula: total power dynamic range limit – TT total power dynamic range limit = 17.7 dB

Table F.2: Derivation of Test Requirements (Receiver tests)

Test	Minimum Requirement in TS 25.104	Test Tolerance (TT)	Test Requirement in TS 25.141
7.2 Reference sensitivity	Reference sensitivity level = -121 dBm FER/BER limit = 0.001	0.7 dB	Formula: Reference sensitivity level + TT Reference sensitivity level = -120.3 dBm FER/BER limit is not changed
7.3 Dynamic range	Wanted signal level = -91 dBm AWGN level = -73 dBm/3.84 MHz	1.2 dB	Formula: Wanted signal level + TT AWGN level unchanged Wanted signal level = -89.8 dBm
7.4 Adjacent channel selectivity	Wanted signal level = -115 dBm W-CDMA interferer level = -52 dBm	0 dB	Formula: Wanted signal level + TT W-CDMA interferer level unchanged Wanted signal level = -115 dBm
7.5 Blocking characteristics	Wanted signal level = -115 dBm Interferer level See table 7.4a / 7.4b	0 dB	Formula: Wanted signal level + TT Interferer level unchanged Wanted signal level = -115 dBm
7.6 Intermod Characteristics	Wanted signal level = -115 dBm Interferer1 level (10 MHz offset CW) = -48 dBm Interferer2 level (20 MHz offset W-CDMA Modulated) = -48 dBm	0 dB	Formula: Wanted signal level + TT Interferer1 level unchanged Interferer2 level unchanged Wanted signal level = -115 dBm
7.7 Spurious Emissions	Maximum level defined in Table 7.7	0 dB	Formula: Maximum level + TT Add TT to Maximum level in table 7.7

Table F.3: Derivation of Test Requirements (Performance tests)

Test	Minimum Requirement in TS 25.104	Test Tolerance (TT)	Test Requirement in TS 25.141
8.2, Demodulation in static propagation condtion	Received E_b/N_0 values	0.4 dB	Minimum requirement + TT
8.3, Demodulation of DCH in multiplath fading conditons	Received E_b/N_0 values	0.6 dB	Minimum requirement + TT
8.4 Demodulation of DCH in moving propagation conditions	Received E_b/N_0 values	0.6 dB	Minimum requirement + TT
8.5 Demodulation of DCH in birth/death propagation conditions	Received E_b/N_0 values	0.6 dB	Minimum requirement + TT
8.8.1 RACH preamble detection in static propagation conditions	Received E_c/N_0 values	0.4dB	Minimum requirement + TT
8.8.2 RACH preamble detection in multipath fading case 3	Received E_c/N_0 values	0.6dB	Minimum requirement + TT
8.8.3 Demodulation of RACH message in static propagation conditions	Received E_b/N_0 values	0.4dB	Minimum requirement + TT
8.8.4 Demodulation of RACH message in multipath fading case 3	Received E_b/N_0 values	0.6dB	Minimum requirement + TT
8.9.3 Demodulation of CPCH message in static propagation conditions	Received E_b/N_0 values	0.4 dB	Minimum requirement + TT
8.9.4 Demodulation of CPCH message in multipath fading case 3	Received E_b/N_0 values	0.6 dB	Minimum requirement + TT
~~8.10 Site Selection Diversity Transmission (SSDT) Mode~~	~~$SIR_{target} + Q_{th} + 7.5$~~ ~~$SIR_{target} + Q_{th} - 7.5$~~	~~0.4 dB~~	~~$Q_{th} + 7.5 + TT$~~ ~~$Q_{th} + 7.5 - TT$~~
8.11.1 ACK false alarm in static propagation conditions	Received E_c/N_0 values	0.4 dB	Minimum requirement + TT
8.11.2 ACK false alarm in multipath fading conditions	Received E_c/N_0 values	0.6 dB	Minimum requirement + TT
8.11.3 ACK mis-detection in static propagation conditions	Received E_c/N_0 values	0.4 dB	Minimum requirement + TT
8.11.4 ACK mis-detection in multipath fading conditions	Received E_c/N_0 values	0.6 dB	Minimum requirement + TT