

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

RP-030330

Title CRs (R99 and Rel-4/Rel-5 Category A) to TS 25.423 and 25.433 on Corrections to Tx Diversity
Source TSG RAN WG3
Agenda Item 7.3.6

RAN3 Tdoc	Spec	curr. Vers.	new Vers.	REL	CR	Rev	Cat	Title	Work item
R3-030859	25.423	3.13.0	3.14.0	R99	839	1	F	Corrections to Tx Diversity	TEI
R3-030860	25.423	4.8.0	4.9.0	REL-4	840	1	A	Corrections to Tx Diversity	TEI
R3-030861	25.423	5.5.0	5.6.0	REL-5	833	2	A	Corrections to Tx Diversity	TEI
R3-030821	25.433	3.13.0	3.14.0	R99	863	-	F	Corrections to Tx Diversity	TEI
R3-030822	25.433	4.8.0	4.9.0	REL-4	864	-	A	Corrections to Tx Diversity	TEI
R3-030823	25.433	5.4.0	5.5.0	REL-5	851	1	A	Corrections to Tx Diversity	TEI

Note: These CRs were considered as just 'technically correct' CRs by RAN WG3 since Nokia and Motorola wanted to check until RAN #20 whether they could agree to the R99 and REL-4 CRs.

CHANGE REQUEST

25.423 CR 833 # rev **2** # Current version: **5.5.0**

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

Proposed change affects: UICC apps# ME Radio Access Network Core Network

Title:	# Corrections to Tx Diversity		
Source:	# RAN WG3		
Work item code:	# TEI	Date:	# 19/05/2003
Category:	# A	Release:	# Rel-5
	Use <u>one</u> of the following categories:		Use <u>one</u> of the following releases:
	F (correction)		2 (GSM Phase 2)
	A (corresponds to a correction in an earlier release)		R96 (Release 1996)
	B (addition of feature),		R97 (Release 1997)
	C (functional modification of feature)		R98 (Release 1998)
	D (editorial modification)		R99 (Release 1999)
	Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Rel-4 (Release 4)
			Rel-5 (Release 5)
			Rel-6 (Release 6)

Reason for change:	# The current power definitons are not considering the case, when a Node B is in Tx diversity mode.
Summary of change:	# It is clarified that in case of TX diversity, the power settings refer to the sum for main and diversity branch.
	<u>Impact Analysis:</u> Impact Assessment towards the previous version of the specification (same release): This CR has <i>impact</i> with the previous version of the specification (same release).
	This CR has impact under functional point of view. Namely the function of power setting in case of TX diversity can be affected, if an implementation was based on a "per branch power" instead of the "sum of powers".
	This CR has no impact under protocol point of view.
Consequences if not approved:	# The interpretation of power settings in case of TX diversity is ambiguous. The RNC is not in full control of the cell set up.

Clauses affected:	# 2, 3.1, 9.2.1.21A, 9.2.1.44						
Other specs	<table border="1" style="display: inline-table; vertical-align: middle;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;">X</td> <td></td> </tr> </table>	Y	N	X		Other core specifications	# TS 25.423 R99 CR839r1 TS 25.423 REL-4 CR840r1 TS 25.433 R99 CR863 TS 25.433 REL-4 CR864 TS 25.433 REL-5 CR851r1
Y	N						
X							

affected:

<input checked="" type="checkbox"/>	Test specifications
<input checked="" type="checkbox"/>	O&M Specifications

Other comments: ☞

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>.

Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ☞ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

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For a specific reference, subsequent revisions do not apply.

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[1] 3GPP TS 23.003: "Numbering, addressing and identification".

/*Partly omitted*/

[41] 3GPP TS 25.321: "MAC protocol specification".

[42] [3GPP TS 25.433: "UTRAN Iub interface NBAP signalling"](#)

3 Definitions, Symbols and Abbreviations

3.1 Definitions

For the purposes of the present document, the following terms and definitions apply.

Node B TX Diversity mode: A Node B is in TX diversity mode when the [FDD - CPICH transmit diversity indicator, P-CCPCH STTD indicator and the primary and secondary SCH TSTD indicators] [3.84 Mcps TDD - P-CCPCH SCTD indicator and SCH TSTD indicator] [1.28 Mcps TDD - P-CCPCH TSTD or SCTD indicator and DwPCH TSTD indicator] are enabled. (See [42] for the description of the indicators.)

/*Partly omitted*/

9.2.1.21A DL Power

The *DL Power* IE indicates a power level relative to the [FDD - primary CPICH power] [TDD - PCCPCH power] configured in a cell [FDD - If referred to a DPCH, it indicates the power of the transmitted DPDCH symbols]. In Node B TX diversity mode, the parameter indicates the sum for all branches.

[TDD - If referred to a DPCH, it indicates the power of a spreading factor 16 code, the power for a spreading factor 1 code would be 12 dB higher].

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
DL Power			INTEGER (-350..150)	Value = DL Power /10 Unit dB Range -35.0 .. +15.0 Step 0.1dB

/*Partly omitted*/

9.2.1.43 PCCPCH Power

Primary CCPCH power is the power that shall be used for reference power value in a TDD cell. The reference point is the antenna connector. In Node B TX diversity mode, the parameter indicates the sum for all branches.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
PCCPCH Power			NTEGER (-150..400,...)	Unit dBm Range -15.0 to 40.0 dBm, Step size 0.1 dB. -15.0 shall indicate $P_{\leq} -15\text{dBm}$ +40.0 shall indicate $P_{\geq} 40\text{dBm}$.

9.2.1.44 Primary CPICH Power

Primary CPICH power is the power that is used for transmitting the Primary CPICH in a cell. The reference point is the antenna connector. [In Node B TX diversity mode, the parameter indicates the sum for all branches.](#)

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Primary CPICH Power			INTEGER (-100..500)	Value = Primary CPICH Power/10 Unit dBm Range -10.0..+50.0 Step 0.1 dB

/*Partly omitted*/

CHANGE REQUEST

25.423 CR 839 # 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 Radio Access Network Core Network

Title:	# Corrections to Tx Diversity		
Source:	# RAN WG3		
Work item code:	# TEI	Date:	# 19/05/2003
Category:	# F	Release:	# R99
	Use <u>one</u> of the following categories:		Use <u>one</u> of the following releases:
	F (correction)	2	(GSM Phase 2)
	A (corresponds to a correction in an earlier release)	R96	(Release 1996)
	B (addition of feature),	R97	(Release 1997)
	C (functional modification of feature)	R98	(Release 1998)
	D (editorial modification)	R99	(Release 1999)
	Detailed explanations of the above categories can be found in 3GPP TR 21.900 .	Rel-4	(Release 4)
		Rel-5	(Release 5)
		Rel-6	(Release 6)

Reason for change:	# The current power definitons are not considering the case, when a Node B is in Tx diversity mode.
Summary of change:	# It is clarified that in case of TX diversity, the power settings refer to the sum for main and diversity branch.
	<u>Impact Analysis:</u> Impact Assessment towards the previous version of the specification (same release): This CR has <i>impact</i> with the previous version of the specification (same release). This CR has impact under functional point of view. Namely the function of power setting in case of TX diversity can be affected, if an implementation was based on a "per branch power" instead of the "sum of powers". This CR has no impact under protocol point of view.
Consequences if not approved:	# The interpretation of power settings in case of TX diversity is ambiguous. The RNC is not in full control of the cell set up.

Clauses affected:	# 2, 3.1, 9.2.1.21A, 9.2.1.44						
Other specs	<table border="1" style="display: inline-table; vertical-align: middle;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;">X</td> <td></td> </tr> </table>	Y	N	X		Other core specifications	# TS 25.423 REL-4 CR840r1 TS 25.423 REL-5 CR833r2 TS 25.433 R99 CR863 TS 25.433 REL-4 CR864 TS 25.433 REL-5 CR851r1
Y	N						
X							

affected:

<input checked="" type="checkbox"/>	Test specifications
<input checked="" type="checkbox"/>	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.

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[1] 3GPP TS 23.003: "Numbering, addressing and identification".

/*Partly omitted*/

[30] 3GPP TS 25.425: "UTRAN Iur and Iub Interface User Plane Protocols for Common Transport Channel data streams".

[\[31\] 3GPP TS 25.433: "UTRAN Iub interface NBAP signalling"](#)

3 Definitions, Symbols and Abbreviations

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/*Partly omitted*/

9.2.1.21A DL Power

The *DL Power* IE indicates a power level relative to the [FDD - primary CPICH power] [TDD - PCCPCH power] configured in a cell [FDD - If referred to a DPCH, it indicates the power of the transmitted DPDCH symbols]. [In Node B TX diversity mode, the parameter indicates the sum for all branches.](#)

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
DL Power			INTEGER (-350..150)	Value = DL Power /10 Unit dB Range -35.0 .. +15.0 Step 0.1dB

/*Partly omitted*/

9.2.1.43 PCCPCH Power

Primary CCPCH power is the power that shall be used for reference power value in a TDD cell. [The reference point is the antenna connector. In Node B TX diversity mode, the parameter indicates the sum for all branches.](#)

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
PCCPCH Power			INTEGER (-150..400,...)	Unit dBm Range -15.0 to 40.0 dBm, Step size 0.1 dB. -15.0 shall indicate $P_{\leq} -15\text{dBm}$ +40.0 shall indicate $P_{\geq} 40\text{dBm}$.

9.2.1.44 Primary CPICH Power

Primary CPICH power is the power that is used for transmitting the Primary CPICH in a cell. The reference point is the antenna connector. [In Node B TX diversity mode, the parameter indicates the sum for all branches.](#)

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Primary CPICH Power			INTEGER (-100..500)	Value = Primary CPICH Power/10 Unit dBm Range -10.0..+50.0 Step 0.1 dB

/*Partly omitted*/

CHANGE REQUEST

25.423 CR 840 # rev **1** # Current version: **4.8.0**

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

Proposed change affects: UICC apps# ME Radio Access Network Core Network

Title:	# Corrections to Tx Diversity				
Source:	# RAN WG3				
Work item code:	# TEI	Date:	# 19/05/2003		
Category:	# A	Release:	# Rel-4		
	Use <u>one</u> of the following categories:		Use <u>one</u> of the following releases:		
	F (correction)		2 (GSM Phase 2)		
	A (corresponds to a correction in an earlier release)		R96 (Release 1996)		
	B (addition of feature),		R97 (Release 1997)		
	C (functional modification of feature)		R98 (Release 1998)		
	D (editorial modification)		R99 (Release 1999)		
	Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Rel-4 (Release 4)		
			Rel-5 (Release 5)		
			Rel-6 (Release 6)		

Reason for change:	# The current power definitons are not considering the case, when a Node B is in Tx diversity mode.
Summary of change:	# It is clarified that in case of TX diversity, the power settings refer to the sum for main and diversity branch. <u>Impact Analysis:</u> Impact Assessment towards the previous version of the specification (same release): This CR has <i>impact</i> with the previous version of the specification (same release). This CR has impact under functional point of view. Namely the function of power setting in case of TX diversity can be affected, if an implementation was based on a "per branch power" instead of the "sum of powers". This CR has no impact under protocol point of view.
Consequences if not approved:	# The interpretation of power settings in case of TX diversity is ambiguous. The RNC is not in full control of the cell set up.

Clauses affected:	# 2, 3.1, 9.2.1.21A, 9.2.1.44				
Other specs	#				
	<table border="1" style="display: inline-table; vertical-align: middle;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;">X</td> <td></td> </tr> </table>	Y	N	X	
Y	N				
X					
Other core specifications	# TS 25.423 R99 CR839r1 TS 25.423 REL-5 CR833r2 TS 25.433 R99 CR863 TS 25.433 REL-4 CR864 TS 25.433 REL-5 CR851r1				

affected:

<input checked="" type="checkbox"/>	Test specifications
<input checked="" type="checkbox"/>	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.

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[1] 3GPP TS 23.003: "Numbering, addressing and identification".

/*Partly omitted*/

[32] 3GPP TS 25.425: "UTRAN Iur and Iub Interface User Plane Protocols for Common Transport Channel data streams".

[\[33\] 3GPP TS 25.433: "UTRAN Iub interface NBAP signalling"](#)

3 Definitions, Symbols and Abbreviations

3.1 Definitions

For the purposes of the present document, the following terms and definitions apply.

Node B TX Diversity mode: A Node B is in TX diversity mode when the [\[FDD - CPICH transmit diversity indicator, P-CCPCH STTD indicator and the primary and secondary SCH TSTD indicators\]](#) [\[3.84 Mcps TDD - P-CCPCH SCTD indicator and SCH TSTD indicator\]](#) [\[1.28 Mcps TDD - P-CCPCH TSTD or SCTD indicator and DwPCH TSTD indicator\]](#) are enabled. (See [\[33\]](#) for the description of the indicators.)

/*Partly omitted*/

9.2.1.21A DL Power

The *DL Power* IE indicates a power level relative to the [\[FDD - primary CPICH power\]](#) [\[TDD - PCCPCH power\]](#) configured in a cell [\[FDD - If referred to a DPCH, it indicates the power of the transmitted DPDCH symbols\]](#). [In Node B TX diversity mode, the parameter indicates the sum for all branches.](#)

[\[TDD - If referred to a DPCH, it indicates the power of a spreading factor 16 code, the power for a spreading factor 1 code would be 12 dB higher\]](#).

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
DL Power			INTEGER (-350..150)	Value = DL Power /10 Unit dB Range -35.0 .. +15.0 Step 0.1dB

/*Partly omitted*/

9.2.1.43 PCCPCH Power

Primary CCPCH power is the power that shall be used for reference power value in a TDD cell. [The reference point is the antenna connector. In Node B TX diversity mode, the parameter indicates the sum for all branches.](#)

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
PCCPCH Power			INTEGER (-150..400,...)	Unit dBm Range -15.0 to 40.0 dBm, Step size 0.1 dB. -15.0 shall indicate $P_{\leq} -15\text{dBm}$ +40.0 shall indicate $P_{\geq} 40\text{dBm}$.

9.2.1.44 Primary CPICH Power

Primary CPICH power is the power that is used for transmitting the Primary CPICH in a cell. The reference point is the antenna connector. [In Node B TX diversity mode, the parameter indicates the sum for all branches.](#)

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Primary CPICH Power			INTEGER (-100..500)	Value = Primary CPICH Power/10 Unit dBm Range -10.0..+50.0 Step 0.1 dB

/*Partly omitted*/

CHANGE REQUEST

25.433 CR 851 # rev **1** # Current version: **5.4.0**

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

Proposed change affects: UICC apps# ME Radio Access Network Core Network

Title:	# Corrections to Tx Diversity				
Source:	# RAN WG3				
Work item code:	# TEI	Date:	# 19/05/2003		
Category:	# A	Release:	# Rel-5		
	Use <u>one</u> of the following categories:		Use <u>one</u> of the following releases:		
	F (correction)		2 (GSM Phase 2)		
	A (corresponds to a correction in an earlier release)		R96 (Release 1996)		
	B (addition of feature),		R97 (Release 1997)		
	C (functional modification of feature)		R98 (Release 1998)		
	D (editorial modification)		R99 (Release 1999)		
	Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Rel-4 (Release 4)		
			Rel-5 (Release 5)		
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Reason for change:	# The current power definitions are not considering the case, when a Node B is in Tx diversity mode.
Summary of change:	# It is clarified that in case of Tx Diversity, the power settings refer to the sum for main and diversity branch. <u>Impact Analysis:</u> Impact Assessment towards the previous version of the specification (same release): This CR has <i>impact</i> with the previous version of the specification (same release). This CR has impact under functional point of view. Namely the function of power setting in case of TX diversity can be affected, if an implementation was based on a “per branch power” instead of the “sum of powers”. This CR has no impact under protocol point of view.
Consequences if not approved:	# The interpretation of power settings in case of TX diversity is ambiguous. The RNC is not in full control of the cell set up.

Clauses affected:	# 3.1, 9.2.1.21, 9.2.1.39, 9.2.1.40, 9.2.1.46A, 9.2.1.49A, 9.2.2.D, 9.2.2.33, 9.2.3.5B, 9.2.3.5E, 9.2.3.9				
Other specs	#				
	<table border="1" style="display: inline-table; vertical-align: middle;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;">X</td> <td></td> </tr> </table> Other core specifications # TS 25.423 R99 CR839r1 TS 25.423 REL-4 CR840r1 TS 25.423 REL-5 CR833r2 TS 25.433 R99 CR863	Y	N	X	
Y	N				
X					

affected:

X	
X	

Test specifications
O&M Specifications

TS 25.433 REL-4 CR864

Other comments: ☞

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

9.2.1.21 DL Power

The *DL Power* IE indicates a power level relative to the [FDD - primary CPICH power] [TDD - primary CCPCH power] configured in a cell. [FDD - If referred to a DPCH, it indicates the power of the transmitted DPDCH symbols.] [FDD - If referred to a DL-DPCCH for CPCH, it indicates the power of the transmitted pilot symbols]. [In Node B TX diversity mode, the parameter indicates the sum for all branches.](#)

[TDD - If referred to a DPCH, it indicates the power of a spreading factor 16 code, the power for a spreading factor 1 code would be 12 dB higher].

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
DL Power			INTEGER (-350..150)	Value = DL Power /10 Unit: dB Range: -35.0 .. +15.0 dB Step: 0.1dB

/*Partly omitted*/

9.2.1.39 Maximum DL Power Capability

This parameter indicates the maximum DL power capability for a local cell or a Power Local Cell Group within the Node B. The reference point -is the antenna connector. [In Node B TX diversity mode, the parameter indicates the sum for all branches.](#)

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Maximum DL Power Capability			INTEGER (0..500)	Unit: dBm Range: 0..50 dBm Step: 0.1 dB

/*Partly omitted*/

9.2.1.40 Maximum Transmission Power

The Maximum Transmission Power is the maximum power for all downlink channels added together, that is allowed to be used simultaneously in a cell. The reference point is the antenna connector. [In Node B TX diversity mode, the parameter indicates the sum for all branches.](#)

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Maximum Transmission Power			INTEGER (0..500)	Unit: dBm Range: 0..50 Step: 0.1 dB

/*Partly omitted*/

9.2.1.46A Minimum DL Power Capability

This parameter indicates the minimum DL power capability for a local cell within the Node B. The reference point is the antenna connector. [In Node B TX diversity mode, the parameter indicates the sum for all branches.](#)

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Minimum DL Power Capability			INTEGER (0..800)	Unit: dBm Range: -30 .. +50 dBm Step: 0.1 dB

/*Partly omitted*/

9.2.1.49A PICH Power

The *PICH Power* IE indicates a power level relative to the [FDD - Primary CPICH power] [TDD - Primary CCPCH power] configured in a cell. [In Node B TX diversity mode, the parameter indicates the sum for all branches.](#)

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
PICH Power			INTEGER (-10..+5)	Unit: dB Range: -10 .. +5 dB Step: 1dB

/*Partly omitted*/

9.2.2.D AICH Power

The *AICH Power* IE indicates a power level (measured as the power per transmitted acquisition indicator when several AIs are transmitted in parallel) relative to the primary CPICH power configured in a cell. [In Node B TX diversity mode, the parameter indicates the sum for all branches.](#)

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
AICH Power			INTEGER (-22..+5)	Unit: dB Range: -22 .. +5 dB Step: 1 dB

/*Partly omitted*/

9.2.2.33 Primary CPICH Power

The Primary CPICH power is the power that shall be used for transmitting the P-CPICH in a cell. The reference point is the antenna connector. [In Node B TX diversity mode, the parameter indicates the sum for all branches.](#)

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Primary CPICH Power			INTEGER (-100..500)	Value = Primary CPICH Power/10 Unit: dBm Range: -10.0..+50.0 dBm Step: 0.1 dB

/*Partly omitted*/

9.2.3.5B DwPCH Power

DwPCH Power is the power that shall be used for transmitting the DwPCH in a cell. [The reference point is the antenna connector. In Node B TX diversity mode, the parameter indicates the sum for all branches.](#)

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
DwPCH Power			INTEGER (-150..+400,...)	Unit: dBm Range: -15 ..+40 dBm Step: 0.1 dB

/*Partly omitted*/

9.2.3.5E Max FPACH Power

Max FPACH Power is the maximum power that shall be used for transmitting the FPACH in a cell. [The reference point is the antenna connector. In Node B TX diversity mode, the parameter indicates the sum for all branches.](#)

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
FPACH Power			INTEGER (-150..+400,...)	Unit: dBm Range: -15 ..+40 dBm Step: 0.1 dB

/*Partly omitted*/

9.2.3.9 PCCPCH Power

The Primary CCPCH power is the power that shall be used for transmitting the P CCPCH in a cell. The P CCPCH power is the reference power in a TDD-cell. The reference point is the antenna connector. [In Node B TX diversity mode, the parameter indicates the sum for all branches.](#)

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
PCCPCH Power			INTEGER (-15..+40,...)	Unit: dBm Range: -15 ..+40 dBm Step: 0.1 dB

CHANGE REQUEST

25.433 CR 863 # rev - # Current version: **3.13.0**

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

Proposed change affects: UICC apps# ME Radio Access Network Core Network

Title:	# Corrections to Tx Diversity		
Source:	# RAN WG3		
Work item code:	# TEI	Date:	# 19/05/2003
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:	# The current power definitions are not considering the case, when a Node B is in Tx diversity mode.
Summary of change:	# It is clarified that in case of Tx Diversity, the power settings refer to the sum for main and diversity branch. <u>Impact Analysis:</u> Impact Assessment towards the previous version of the specification (same release): This CR has <i>impact</i> with the previous version of the specification (same release). This CR has impact under functional point of view. Namely the function of power setting in case of TX diversity can be affected, if an implementation was based on a “per branch power” instead of the “sum of powers”. This CR has no impact under protocol point of view.
Consequences if not approved:	# The interpretation of power settings in case of TX diversity is ambiguous. The RNC is not in full control of the cell set up.

Clauses affected:	# 3.1, 9.2.1.21, 9.2.1.39. 9.2.1.40, 9.2.1.46A, 9.2.1.49A, 9.2.2.D, 9.2.2.33, 9.2.3.9						
Other specs	<table border="1" style="display: inline-table; vertical-align: middle;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;">X</td> <td></td> </tr> </table> Other core specifications	Y	N	X		#	TS 25.423 R99 CR839r1 TS 25.423 REL-4 CR840r1 TS 25.423 REL-5 CR833r2 TS 25.433 REL-4 CR864 TS 25.433 REL-5 CR851r1
Y	N						
X							

affected:

<input checked="" type="checkbox"/>	Test specifications
<input checked="" type="checkbox"/>	O&M Specifications

Other comments: ☞

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>.

Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ☞ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

3 Definitions, Symbols and Abbreviations

3.1 Definitions

For the purposes of the present document, the following terms and definitions apply.

Node B TX Diversity mode: A Node B is in TX diversity mode when the [FDD - CPICH transmit diversity indicator, P-CCPCH STTD indicator and the primary and secondary SCH TSTD indicators] [TDD - P-CCPCH STTD indicator and SCH TSTD indicator] are enabled.

/*Partly omitted*/

9.2.1.21 DL Power

The *DL Power* IE indicates a power level relative to the [FDD - primary CPICH power] [TDD - primary CCPCH power] configured in a cell. [FDD - If referred to a DPCH, it indicates the power of the transmitted DPDCH symbols.] [FDD - If referred to a DL-DPCCH for CPCH, it indicates the power of the transmitted pilot symbols]. [In Node B TX diversity mode, the parameter indicates the sum for all branches.](#)

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
DL Power			INTEGER (-350..150)	Value = DL Power /10 Unit: dB Range: -35.0 .. +15.0 dB Step: 0.1dB

/*Partly omitted*/

9.2.1.39 Maximum DL Power Capability

This parameter indicates the maximum DL power capability for a local cell within the Node B. The reference point is the antenna connector. [In Node B TX diversity mode, the parameter indicates the sum for all branches.](#)

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Maximum DL Power Capability			INTEGER (0..500)	Unit: dBm Range: 0..50 dBm Step: 0.1 dB

/*Partly omitted*/

9.2.1.40 Maximum Transmission Power

The Maximum Transmission Power is the maximum power for all downlink channels added together, that is allowed to be used simultaneously in a cell. The reference point is the antenna connector. [In Node B TX diversity mode, the parameter indicates the sum for all branches.](#)

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Maximum Transmission Power			INTEGER (0..500)	Unit: dBm Range: 0..50 Step: 0.1 dB

/*Partly omitted*/

9.2.1.46A Minimum DL Power Capability

This parameter indicates the minimum DL power capability for a local cell within the Node B. The reference point is the antenna connector. [In Node B TX diversity mode, the parameter indicates the sum for all branches.](#)

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Minimum DL Power Capability			INTEGER (0..800)	Unit: dBm Range: -30 .. +50 dBm Step: 0.1 dB

/*Partly omitted*/

9.2.1.49A PICH Power

The *PICH Power* IE indicates a power level relative to the [FDD - Primary CPICH power] [TDD - Primary CCPCH power] configured in a cell. [In Node B TX diversity mode, the parameter indicates the sum for all branches.](#)

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
PICH Power			INTEGER (-10..+5)	Unit: dB Range: -10 .. +5 dB Step: 1dB

/*Partly omitted*/

9.2.2.D AICH Power

The *AICH Power* IE indicates a power level (measured as the power per transmitted acquisition indicator when several AIs are transmitted in parallel) relative to the primary CPICH power configured in a cell. [In Node B TX diversity mode, the parameter indicates the sum for all branches.](#)

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
AICH Power			INTEGER (-22..+5)	Unit: dB Range: -22 .. +5 dB Step: 1 dB

/*Partly omitted*/

9.2.2.33 Primary CPICH Power

The Primary CPICH power is the power that shall be used for transmitting the P-CPICH in a cell. The reference point is the antenna connector. [In Node B TX diversity mode, the parameter indicates the sum for all branches.](#)

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Primary CPICH Power			INTEGER (-100..500)	Value = Primary CPICH Power/10 Unit: dBm Range: -10.0..+50.0 dBm Step: 0.1 dB

/*Partly omitted*/

9.2.3.9 PCCPCH Power

The Primary CCPCH power is the power that shall be used for transmitting the P CCPCH in a cell. The P CCPCH power is the reference power in a TDD-cell. The reference point is the antenna connector. [In Node B TX diversity mode, the parameter indicates the sum for all branches.](#)

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
PCCPCH Power			INTEGER (-15..+40,...)	Unit: dBm Range: -15 ..+40 dBm Step: 0.1 dB

CHANGE REQUEST

25.433 CR 864 # rev - # Current version: 4.8.0

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

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	# Corrections to Tx Diversity		
Source:	# RAN WG3		
Work item code:	# TEI	Date:	# 19/05/2003
Category:	# A	Release:	# Rel-4
	Use <u>one</u> of the following categories:		Use <u>one</u> of the following releases:
	F (correction)		2 (GSM Phase 2)
	A (corresponds to a correction in an earlier release)		R96 (Release 1996)
	B (addition of feature),		R97 (Release 1997)
	C (functional modification of feature)		R98 (Release 1998)
	D (editorial modification)		R99 (Release 1999)
	Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Rel-4 (Release 4)
			Rel-5 (Release 5)
			Rel-6 (Release 6)

Reason for change:	# The current power definitions are not considering the case, when a Node B is in Tx diversity mode.
Summary of change:	# It is clarified that in case of Tx Diversity, the power settings refer to the sum for main and diversity branch.
	<u>Impact Analysis:</u> Impact Assessment towards the previous version of the specification (same release): This CR has <i>impact</i> with the previous version of the specification (same release).
	This CR has impact under functional point of view. Namely the function of power setting in case of TX diversity can be affected, if an implementation was based on a “per branch power” instead of the “sum of powers”.
	This CR has no impact under protocol point of view.
Consequences if not approved:	# The interpretation of power settings in case of TX diversity is ambiguous. The RNC is not in full control of the cell set up.

Clauses affected:	# 3.1, 9.2.1.21, 9.2.1.39, 9.2.1.40, 9.2.1.46A, 9.2.1.49A, 9.2.2.D, 9.2.2.33, 9.2.3.5B, 9.2.3.5E, 9.2.3.9						
Other specs	<table border="1" style="display: inline-table; vertical-align: middle;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;">X</td> <td></td> </tr> </table>	Y	N	X		Other core specifications	# TS 25.423 R99 CR839r1 TS 25.423 REL-4 CR840r1 TS 25.423 REL-5 CR833r2 TS 25.433 R99 CR863
Y	N						
X							

affected:

X	
X	

Test specifications
O&M Specifications

TS 25.433 REL-5 CR851r1

Other comments: ⌘

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>.

Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

3 Definitions, Symbols and Abbreviations

3.1 Definitions

For the purposes of the present document, the following terms and definitions apply.

Node B TX Diversity mode: A Node B is in TX diversity mode when the [FDD - CPICH transmit diversity indicator, P-CCPCH STTD indicator and the primary and secondary SCH TSTD indicators] [3.84 Mcps TDD - P-CCPCH STTD indicator and SCH TSTD indicator] [1.28 Mcps TDD - P-CCPCH TSTD or SCTD indicator and DwPCH TSTD indicator] are enabled.

/*Partly omitted*/

9.2.1.21 DL Power

The *DL Power* IE indicates a power level relative to the [FDD - primary CPICH power] [TDD - primary CCPCH power] configured in a cell. [FDD - If referred to a DPCH, it indicates the power of the transmitted DPDCH symbols.] [FDD - If referred to a DL-DPCCH for CPCH, it indicates the power of the transmitted pilot symbols]. [In Node B TX diversity mode, the parameter indicates the sum for all branches.](#)

[TDD - If referred to a DPCH, it indicates the power of a spreading factor 16 code, the power for a spreading factor 1 code would be 12 dB higher].

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
DL Power			INTEGER (-350..150)	Value = DL Power /10 Unit: dB Range: -35.0 .. +15.0 dB Step: 0.1dB

/*Partly omitted*/

9.2.1.39 Maximum DL Power Capability

This parameter indicates the maximum DL power capability for a local cell within the Node B. The reference point is the antenna connector. [In Node B TX diversity mode, the parameter indicates the sum for all branches.](#)

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Maximum DL Power Capability			INTEGER (0..500)	Unit: dBm Range: 0..50 dBm Step: 0.1 dB

/*Partly omitted*/

9.2.1.40 Maximum Transmission Power

The Maximum Transmission Power is the maximum power for all downlink channels added together, that is allowed to be used simultaneously in a cell. The reference point is the antenna connector. [In Node B TX diversity mode, the parameter indicates the sum for all branches.](#)

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Maximum Transmission Power			INTEGER (0..500)	Unit: dBm Range: 0..50 Step: 0.1 dB

/*Partly omitted*/

9.2.1.46A Minimum DL Power Capability

This parameter indicates the minimum DL power capability for a local cell within the Node B. The reference point is the antenna connector. [In Node B TX diversity mode, the parameter indicates the sum for all branches.](#)

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Minimum DL Power Capability			INTEGER (0..800)	Unit: dBm Range: -30 .. +50 dBm Step: 0.1 dB

/*Partly omitted*/

9.2.1.49A PICH Power

The *PICH Power* IE indicates a power level relative to the [FDD - Primary CPICH power] [TDD - Primary CCPCH power] configured in a cell. [In Node B TX diversity mode, the parameter indicates the sum for all branches.](#)

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
PICH Power			INTEGER (-10..+5)	Unit: dB Range: -10 .. +5 dB Step: 1dB

/*Partly omitted*/

9.2.2.D AICH Power

The *AICH Power* IE indicates a power level (measured as the power per transmitted acquisition indicator when several AIs are transmitted in parallel) relative to the primary CPICH power configured in a cell. [In Node B TX diversity mode, the parameter indicates the sum for all branches.](#)

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
AICH Power			INTEGER (-22..+5)	Unit: dB Range: -22 .. +5 dB Step: 1 dB

/*Partly omitted*/

9.2.2.33 Primary CPICH Power

The Primary CPICH power is the power that shall be used for transmitting the P-CPICH in a cell. The reference point is the antenna connector. [In Node B TX diversity mode, the parameter indicates the sum for all branches.](#)

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Primary CPICH Power			INTEGER (-100..500)	Value = Primary CPICH Power/10 Unit: dBm Range: -10.0..+50.0 dBm Step: 0.1 dB

/*Partly omitted*/

9.2.3.5B DwPCH Power

DwPCH Power is the power that shall be used for transmitting the DwPCH in a cell. [The reference point is the antenna connector. In Node B TX diversity mode, the parameter indicates the sum for all branches.](#)

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
DwPCH Power			INTEGER (-150..+400,...)	Unit: dBm Range: -15 ..+40 dBm Step: 0.1 dB

/*Partly omitted*/

9.2.3.5E Max FPACH Power

Max FPACH Power is the maximum power that shall be used for transmitting the FPACH in a cell. [The reference point is the antenna connector. In Node B TX diversity mode, the parameter indicates the sum for all branches.](#)

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
FPACH Power			INTEGER (-150..+400,...)	Unit: dBm Range: -15 ..+40 dBm Step: 0.1 dB

/*Partly omitted*/

9.2.3.9 PCCPCH Power

The Primary CCPCH power is the power that shall be used for transmitting the P CCPCH in a cell. The P CCPCH power is the reference power in a TDD-cell. The reference point is the antenna connector. [In Node B TX diversity mode, the parameter indicates the sum for all branches.](#)

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
PCCPCH Power			INTEGER (-15..+40,...)	Unit: dBm Range: -15 ..+40 dBm Step: 0.1 dB