

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

RP-030443

Title CRs (R99 and Rel-4/Rel-5 Category A) to TS 25.423 and TS 25.433 on
Corrections to Tx Diversity
Source TSG RAN WG3
Agenda Item 7.4.6

RAN3 Tdoc	Spec	curr. Vers.	new Vers.	REL	CR	Rev	Cat	Title	Work item
R3-030993	25.423	3.13.0	3.14.0	R99	850	-	F	Corrections to Tx Diversity	TEI
R3-030994	25.423	4.9.0	4.10.0	REL-4	851	-	A	Corrections to Tx Diversity	TEI
R3-030995	25.423	5.6.0	5.7.0	REL-5	852	-	A	Corrections to Tx Diversity	TEI
R3-030996	25.433	3.13.0	3.14.0	R99	879	-	F	Corrections to Tx Diversity	TEI
R3-030997	25.433	4.9.0	4.10.0	REL-4	880	-	A	Corrections to Tx Diversity	TEI
R3-030998	25.433	5.5.0	5.6.0	REL-5	881	-	A	Corrections to Tx Diversity	TEI

CR-Form-v7

CHANGE REQUEST

25.423 CR 850 # 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:	# RAN3		
Work item code:	# TEI	Date:	# 25/08/2003
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:	# R0: 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:	# 9.2.1.21A, 9.2.1.43, 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> Other core specifications	Y	N	X		#	CR 851 on TS25.423 v 4.9.0 CR 852 on TS25.423 v 5.6.0 CR 879 on TS25.433 v 3.13.0 CR 880 on TS25.433 v 4.9.0 CR 881 on TS25.433 v 5.5.0
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.

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]. [If Transmit Diversity is applied to a downlink physical channel, the *DL Power* IE indicates the power offset between the linear sum of the power for this downlink physical channel on all branches and the \[FDD - primary CPICH power\] \[TDD - PCCPCH power\] configured in a cell.](#)

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. If Transmit Diversity is applied to the Primary CCPCH, the PCCPCH Power is the linear sum of the power that is used for transmitting the PCCPCH on 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 $P_{\geq} 40\text{dBm}$.

/*Partly omitted*/

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. [If Transmit Diversity is applied to the Primary CPICH, the Primary CPICH Power is the linear sum of the power that is used for transmitting the Primary CPICH on 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*/

CR-Form-v7

CHANGE REQUEST

25.423 CR 851 # rev - # Current version: 4.9.0

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:	# RAN3				
Work item code:	# TEI	Date:	# 25/08/2003		
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:	# R0: 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:	# 9.2.1.21A, 9.2.1.43, 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 style="text-align: center;"></td> </tr> </table> Other core specifications # TS 25.423 R99 CR850 TS 25.423 REL-5 CR852 TS 25.433 R99 CR879 TS 25.433 REL-4 CR880 TS 25.433 REL-5 CR881	Y	N	X	
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.

/*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]. [If Transmit Diversity is applied to a downlink physical channel, the *DL Power* IE indicates the power offset between the linear sum of the power for this downlink physical channel on all branches and the \[FDD - primary CPICH power\] \[TDD - PCCPCH power\] configured in a cell.](#)

[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. If Transmit Diversity is applied to the Primary CCPCH, the PCCPCH Power is the linear sum of the power that is used for transmitting the PCCPCH on 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. [If Transmit Diversity is applied to the Primary CPICH, the Primary CPICH Power is the linear sum of the power that is used for transmitting the Primary CPICH on 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*/

CR-Form-v7

CHANGE REQUEST

25.423 CR 852 # rev **-** # Current version: **5.6.0**

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

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

Title:	# Corrections to Tx Diversity		
Source:	# RAN3		
Work item code:	# TEI	Date:	# 25/08/2003
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:	# R0: 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:	# 9.2.1.21A, 9.2.1.43, 9.2.1.44						
Other specs	<table border="1" style="display: inline-table; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 20px;">Y</td> <td style="width: 20px;">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 CR850 TS 25.423 REL-4 CR851 TS 25.433 R99 CR879 TS 25.433 REL-4 CR880 TS 25.433 REL-5 CR881
Y	N						
X							

affected:

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

Other comments: ☞

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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]. If Transmit Diversity is applied to a downlink physical channel, the *DL Power* IE indicates the power offset between the linear sum of the power for this downlink physical channel on all branches and the [FDD - primary CPICH power] [TDD - PCCPCH power] configured in a cell.

[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. If Transmit Diversity is applied to the Primary CCPCH, the PCCPCH Power is the linear sum of the power that is used for transmitting the PCCPCH on 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 $P_{\leq} -15dBm$ +40.0 shall indicate $P_{\geq} 40dBm$.

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. If Transmit Diversity is applied to the Primary CPICH, the Primary CPICH Power is the linear sum of the power that is used for transmitting the Primary CPICH on 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*/

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CHANGE REQUEST

25.433 CR 879 # 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:	# RAN3				
Work item code:	# TEI	Date:	# 25/08/2003		
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)		
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	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:	# R0: 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:	# 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 # CR 850 on TS25.433 v 3.13.0 CR 851 on TS25.423 v 4.9.0 CR 852 on TS25.423 v 5.6.0 CR 880 on TS25.433 v 4.9.0 CR 881 on TS25.433 v 5.5.0	Y	N	X	
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.

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. [If Transmit Diversity is applied to a downlink physical channel, the *DL Power* IE indicates the power offset between the linear sum of the power for this downlink physical channel on all branches and 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.] [FDD - If referred to a DL-DPCCH for CPCH, it indicates the power of the transmitted pilot symbols].

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. [If Transmit Diversity can be used in the local cell, the parameter indicates the maximum for the linear sum of the power that can be used on 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 [value for the linear sum of the power for of all downlink physical channels](#) ~~added together~~, that is allowed to be used ~~simultaneously~~ in a cell. [If Transmit Diversity is applied to one downlink physical channel, the power to be considered for this downlink physical channel is the linear sum of the power used for this downlink physical channel on all branches.](#) The reference point is the antenna connector.

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. [If Transmit Diversity can be used in the local cell, the parameter indicates the minimum for the linear sum of the power that can be used on 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. [If Transmit Diversity is applied to the PICH, the *PICH Power* IE indicates the power offset between the linear sum of the power for the PICH on all branches and the \[FDD - Primary CPICH power\] \[TDD - Primary CCPCH power\] configured in a cell.](#)

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. [If Transmit Diversity is applied to the AICH, the *AICH Power* IE indicates the power offset between the linear sum of the power for the AICH on all branches and the Primary CPICH power configured in a cell.](#)

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. [If Transmit Diversity is applied to the Primary CPICH, the Primary CPICH power is the linear sum of the power that is used for transmitting the Primary CPICH on 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. [If Transmit Diversity is applied to the Primary CCPCH, the Primary CCPCH power is the linear sum of the power that is used for transmitting the Primary CCPCH on 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

CR-Form-v7

CHANGE REQUEST

25.433 CR 880 # rev - # Current version: **4.9.0**

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:	# RAN3		
Work item code:	# TEI	Date:	# 25/08/2003
Category:	# A	Release:	# Rel-4
	Use <u>one</u> of the following categories:		Use <u>one</u> of the following releases:
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			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.
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	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:	# 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; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 20px;">Y</td> <td style="width: 20px;">N</td> </tr> <tr> <td style="width: 20px;">X</td> <td style="width: 20px;"></td> </tr> </table>	Y	N	X		Other core specifications	# TS 25.423 R99 CR850 TS 25.423 REL-4 CR851 TS 25.423 REL-5 CR852 TS 25.433 R99 CR879
Y	N						
X							

affected:

X	
X	

Test specifications
O&M Specifications

TS 25.433 REL-5 CR881

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.

/*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. [If Transmit Diversity is applied to a downlink physical channel, the *DL Power* IE indicates the power offset between the linear sum of the power for this downlink physical channel on all branches and 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.] [FDD - If referred to a DL-DPCCH for CPCH, it indicates the power of the transmitted pilot symbols]. [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. [If Transmit Diversity can be used in the local cell, the parameter indicates the maximum for the linear sum of the power that can be used on 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 [value for the linear sum of the power for of all downlink physical channels added together](#), that is allowed to be used [simultaneously](#) in a cell. [If Transmit Diversity is applied to one downlink physical channel, the power to be considered for this downlink physical channel is the linear sum of the power used for this downlink physical channel on all branches.](#) The reference point is the antenna connector.

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. [If Transmit Diversity can be used in the local cell, the parameter indicates the minimum for the linear sum of the power that can be used on 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. [If Transmit Diversity is applied to the PICH, the *PICH Power* IE indicates the power offset between the linear sum of the power for the PICH on all branches and the \[FDD - Primary CPICH power\] \[TDD - Primary CCPCH power\] configured in a cell.](#)

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. [If Transmit Diversity is applied to the AICH, the *AICH Power* IE indicates the power offset between the linear sum of the power for the AICH on all branches and the Primary CPICH power configured in a cell.](#)

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. [If Transmit Diversity is applied to the Primary CPICH, the Primary CPICH power is the linear sum of the power that is used for transmitting the Primary CPICH on 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. If Transmit Diversity is applied to the DwPCH, the DwPCH power is the linear sum of the power that is used for transmitting the DwPCH on 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. If Transmit Diversity is applied to the FPACH, the Max FPACH Power is the maximum of the linear sum of the power that is allowed for transmitting the FPACH on 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. [If Transmit Diversity is applied to the Primary CCPCH, the Primary CCPCH power is the linear sum of the power that is used for transmitting the Primary CCPCH on 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

CR-Form-v7

CHANGE REQUEST

25.433 CR 881 # rev **-** # 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:	# RAN3				
Work item code:	# TEI	Date:	# 25/08/2003		
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 definitions are not considering the case, when a Node B is in Tx diversity mode.
Summary of change:	# R0: 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:	# 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 CR850 TS 25.423 REL-4 CR851 TS 25.423 REL-5 CR852 TS 25.433 R99 CR879	Y	N	X	
Y	N				
X					

affected:

X	
X	

Test specifications
O&M Specifications

TS 25.433 REL-4 CR880

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.
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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.

/*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. [If Transmit Diversity is applied to a downlink physical channel, the *DL Power* IE indicates the power offset between the linear sum of the power for this downlink physical channel on all branches and 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.] [FDD - If referred to a DL-DPCCH for CPCH, it indicates the power of the transmitted pilot symbols]. [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. [If Transmit Diversity can be used in the local cell, the parameter indicates the maximum for the linear sum of the power that can be used on 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 [value for the linear sum of the power ~~for~~ of all downlink physical channels ~~added together~~](#), that is allowed to be used [simultaneously](#) in a cell. [If Transmit Diversity is applied to one downlink physical channel, the power to be considered for this downlink physical channel is the linear sum of the power used for this downlink physical channel on all branches.](#) The reference point is the antenna connector.

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. [If Transmit Diversity can be used in the local cell, the parameter indicates the minimum for the linear sum of the power that can be used on 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. [If Transmit Diversity is applied to the PICH, the *PICH Power* IE indicates the power offset between the linear sum of the power for the PICH on all branches and the \[FDD - Primary CPICH power\] \[TDD - Primary CCPCH power\] configured in a cell.](#)

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. [If Transmit Diversity is applied to the AICH, the *AICH Power* IE indicates the power offset between the linear sum of the power for the AICH on all branches and the Primary CPICH power configured in a cell.](#)

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. [If Transmit Diversity is applied to the Primary CPICH, the Primary CPICH power is the linear sum of the power that is used for transmitting the Primary CPICH on 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. If Transmit Diversity is applied to the DwPCH, the DwPCH power is the linear sum of the power that is used for transmitting the DwPCH on 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. If Transmit Diversity is applied to the FPACH, the Max FPACH Power is maximum of the linear sum of the power that is allowed for transmitting the FPACH on 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. [If Transmit Diversity is applied to the Primary CCPCH, the Primary CCPCH power is the linear sum of the power that is used for transmitting the Primary CCPCH on 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