TSG RAN Meeting #22 **RP-030597**
Maui, Hawaii, US, 9 - 12 December 2003

Title **CRs (Rel-5 and Rel-6 Category A) to TS 25.104 & TS 25.141, "Correction of the P-CPICH power accuracy requirement & test in case of TX-diversity"**
Source **TSG RAN WG4**
Agenda Item **7.5.5**

RAN4 Tdoc	Spec	CR	R	Cat	Rel	Curr Ver	Title	Work Item
R4-031067	25.104	201	1	F	Rel-5	5.7.0	Correction of the P-CPICH power accuracy requirement in case of TX-diversity	TEI5
R4-031070	25.104	202	1	A	Rel-6	6.3.0	Correction of the P-CPICH power accuracy requirement in case of TX-diversity	TEI5
R4-031068	25.141	320	1	F	Rel-5	5.7.0	Correction of the P-CPICH power accuracy test in case of TX-diversity	TEI5
R4-031071	25.141	322	1	A	Rel-6	6.3.0	Correction of the P-CPICH power accuracy test in case of TX-diversity	TEI5

3GPP TSG RAN WG4 (Radio) Meeting #29 **R4-031067**

San Diego, USA 17 - 21 November 2003

CR-Form-v7

CHANGE REQUEST

⌘ **25.104** **CR** **201** ⌘ **rev** **1** ⌘ Current version: **5.7.0** ⌘

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

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

Title:	⌘	Correction of the P-CPICH power accuracy requirement in case of TX-diversity
Source:	⌘	RAN WG4
Work item code:	⌘	TEI5
Date:	⌘	26/11/2003
Category:	⌘	**F**
Release:	⌘	Rel-5

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*

Reason for change:	⌘	In case of transmit diversity the Primary CPICH power accuracy requirement contains some ambiguity.
Summary of change:	⌘	In case of transmit diversity the Primary CPICH power accuracy requirement of +/-2.1 dB applies per antenna connector.
Consequences if not approved:	⌘	The Primary CPICH power accuracy requirement in case of transmit diversity will remain ambiguous. **Isolated impact analysis:** The CR has no impact on Node-B or UE implementation as it clarifies the correct Primary CPICH power accuracy requirement in case of transmit diversity

Clauses affected:	⌘	6.4.4			
Other specs affected:	⌘	**Y** / **N**	Other core specifications	⌘	25.141
		☐ / ☒	Other core specifications		
		☒ / ☐	Test specifications		
		☐ / ☒	O&M Specifications		
Other comments:	⌘	Equivalent CRs in other Releases: CR202r1 cat. A to 25.104 v6.3.0			

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

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

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

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

6.4.4 Primary CPICH power

Primary CPICH power is the code domain power of the Common Pilot Channel.Primary CPICH power is indicated on the BCH.

6.4.4.1 Requirement

Primary CPICH code domain power shall be within ± 2.1dB of the Primary CPICH code domain power indicated on the BCH~~e~~.

In case of transmit diversity the Primary CPICH code domain power per antenna connector shall be within +/- 2.1dB of the Primary CPICH code domain power intended for that particular antenna connector.

6.4.5 IPDL time mask

3GPP TSG RAN WG4 (Radio) Meeting #29 **R4-031070**

San Diego, USA 17 - 21 November 2003

CR-Form-v7

CHANGE REQUEST

⌘ **25.104** **CR** **202** ⌘ **rev** **1** ⌘ Current version: **6.3.0** ⌘

*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:	⌘	Correction of the P-CPICH power accuracy requirement in case of TX-diversity
Source:	⌘	RAN WG4
Work item code:	⌘	TEI5
Date:	⌘	26/11/2003
Category:	⌘	**A**
Release:	⌘	Rel-6

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*

Reason for change:	⌘	In case of transmit diversity the Primary CPICH power accuracy requirement contains some ambiguity.
Summary of change:	⌘	In case of transmit diversity the Primary CPICH power accuracy requirement of +/-2.1 dB applies per antenna connector.
Consequences if not approved:	⌘	The Primary CPICH power accuracy requirement in case of transmit diversity will remain ambiguous. **Isolated impact analysis:** The CR has no impact on Node-B or UE implementation as it clarifies the correct Primary CPICH power accuracy requirement in case of transmit diversity

Clauses affected:	⌘	6.4.4			
Other specs affected:	⌘	**Y** / **N**	Other core specifications	⌘	25.141
		☐ / ☒	Other core specifications		
		☒ / ☐	Test specifications		
		☐ / ☒	O&M Specifications		
Other comments:	⌘	Equivalent CRs in other Releases: CR201r1 cat. F to 25.104 v5.7.0			

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

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

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

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

6.4.4 Primary CPICH power

Primary CPICH power is the code domain power of the Common Pilot Channel.Primary CPICH power is indicated on the BCH.

6.4.4.1 Requirement

Primary CPICH code domain power shall be within ± 2.1dB of the Primary CPICH code domain power indicated on the BCH~~e~~.

In case of transmit diversity the Primary CPICH code domain power per antenna connector shall be within +/- 2.1dB of the Primary CPICH code domain power intended for that particular antenna connector.

6.4.5 IPDL time mask

3GPP TSG RAN WG4 (Radio) Meeting #29 **R4-031068**

San Diego, USA 17 - 21 November 2003

CR-Form-v7

CHANGE REQUEST

⌘ **25.141** **CR** **320** ⌘ **rev** **1** ⌘ Current version: **5.7.0** ⌘

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

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

Title:	⌘	Correction of the P-CPICH power accuracy test in case of TX-diversity
Source:	⌘	RAN WG4
Work item code:	⌘	TEI5
Date:	⌘	26/11/2003
Category:	⌘	**F**
Release:	⌘	Rel-5

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*

Reason for change:	⌘	In case of transmit diversity the Primary CPICH power accuracy test contains some ambiguity. In case of transmit diversity the Primary CPICH power accuracy requirement of +/-2.1 dB applies per antenna connector.
Summary of change:	⌘	The Primary CPICH power intended for each antenna connector in case of transmit diversity shall be declared by the manufactuer and compared to the measured Primary CPICH power for that particualar antenna connector.
Consequences if not approved:	⌘	Test specification and core specification will be inconsistent for BS supporting transmit diversity. **Isolated impact analysis:** The CR has no impact on Node-B or UE implementation as it clarifies the correct testing of P-CPICH power accuracy requirement in case of transmit diversity

Clauses affected:	⌘	6.2.2, 6.2.2.4.1, 6.2.2.5

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

⌘

Other comments:	⌘	Equivalent CRs in other Releases: CR322r1 cat. A to 25.141 v6.3.0

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

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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.

6.2.2 CPICH power accuracy

6.2.2.1 Definition and applicability

CPICH power accuracy is defined as the maximum deviation between the Primary CPICH code domain power indicated on the BCH and the Primary CPICH code domain power measured at the TX antenna interface. The requirement is applicable for all BS types.

6.2.2.2 Minimum Requirement

The measured Primary CPICH code domain power shall be within ±2.1dB of the Primary CPICH code domain power indicated on the BCH. In case of transmit diversity the Primary CPICH code domain power per antenna connector shall be within +/- 2.1dB of the Primary CPICH code domain power intended for that particular antenna connector. The normative reference for this requirement is in TS 25.104 [1] subclause 6.4.4

6.2.2.3 Test purpose

The purpose of the test is to verify, that the BS under test delivers Primary CPICH code domain power within margins, thereby allowing reliable cell planning and operation.

6.2.2.4 Method of test

6.2.2.4.1 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 to code domain analyser as shown in annex B.
2) Disable inner loop power control.
3) Set-up BS transmission at maximum total power as specified by the supplier. Channel set-up shall be according to Test Model 2 subclause 6.1.1.2. In case of transmit diversity the Primary CPICH code domain power intended per antenna connector shall be declared by the manufacturer.

6.2.2.4.2 Procedure

- Measure the code domain power of the PCPICH in one timeslot according to annex E.

6.2.2.5 Test Requirement

The measured CPICH code domain power shall be within ±2.9dB of the ordered absolute value. In case of transmit diversity the measured Primary CPICH code domain power per antenna connector shall be within +/- 2.9dB of the Primary CPICH code domain power for that particular antenna connector declared by the manufactuer.

NOTE: If the above Test Requirement differs from the Minimum Requirement then the Test Tolerance applied for this test is non-zero. The Test Tolerance for this test is defined in subclause 4.2 and the explanation of how the Minimum Requirement has been relaxed by the Test Tolerance is given in Annex F.

6.3 Frequency error

3GPP TSG RAN WG4 (Radio) Meeting #29 **R4-031071**

San Diego, USA 17 - 21 November 2003

CR-Form-v7

CHANGE REQUEST

⌘ **25.141** **CR** **322** ⌘ **rev** **1** ⌘ Current version: **6.3.0** ⌘

*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 ☐

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Source:	⌘	RAN WG4
Work item code:	⌘	TEI5
Date:	⌘	26/11/2003
Category:	⌘	**A**
Release:	⌘	Rel-6

Use one of the following categories:
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Use one of the following releases:

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Reason for change:	⌘	In case of transmit diversity the Primary CPICH power accuracy test contains some ambiguity. In case of transmit diversity the Primary CPICH power accuracy requirement of +/-2.1 dB applies per antenna connector.
Summary of change:	⌘	The Primary CPICH power intended for each antenna connector in case of transmit diversity shall be declared by the manufactuerer and compared to the measured Primary CPICH power for that particualar antenna connector.
Consequences if not approved:	⌘	Test specification and core specification will be inconsistent for BS supporting transmit diversity. **Isolated impact analysis:** The CR has no impact on Node-B or UE implementation as it clarifies the correct testing of P-CPICH power accuracy requirement in case of transmit diversity
Clauses affected:	⌘	6.2.2, 6.2.2.4.1, 6.2.2.5

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

Other comments:	⌘	Equivalent CRs in other Releases: CR320r1 cat. F to 25.141 v5.7.0

How to create CRs using this form:
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6.2.2 CPICH power accuracy

6.2.2.1 Definition and applicability

CPICH power accuracy is defined as the maximum deviation between the Primary CPICH code domain power indicated on the BCH and the Primary CPICH code domain power measured at the TX antenna interface. The requirement is applicable for all BS types.

6.2.2.2 Minimum Requirement

The measured Primary CPICH code domain power shall be within ±2.1dB of the Primary CPICH code domain power indicated on the BCH. In case of transmit diversity the Primary CPICH code domain power per antenna connector shall be within +/- 2.1dB of the Primary CPICH code domain power intended for that particular antenna connector. The normative reference for this requirement is in TS 25.104 [1] subclause 6.4.4

6.2.2.3 Test purpose

The purpose of the test is to verify, that the BS under test delivers Primary CPICH code domain power within margins, thereby allowing reliable cell planning and operation.

6.2.2.4 Method of test

6.2.2.4.1 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 to code domain analyser as shown in annex B.
2) Disable inner loop power control.
3) Set-up BS transmission at maximum total power as specified by the supplier. Channel set-up shall be according to Test Model 2 subclause 6.1.1.2. In case of transmit diversity the Primary CPICH code domain power intended per antenna connector shall be declared by the manufactuer.

6.2.2.4.2 Procedure

- Measure the code domain power of the PCPICH in one timeslot according to annex E.

6.2.2.5 Test Requirement

The measured CPICH code domain power shall be within ±2.9dB of the ordered absolute value. In case of transmit diversity the measured Primary CPICH code domain power per antenna connector shall be within +/- 2.9dB of the Primary CPICH code domain power for that particular antenna connector declared by the manufacturer.

NOTE: If the above Test Requirement differs from the Minimum Requirement then the Test Tolerance applied for this test is non-zero. The Test Tolerance for this test is defined in subclause 4.2 and the explanation of how the Minimum Requirement has been relaxed by the Test Tolerance is given in Annex F.

6.3 Frequency error