

**Agenda item:**

**Title:** CR 25.215-017: CPICH SIR measurements.

**Source:** Telia AB

**Document for:** Decision

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## Background

According to the latest versions of the RAN-2 specifications TS 25.302 and TS 25.331, it shall be possible to measure the SIR on the CPICH. In this CR, it is proposed to update TS 25.215 accordingly.

|  |  |  |                               |
|--|--|--|-------------------------------|
| <b>CHANGE REQUEST</b>  |  | Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly. |                               |
| <b>25.215</b>  | <b>CR</b>  | <b>017</b>   | Current Version: <b>3.0.0</b> |
| GSM (AA.BB) or 3G (AA.BBB) specification number ↑  |  | ↑ CR number as allocated by MCC support team   |                               |
| For submission to: <b>TSG-RAN #6</b><br><small>list expected approval meeting # here ↑</small> | for approval <input checked="" type="checkbox"/> | strategic <input type="checkbox"/>   | (for SMG use only)            |
|  | for information <input type="checkbox"/>         | non-strategic <input type="checkbox"/>   |                               |

Form: CR cover sheet, version 2 for 3GPP and SMG    The latest version of this form is available from: <ftp://ftp.3gpp.org/Information/CR-Form-v2.doc>

**Proposed change affects:** (U)SIM     ME     UTRAN / Radio     Core Network   
(at least one should be marked with an X)

**Source:**    Telia AB    **Date:**    1999-11-30

**Subject:**    CPICH SIR measurement

**Work item:**    \_\_\_\_\_

|                  |  |                 |  |
|------------------|--|-----------------|--|
| <b>Category:</b> | F Correction <input checked="" type="checkbox"/><br>A Corresponds to a correction in an earlier release <input type="checkbox"/><br>B Addition of feature <input type="checkbox"/><br>C Functional modification of feature <input type="checkbox"/><br>D Editorial modification <input type="checkbox"/> | <b>Release:</b> | Phase 2 <input type="checkbox"/><br>Release 96 <input type="checkbox"/><br>Release 97 <input type="checkbox"/><br>Release 98 <input type="checkbox"/><br>Release 99 <input checked="" type="checkbox"/><br>Release 00 <input type="checkbox"/> |
|------------------|--|-----------------|--|

(only one category shall be marked with an X)

**Reason for change:**    The possibility to measure SIR on the CPICH is included in the RAN WG2 specifications TS 25.302 and TS 25.331. Hence, it is proposed to update TS 25.215 accordingly.

**Clauses affected:**    5.1, 5.1.4

|                              |   |  |
|------------------------------|---|--|
| <b>Other specs affected:</b> | Other 3G core specifications <input type="checkbox"/><br>Other GSM core specifications <input type="checkbox"/><br>MS test specifications <input type="checkbox"/><br>BSS test specifications <input type="checkbox"/><br>O&M specifications <input type="checkbox"/> | → List of CRs: _____<br>→ List of CRs: _____<br>→ List of CRs: _____<br>→ List of CRs: _____<br>→ List of CRs: _____ |
|------------------------------|---|--|

**Other comments:**    \_\_\_\_\_

## 5.1 UE measurement abilities

The structure of the table defining a UE measurement quantity is shown below:

| Column field      | Comment  |
|-------------------|--|
| <b>Definition</b> | Contains the definition of the measurement.  |
| Applicable for    | States if a measurement shall be possible to perform in Idle mode and/or Connected mode. For connected mode also information of the possibility to perform the measurement on intra-frequency and/or inter-frequency are given.<br>The following terms are used in the tables:<br>Idle = Shall be possible to perform in idle mode<br>Connected Intra = Shall be possible to perform in connected mode on an intra-frequency<br>Connected Inter = Shall be possible to perform in connected mode on an inter-frequency |
| Range/mapping     | Gives the range and mapping to bits for the measurements quantity.   |

### 5.1.1 CPICH RSCP

|                       |   |
|-----------------------|---|
| Definition            | Received Signal Code Power, the received power on one code after de-spreading measured on the pilot bits of the CPICH. The reference point for the RSCP is the antenna connector at the UE. |
| <b>Applicable for</b> | Idle, Connected Intra, Connected Inter  |
| <b>Range/mapping</b>  |   |

### 5.1.2 RSCP

|                       |  |
|-----------------------|--|
| Definition            | Received Signal Code Power, the received power on one code after de-spreading measured on the pilot bits of the DPCCH after RL combination. The reference point for the RSCP is the antenna connector at the UE. |
| <b>Applicable for</b> | Connected Intra  |
| <b>Range/mapping</b>  |  |

### 5.1.3 ISCP

Note that it is not a requirement that the ISCP shall be possible to report to higher layers. The ISCP is defined in this section because it is included in the definition of SIR.

|            |   |
|------------|---|
| Definition | Interference Signal Code Power, the interference on the received signal after de-spreading. Only the non-orthogonal part of the interference is included in the measurement. The reference point for the ISCP is the antenna connector at the UE. |
|------------|---|

### 5.1.4 CPICH SIR

|                       |   |
|-----------------------|---|
| <b>Definition</b>     | <p>Signal to Interference Ratio, defined as: <math>(RSCP/ISCP) \times (SF/2)</math>. The SIR shall be measured on CPICH pilot bits. The reference point for the SIR is the antenna connector of the UE.</p> <p>where:</p> <p>RSCP = Received Signal Code Power, the received power on one code measured on the pilot bits.</p> <p>ISCP = Interference Signal Code Power, the interference on the received signal measured on the pilot bits. Only the non-orthogonal part of the interference is included in the measurement.</p> <p>SF=The spreading factor used on the CPICH.</p> |
| <b>Applicable for</b> | Idle, Connected Intra, Connected Inter  |
| <b>Range/mapping</b>  |   |

### 5.1.45 SIR

|                       |   |
|-----------------------|---|
| <b>Definition</b>     | Signal to Interference Ratio, defined as the RSCP divided by ISCP. The SIR shall be measured on DPCCH after RL combination. The reference point for the SIR is the antenna connector of the UE. |
| <b>Applicable for</b> | Connected Intra   |
| <b>Range/mapping</b>  |   |