

TSG RAN Working Group 1 meeting #11  
29 February – 3 March 2000  
San Diego, California, USA

TSGR1#11(00)0348

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**Source:** Nokia

**Title:** CR 25.215-047 : Removal of RSCP measurement

**Document for:** Approval

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UE RSCP measurement was discussed in TSG RAN Ad Hoc meeting on RRM in Turin on February 9<sup>th</sup> 2000. Discussion was based on Nokia contribution RPA000042.

The conclusion of the RRM adhoc was that RSCP definition should only be included in SIR measurement. A separate UE RSCP measurement is not supported in FDD anymore.

The attached CR is provided to delete the UE RSCP measurement from TS25.215.

### 3G CHANGE REQUEST

Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.

25.215 CR 047

Current Version: 3.1.1

3G specification number ↑

↑ CR number as allocated by 3G support team

For submission to TSG RAN#7 for approval X (only one box should be marked with an X)  
list TSG meeting no. here ↑ for information

Form: 3G CR cover sheet, version 1.0 The latest version of this form is available from: ftp://ftp.3gpp.org/Information/3GCRF-xx.rtf

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

**Source:** TSG RAN WG1 **Date:** 29.2.2000

**Subject:** Removal of RSCP measurement

**3G Work item:**

**Category:** F Correction   
A Corresponds to a correction in a 2G specification   
(only one category shall be marked with an X) B Addition of feature   
C Functional modification of feature   
D Editorial modification

**Reason for change:** To implement a decision made in TSG RAN Ad Hoc meeting on RRM, this CR deletes UE RSCP measurement to 25.215. The measurement is thus included only in SIR measurement.

**Clauses affected:** 5.1.3 RSCP measurement

**Other specs affected:** Other 3G core specifications  → List of CRs:  
Other 2G core specifications  → List of CRs:  
MS test specifications  → List of CRs:  
BSS test specifications  → List of CRs:  
O&M specifications  → List of CRs:

**Other comments:**

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. The following terms are used in the tables: Idle = Shall be possible to perform in idle mode Connected Intra = Shall be possible to perform in connected mode on an intra-frequency 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 measured on the pilot bits of the Primary 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>	CPICH RSCP is given with a resolution of 1 dB with the range [-115, ..., -25] dBm. CPICH RSCP shall be reported in the unit CPICH_RSCP_LEV where:  CPICH_RSCP_LEV_00: CPICH RSCP < -115 dBm CPICH_RSCP_LEV_01: -115 dBm ≤ CPICH RSCP < -114 dBm CPICH_RSCP_LEV_02: -114 dBm ≤ CPICH RSCP < -113 dBm ... CPICH_RSCP_LEV_89: -27 dBm ≤ CPICH RSCP < -26 dBm CPICH_RSCP_LEV_90: -26 dBm ≤ CPICH RSCP < -25 dBm CPICH_RSCP_LEV_91: -25 dBm ≤ CPICH RSCP

### 5.1.2 PCCPCH RSCP

Definition	Received Signal Code Power, the received power on one code measured on the PCCPCH from a TDD cell. The reference point for the RSCP is the antenna connector at the UE.  Note: The RSCP can either be measured on the data part or the midamble of a burst, since there is no power difference between these two parts. However, in order to have a common reference, measurement on the midamble is assumed.
<b>Applicable for</b>	Idle, Connected Inter
<b>Range/mapping</b>	PCCPCH RSCP is given with a resolution of 1 dB with the range [-115, ..., -25] dBm. PCCPCH RSCP shall be reported in the unit PCCPCH_RSCP_LEV where:  PCCPCH_RSCP_LEV_00: PCCPCH RSCP < -115 dBm PCCPCH_RSCP_LEV_01: -115 dBm ≤ PCCPCH RSCP < -114 dBm PCCPCH_RSCP_LEV_02: -114 dBm ≤ PCCPCH RSCP < -113 dBm ... PCCPCH_RSCP_LEV_89: -27 dBm ≤ PCCPCH RSCP < -26 dBm PCCPCH_RSCP_LEV_90: -26 dBm ≤ PCCPCH RSCP < -25 dBm PCCPCH_RSCP_LEV_91: -25 dBm ≤ PCCPCH RSCP

### 5.1.3 RSCP

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

<b>Range/mapping</b>	<p>RSCP is given with a resolution of 1 dB with the range [-115, ..., -40] dBm. RSCP is given with a resolution of 1 dB with the range [-115, ..., -25] dBm. RSCP shall be reported in the unit RSCP_LEV where:</p> <p>RSCP_LEV_00: <math>RSCP &lt; -115</math> dBm  RSCP_LEV_01: <math>-115</math> dBm <math>\leq</math> RSCP <math>&lt; -114</math> dBm  RSCP_LEV_02: <math>-114</math> dBm <math>\leq</math> RSCP <math>&lt; -113</math> dBm  ...  RSCP_LEV_89: <math>-27</math> dBm <math>\leq</math> RSCP <math>&lt; -26</math> dBm  RSCP_LEV_90: <math>-26</math> dBm <math>\leq</math> RSCP <math>&lt; -25</math> dBm  RSCP_LEV_91: <math>-25</math> dBm <math>\leq</math> RSCP</p>
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### 5.1.4 5.1.3 SIR

<b>Definition</b>	<p>Signal to Interference Ratio, defined as: <math>(RSCP/ISCP) \times (SF/2)</math>. The SIR shall be measured on DPCCH after RL combination. 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.</p>
<b>Applicable for</b>	Connected Intra
<b>Range/mapping</b>	<p>SIR is given with a resolution of 0.5 dB with the range [-11, ..., 20] dB. SIR shall be reported in the unit UE_SIR where:</p> <p>UE_SIR_00: SIR <math>&lt; -11.0</math> dB  UE_SIR_01: <math>-11.0</math> dB <math>\leq</math> SIR <math>&lt; -10.5</math> dB  UE_SIR_02: <math>-10.5</math> dB <math>\leq</math> SIR <math>&lt; -10.0</math> dB  ...  UE_SIR_61: <math>19.0</math> dB <math>\leq</math> SIR <math>&lt; 19.5</math> dB  UE_SIR_62: <math>19.5</math> dB <math>\leq</math> SIR <math>&lt; 20.0</math> dB  UE_SIR_63: <math>20.0</math> dB <math>\leq</math> SIR</p>

### 5.1.5 5.1.4 UTRA carrier RSSI

<b>Definition</b>	Received Signal Strength Indicator, the wide-band received power within the relevant channel bandwidth. Measurement shall be performed on a UTRAN downlink carrier. The reference point for the RSSI is the antenna connector at the UE.
<b>Applicable for</b>	Idle, Connected Intra, Connected Inter
<b>Range/mapping</b>	<p>UTRA carrier RSSI is given with a resolution of 1 dB with the range [-94, ..., -32] dBm. UTRA carrier RSSI shall be reported in the unit UTRA_carrier_RSSI_LEV where:</p> <p>UTRA_carrier_RSSI_LEV_00: UTRA carrier RSSI <math>&lt; -94</math> dBm  UTRA_carrier_RSSI_LEV_01: <math>-94</math> dBm <math>\leq</math> UTRA carrier RSSI <math>&lt; -93</math> dBm  UTRA_carrier_RSSI_LEV_02: <math>-93</math> dBm <math>\leq</math> UTRA carrier RSSI <math>&lt; -92</math> dBm  ...  UTRA_carrier_RSSI_LEV_61: <math>-32</math> dBm <math>\leq</math> UTRA carrier RSSI <math>&lt; -33</math> dBm  UTRA_carrier_RSSI_LEV_62: <math>-33</math> dBm <math>\leq</math> UTRA carrier RSSI <math>&lt; -32</math> dBm  UTRA_carrier_RSSI_LEV_63: <math>-32</math> dBm <math>\leq</math> UTRA carrier RSSI</p>