

TSG-RAN Working Group 1 meeting No. 12
April 10 – 13, Seoul, Korea

TSGR1-00-0478

TSG-RAN Working Group 2 (Radio layer 2 and Radio layer 3)
Turin, Italy, 28 February – 3 March 2000

R2-000670

Title: **LS on Information on the measurement filtering model**

Source: TSG-RAN WG2

To: TSG-RAN WG1, TSG-RAN WG3, TSG-RAN WG4

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TSG-RAN WG2 would like to inform TSG-RAN WG1, WG3 and WG4 about the adopted measurement filtering model in TSG RAN WG2. Please find attached the accepted Change Request on TS 25.302.

<h2 style="margin: 0;">CHANGE REQUEST</h2>			Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.
25.302	CR	047r1	Current Version: 3.3.0
GSM (AA.BB) or 3G (AA.BBB) specification number ↑		↑ CR number as allocated by MCC support team	
For submission to: TSG-RAN#7	for approval <input checked="" type="checkbox"/>	strategic <input type="checkbox"/>	(for SMG use only)
list expected approval meeting # here ↑	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: TSG-RAN WG2 **Date:** 2000-03-02

Subject: Incorporation of Measurement filtering model

Work item: _____

Category:	F Correction <input checked="" type="checkbox"/> A Corresponds to a correction in an earlier release <input type="checkbox"/> B Addition of feature <input type="checkbox"/> C Functional modification of feature <input type="checkbox"/> D Editorial modification <input type="checkbox"/>	Release:	Phase 2 <input type="checkbox"/> Release 96 <input type="checkbox"/> Release 97 <input type="checkbox"/> Release 98 <input type="checkbox"/> Release 99 <input checked="" type="checkbox"/> Release 00 <input type="checkbox"/>
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(only one category shall be marked with an X)

Reason for change: Filtering is discussed both in WG1, WG4 and WG2. In order to have a common understanding on how L3 configuration of filtering and filtering in L1 a model should be present within the 3GPP specifications.

Clauses affected: New section 9.1 is inserted

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



<----- double-click here for help and instructions on how to create a CR.

6.1 9.1 Model of physical layer measurements

This section describes a model for how the physical layer measurements are performed. This model applies both to the UE and Node B measurements

The measurement model for physical layer measurements is represented in the figure below:

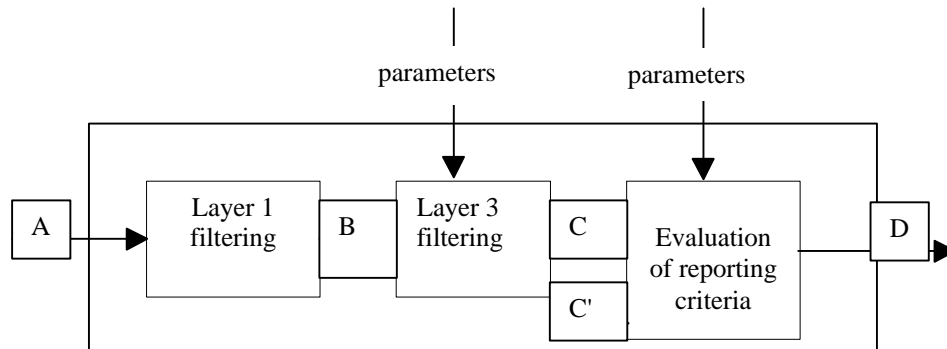


Figure 1 Measurement model

The model is described below:

- **A:** measurements (samples) internal to the physical layer in support to the measurements to be provided to higher layers.
- **Layer 1 filtering:** internal layer 1 filtering of the inputs measured at point A. Exact filtering is implementation dependant. How the measurements are actually executed in the physical layer by an implementation (inputs A and Layer 1 filtering) is not constrained by the standard i.e. the model does not state a specific sampling rate or even if the sampling is periodic or not. What the standard specifies is the performance objective and reporting rate at point B in the model. The performance objectives for the physical layer measurements is specified in [ref to R4 spec].
- **B:** A measurement reported by layer 1 after layer 1 filtering. The reporting rate at point B is defined by the standard and is measurement type specific. It is chosen to be equal to the measurement period over which performance objectives are defined in [ref to R4 spec]. As a consequence, by setting the layer 3 filtering to "no filtering", the performance of the layer 1 implementation can be tested. This means that the physical layer can organise its internal measurements between these reporting at point B to meet the performance requirements.
- **Layer 3 filtering:** Filtering performed on the measurements provided at point B. The Layer 3 filters are standardised and the configuration of the layer 3 filters is provided by RRC signalling (UE measurements) or NBAP signalling (Node B measurements).
- **C:** A measurement after processing in the layer 3 filter. The reporting rate is identical to the reporting rate at point B and is therefore also measurement type specific. Although this is not shown in the figure, one measurement can be used by a multiplicity of evaluation of reporting criteria.
- **Evaluation of reporting criteria:** This checks whether actual measurement reporting is necessary at point D i.e. whether a message need to be sent to higher layers on the radio interface or Iub interface. The evaluation can be based on more than one flow of measurements at reference point C e.g. to compare between different measurements. This is illustrated by input C, C', etc. The reporting criteria are standardised and the configuration is provided by RRC signalling (UE measurements) or NBAP signalling (Node B measurements). Examples are periodic reporting and event based reporting.
- **D:** a measurement report information (message) sent on the radio or Iub interface.