

**Agenda Item** : 16.3  
**Source** : Siemens, Italtel  
**Title** : Combined event-triggered and periodic reporting  
**Document for** : Decision, addition to 25.433

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## **ABSTRACT**

This contribution proposes an additional report characteristics for Common and Dedicated Measurement Initiation Requests over NBAP. It combines the **event-triggered** and **periodic** reporting methods. This reporting type is useful for link quality surveillance applications.

## **1. Introduction**

The NBAP Specification [1] provides procedures for Radio Network Performance Measurements, both as a Common Procedure (ch. 8.1.4.1) and as a Dedicated Procedure (ch. 8.2.6.1), with the Common Procedure message defined in chapter 9.1.18. In both procedures, the MEASUREMENT INITIATION REQUEST message contains an information field "Report Characteristics". According to the current specification, this can assume the following three values: i) periodic, ii) event-triggered, and iii) immediate reporting. However, for typical Link quality surveillance applications, as applied e.g. for Dynamic Channel Allocation (DCA) in the TDD mode, periodic measurement reports are only required whenever the link quality falls below a certain threshold and comes in a critical range where an allocation update could become necessary. Therefore it is proposed to introduce an additional class which results from the combination of event-triggered and periodic approach.

## **2. Combined event-triggered and periodic reporting**

The additional Report Characteristics of the Measurement Initiation Request Message should combine the **event triggered** and the **periodic** approach. For instance, in case of DCA the Node B will periodically determine the link quality (SIR, BER, etc.) of the uplink connections, but only if the quality exceeds a certain threshold  $S_1$  (trigger event  $t_1$  in Figure 1), the interference measurements of selected uplink time-slots are initiated and together with a link quality indication periodically reported to the Radio Resource Management located in the RNC. The required reporting period (measurement frequency) must be contained in the Measurement Characteristics field. The advantage of this combined procedure is the reduction of measurement signalling over lub (since only in critical situations measurements are reported). Reporting is either terminated by exceeding the threshold in the opposite direction, (instance  $t_2$  in Figure 1) or by measurement termination.

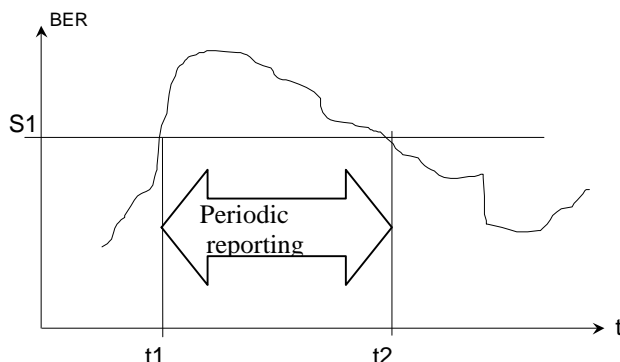


Figure 1: An example of combined event-triggered and periodic reporting

## **4. Conclusion and Proposal**

The combined event-triggered and periodic Report Characteristics for Measurement Request Message has been proposed. The following changes to the specification document TS 25.433 are suggested:

Proposed new text in TS 25.433.

*In Chapter 8.1.4.1 “Measurement Request” at bullet point “Report Characteristics”, it should be added:*

**Combined event-triggered and periodic:** Periodic reporting with some frequency should be started upon a specific event in Node B, e.g. Performance threshold crossing. Once the opposite event occurs, the reporting shall be stopped. In this case the event and the update frequency have to be specified.

*The same text should be added in chapter 8.2.6.1 for the Dedicated Measurement Initiation Request.*

*In ch. 9.1.18, in the parameter list, the text of footnote 12 should be extended to read:  
“Can be periodic, event triggered, immediate, or combined event triggered and immediate”.*

## **References**

[1] UMTS 25.433 v.1.1.2 (Tdoc R3-99813): NBAP Specification