

Agenda Item: AH21
Source: Siemens AG
To: TSG RAN WG1
Title: Main path RX Timing Deviation for 1.28 Mcps TDD
Document for: Decision

1. Summary

This paper is introducing an additional measurement for the 1.28 Mcps TDD option: The main path RX timing deviation. This measurement is needed for the operation of the uplink synchronisation control algorithms.

2. Introduction

For the 3.84 Mcps TDD option the measurement RX timing deviation is defined. This measurement refers to the first significant uplink path to be used in the detection process. Since the uplink synchronisation control synchronises the portion of the uplink burst related to the strongest channel impulse response path (main path) to a certain node B and time slot specific reference timing (related to the uplink synchronisation control target). This 3.84 Mcps RX timing deviation measurement cannot be used as input for the uplink synchronisation control algorithms.

Consequently, the deviation of the main path with respect to the reference timing has to be measured in the node B in order to assist the uplink synchronisation algorithm.

3. Proposal

We propose to add following paragraphs in the working CR for TS25.225 as the definition of Main Path RX Timing Deviation for 1.28Mcps TDD.

----- Beginning of text proposal for working CR for 25.225 -----

5.2.8.2 Main path RX Timing Deviation for 1.28 Mcps TDD

Definition	<p>'Main Path Rx Timing Deviation' is the time difference, in multiple of 1/8 chips:</p> $T_{Rx_dev} = T_{Main_Rx_Path} - T_{S_ref}$ <p><u>Where:</u></p> <p><u>T_{Main_Rx_Path}:</u> time of the reception in the Node B of the most powerful uplink path from the detected signal</p> <p><u>T_{S_ref}:</u> time of the beginning of the signal detection according to the Node B internal reference timing</p> <p>The Node B can set different reference timings on different time slots</p>
-------------------	--

NOTE: This measurement is used by the network for the uplink synchronisation control procedure.

----- End of text proposal for working CR for 25.225 -----