3GPP TSG-RAN Working Group 1, Meeting #11   **TDoc TSG RAN WG1 (00)0146**
San Diego, USA, February 29 – March 3, 2000

To: WG3
CC: WG2
Source: Siemens AG
Title: Draft LS on SFN synchronisation for TDD

TSG RAN WG1 has noticed that RAN WG3 assumptions about SFN synchronisation for the TDD mode (cf. [1]) are not in line with the assumptions in RAN WG1. Therefore, RAN WG1 would like to inform RAN WG3 that from RAN WG1 point of view it is beneficial to synchronize the SFN within one TDD system, for the following reasons:

- In TDD mode cell parameters are changed from frame to frame, see [2]. Since these cell parameter cycling sequences are controlled by the SFN, this feature requires synchronisation of the LSB of the SFN, e.g. to avoid signalling of SFN offsets between cells in case of neighbour cell measurements.
- A SFN synchronisation is also seen favourable with respect to the SFN based multiframe structures of physical channels in TDD in order to allow an easy alignment of the multiframe structures for handover. Since that multiframe (physical channel repetition period) can include up to 64 radio frames, this implies synchronisation of at least 6 LSBs of the SFN.

In order to achieve a common understanding in all working groups, TSG RAN WG1 would like to ask RAN WG3 that in case of a frame synchronisation of TDD mode cells SFN synchronisation is supported as well, covering at least the last 6 bits of the SFN.

[1]   TS25.402 vers. 3.0.0 'Synchronisation in UTRAN Stage 2', 3GPP TSG RAN WG3
[2]   TDoc R1-00-0135 'Cycling of cell parameters', Texas Instruments, 3GPP TSG RAN WG1 meeting #10, Beijing, China