TSG-RAN Working Group 1 Meeting #12   *TSGR1#12(00)0591*
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Source:	Siemens, InterDigital Comm. Corp.
Title:	Draft LS to WG4: Accuracy Requirements for NodeB synchronisation
Source:	TSG-RAN WG1
To:	TSG-RAN WG4
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TSG RAN WG1 has begun work for R2000 according to RP-000055, Proposed work item "NodeB Synchronisation for TDD".

In order to select the preferred system solution to this requirement it is necessary to know the required performance; e.g. worst case difference between the time references of two neighboring Node Bs.

Knowledge of this requirement is urgently needed and WG4 is therefore encouraged to actively work towards recommending a value, or range of values.

In selecting the accuracy value, WG4 is encouraged to consider the following factors.
- Maximum propagation delay within a cell
- Maximum delay spread
- Transmit-Receive mask
- Impact of Time error on inter-slot interference
- Impact of Time error on timing advance adjustment for hand off.
- Impact of Node B timing adjustments on UE receive and tracking performance.

WG1 also identifies the need for WG4's expertise in radio link performance and will welcome its participation in evaluating the impact of link and propagation effects on the reliability and accuracy of time of arrival (TOA) measurements, which may critical functions supporting several of the candidate approaches.