

**Source:** InterDigital Comm. Corp.  
**Title:** Roadmap to Node B Synchronisation Documents  
**Document for:** Information

---

## **1 Introduction**

This contribution is written to provide the reader with an overview of the contributions written on the subject of Node B Synchronisation. While this work item officially begins in RAN1#12, April, 2000, there had been activity in 1999 before the decision was made to defer work to R2000.

This document suggests an overview and preferred order for reading the new InterDigital contributions and identifies useful references from previous meetings.

## **2 New Contributions by InterDigital**

It is recommended that the following new documents be read in the following order.

472 Accuracy Requirements for Node B Synchronization

- Recommendation – for discussion

470 Proposed Study Plan for Node B Synchronization over the Air: Document for: Discussion

- For discussion and refinement

471 Synchronization of TDD Cells

- Proposal for a passive approach
- For the proposal for an active approach see references [3],[4]
- Other Candidates are welcome

468 Node B Synchronization over the Air: Preliminary Comparison of Alternatives

- Initial qualitative assessment of the current two candidates

467 Proposed Clock Model for Node B Synchronization over the Air: Document for: Discussion

- A proposal for a clock model to support detailed simulation and analysis of alternatives
- Other contributions are welcome

469 Node Sync Tracking Simulation: Impact of TOA measurement accuracy

- Preliminary performance results for passive approach
- See reference [3] for performance results for active approach

473 Node B Synchronization over the Air: A purely analytical verification of Tdoc R1-00-0074 simulation results.

- Analytic (non-simulation) results agree with performance results of Tdoc 74
- Also highlights basic cause and effect relationships

## **3 Recommended Reading-prior documents**

[1] Synchronization of TDD Cells, TSGR3#6(99)905, Sophia Antipolis, France, August 23-27, 1999, InterDigital Comm. Corp.

[2] NBAP & RNSAP Procedure for TDD Synchronization (some additions/modifications to R3-99905) TSGR3#6(99) 882, Italtel / Siemens, August 23rd 1999, Sophia Antipolis, France

[3]Node B synchronisation for TDD, Siemens, TSGR1#10(00)0074, Beijing, China, January 18-21 2000

[4] Synchronisation of Node B's in TDD via Selected PRACH Time Slots, Siemens, TSG RAN WG1 (99)G42, New York, USA, October 12 - 15, 1999

[5] RP-000055 Proposed work item "NodeB Synchronisation for TDD" (Siemens)