

TSG RAN Meeting #15

RP-020036

Cheju, Korea, 5 - 8 March 2002

Title: CRs (Rel-5) for WI "Node B Synchronisation for 1.28 Mcps TDD"

Source: TSG RAN WG4

Agenda Item: 9.3.2

RAN4 Tdoc	Spec	CR	Rev	Phase	Title	Cat	Curr Ver	New Ver
R4-020155	25.123	175		Rel-5	NodeB Synchronisation Measurements performance requirements for 1.28Mcps TDD	B	4.4.0	5.0.0

Sophia Antipolis, France 28th January - 1st February 2002

CR-Form-v3

CHANGE REQUEST
 ⌘ **25.123** CR **175** ⌘ rev **-** ⌘ Current version: **4.4.0** ⌘

 For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

Proposed change affects: ⌘ (U)SIM ME/UE Radio Access Network Core Network
Title: ⌘ NodeB Synchronisation Measurement performance requirements_for 1.28Mcps TDD

Source: ⌘ RAN WG4

Work item code: ⌘ RANimp-NBSLCR **Date:** ⌘ 1/2/2002

Category: ⌘ **B** **Release:** ⌘ Rel-5

 Use one of the following categories:

F (essential correction)

A (corresponds to a correction in an earlier release)

B (Addition of feature),

C (Functional modification of feature)

D (Editorial modification)

Detailed explanations of the above categories can be found in 3GPP TR 21.900.

 Use one of the following releases:

2 (GSM Phase 2)

R96 (Release 1996)

R97 (Release 1997)

R98 (Release 1998)

R99 (Release 1999)

REL-4 (Release 4)

REL-5 (Release 5)

Reason for change: ⌘ Missing ranges, mappings and accuracy requirements for 1.28Mcps TDD NodeB Synchronisation Burst Timing and SIR.

Summary of change: ⌘ The accuracy requirement for NodeB synchronisation burst timing and SIR mappings are introduced.

Consequences if not approved: ⌘ Unfinished/incomplete requirements.

Clauses affected: ⌘ 9.2.1.11B

Other specs affected: ⌘ Other core specifications ⌘ Test specifications O&M Specifications

Other comments: ⌘ The approval of this CR should depend on the finalisation of the 1.28Mcps TDD NodeB synchronisation WI in WG1.
How to create CRs using this form:
 Comprehensive information and tips about how to create CRs can be found at: http://www.3gpp.org/3G_Specs/CRs.htm. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://www.3gpp.org/specs/>. For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 TSG meetings.

- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

9.2.1.11B Node B Synchronisation for 1.28Mcps TDD

Cell synchronisation burst timing is the time of start (defined by the first detected path in time) of the cell sync burst of a neighbouring cell. Type 1 is used for the initial phase of Node B synchronisation. Type 2 is used for the steady-state phase of Node B synchronisation. Both have different range.

The reference point for the cell sync burst timing measurement shall be the Rx antenna connector.

9.2.1.11B.1 Cell Synchronisation burst timing Type1 and Type 2

Table 9.xx1

<u>Parameter</u>	<u>Unit</u>	<u>Accuracy [chip]</u>	<u>Conditions</u>
<u>Cell Synchronisation burst timing</u>	<u>chip</u>	<u>[+/-0.125 for both type 1 and type 2]</u>	

9.2.1.11B.2 Range/mapping Type 1

The reporting range for Cell Synchronisation burst timing type 1 is from -65536 to +65536 chips with 1/4 chip resolution.

In table 9.xx the mapping of measured quantity is defined for burst type 1.

Table 9.xx2

<u>Reported value</u>	<u>Measured quantity value</u>	<u>Unit</u>
<u>Burst TIME TYPE1 0000000</u>	<u>-65536 ≤ burst timing Type 1 < -65535.75</u>	<u>chip</u>
<u>Burst TIME TYPE1 0000001</u>	<u>-65535.75 ≤ burst timing Type 1 < -65535.5</u>	<u>chip</u>
<u>Burst TIME TYPE1 0000002</u>	<u>-65535.5 ≤ burst timing Type 1 < -65535.25</u>	<u>chip</u>
<u>...</u>	<u>...</u>	<u>...</u>
<u>Burst TIME TYPE1 0524285</u>	<u>65535.25 ≤ burst timing Type 1 < 65535.5</u>	<u>chip</u>
<u>Burst TIME TYPE1 0524286</u>	<u>65535.5 ≤ burst timing Type 1 < 65535.75</u>	<u>chip</u>
<u>Burst TIME TYPE1 0524287</u>	<u>65535.75 ≤ burst timing Type 1 < 65536</u>	<u>chip</u>

9.2.1.11B.3 Range/mapping Type 2

The reporting range for Cell Synchronisation burst timing type 2 is from -8 to +8 chips with 1/8 chip resolution. In table 9.xx3 the mapping of measured quantity is defined for burst type 2.

Table 9.xx3

<u>Reported value</u>	<u>Measured quantity value</u>	<u>Unit</u>
<u>Burst TIME TYPE2 0000</u>	<u>-8 ≤ burst timing Type 2 < -7.875</u>	<u>chip</u>
<u>Burst TIME TYPE2 0001</u>	<u>-7.875 ≤ burst timing Type 2 < -7.750</u>	<u>chip</u>
<u>Burst TIME TYPE2 0002</u>	<u>-7.750 ≤ burst timing Type 2 < -7.625</u>	<u>chip</u>
<u>...</u>	<u>...</u>	<u>...</u>
<u>Burst TIME TYPE2 0125</u>	<u>7.625 ≤ burst timing Type 2 < 7.750</u>	<u>chip</u>
<u>Burst TIME TYPE2 0126</u>	<u>7.750 ≤ burst timing Type 2 < 7.875</u>	<u>chip</u>
<u>Burst TIME TYPE2 0127</u>	<u>7.875 ≤ burst timing Type 2 < 8</u>	<u>chip</u>

9.2.11B.4 Cell Synchronisation burst SIR Type1 and Type2

Signal to Interference Ratio for the cell sync burst, defined according to TS25.225.

The reference point for the cell synchronisation burst SIR shall be the Rx antenna connector.

Table 9.xx4

<u>Parameter</u>	<u>Unit</u>	<u>Accuracy [dB]</u>		<u>Conditions</u>
		<u>Normal conditions</u>	<u>Extreme conditions</u>	
<u>Cell Synchronisation burst SIR</u>	<u>dB</u>	<u>±3 dB for both type 1 and 2</u>	<u>[]</u>	

9.2.1.11B.5 Range/Mapping for Type1 and Type 2

The reporting range for SIR is from 0 ... 30 dB with a resolution of 1dB.

In table 9.xx5 mapping of the measured quantity is defined. Signalling range may be larger than the guaranteed accuracy range.

Table 9.xx5

<u>Reported value</u>	<u>Measured quantity value</u>	<u>Unit</u>
<u>Cell Sync Burst SIR_00</u>	<u>SIR < 0</u>	<u>dB</u>
<u>Cell Sync Burst SIR_01</u>	<u>0 ≤ SIR < 1</u>	<u>dB</u>
<u>Cell Sync Burst SIR_02</u>	<u>1 ≤ SIR < 2</u>	<u>dB</u>
<u>...</u>	<u>...</u>	<u>...</u>
<u>Cell Sync Burst SIR_29</u>	<u>28 ≤ SIR < 29</u>	<u>dB</u>
<u>Cell Sync Burst SIR_30</u>	<u>29 ≤ SIR < 30</u>	<u>dB</u>
<u>Cell Sync Burst SIR_31</u>	<u>30 ≤ SIR</u>	<u>dB</u>