3GPP TSG RAN WG1#9   **Tdoc R1-(99)k77**
Dresden, Germany
November 30th - December 3rd, 1999   **Meeting No. 9**
Agenda Item: Ad Hoc 16 / Plenary

Source: Nokia

Clarifications for CFN-SFN observed time difference measurement in UTRA FDD

1. Introduction.

This contribution proposes to clarify the CFN-SFN measurement in connection with the compressed mode.

2. Background

The UE performs CFN-SFN timing measurements with compressed mode, the SFN number from the measured carriers can not be decoded. This means that the range for this measurements basically is limited to the timing difference of the scrambling codes, the possible frame offset (OFF parameters in the measurement) is not actually measured.

3. Conclusions

The attached CR-021 is recommended to be to included in 25.215 for clarifying the SFN-CFN measurement issue in order to avoid misunderstanding of this reported value when provided with compressed mode.

CHANGE REQUEST

Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.

25.215	CR	**021**	Current Version:	3.0.0

GSM (AA.BB) or 3G (AA.BBB) specification number ↑   *↑ CR number as allocated by MCC support team*

For submission to: **TSG RAN#6**   for approval **X**   strategic ☐   *(for SMG*
list expected approval meeting # here ↑   for information ☐   non-strategic ☐   *use only)*

Form: CR cover sheet, version 2 for 3GPP and SMG   *The latest version of this form is available from: ftp://ftp.3gpp.org/Information/CR-Form-v2.doc*

Proposed change affects: (U)SIM ☐   ME **X**   UTRAN / Radio **X**   Core Network ☐
(at least one should be marked with an X)

Source:	Nokia	**Date:**	29.11.1999

Subject: CFN-SFN measurement with compressed mode

Work item:

Category: F   Correction   **X**   **Release:**   Phase 2 ☐
          A   Corresponds to a correction in an earlier release ☐   Release 96 ☐
(only one category   B   Addition of feature ☐   Release 97 ☐
shall be marked   C   Functional modification of feature ☐   Release 98 ☐
with an X)   D   Editorial modification ☐   Release 99 **X**
                                                                Release 00 ☐

Reason for change: For the CFN-SFN measurement, the range reported is not available with compressed mode.

Clauses affected:

Other specs affected:
Other 3G core specifications	☐	→ List of CRs:
Other GSM core specifications	☐	→ List of CRs:
MS test specifications	☐	→ List of CRs:
BSS test specifications	☐	→ List of CRs:
O&M specifications	☐	→ List of CRs:

Other comments:

help.doc

<--------- double-click here for help and instructions on how to create a CR.

5.1.11 CFN-SFN observed time difference

Definition	The CFN-SFN observed time difference to cell is defined as: $OFF \times 38400 + T_m$, where: $T_m = T_{RxSFN} - (T_{UETx} - T_0)$, given in chip units with the range [0, 1, …, 38399] chips T_{UETx} is the time when the UE transmits an uplink DPCCH/DPDCH frame. T_0 is defined in TS 25.211 section 7.1.3. T_{RxSFN} is time at the beginning of the next received neighbouring P-CCPCH frame after the time instant $T_{UETx} - T_0$ in the UE. If the next neighbouring P-CCPCH frame is received exactly at $T_{UETx} - T_0$ then $T_{RxSFN} = T_{UETx} - T_0$ (which leads to $T_m = 0$). And $OFF = (CFN_{Tx} - SFN)$ mod 256, given in number of frames with the range [0, 1, …, 255] frames CFN_{Tx} is the connection frame number for the UE transmission of an uplink DPCCH/DPDCH frame at the time T_{UETx}. SFN = the system frame number for the neighbouring P-CCPCH frame received in the UE at the time T_{RxSFN}. In case the inter-frequency measurement is done with compressed mode, the value for parameter OFF is always reported to be 0. In case that the SFN measurement indicator indicates that the UE does not need to read cell SFN of the target neighbour cell, the value of the parameter OFF is always set to be 0. *Note: In Compressed mode it is not required to read cell SFN of the target neighbour cell. This is indicated with the SFN measurement indicator .*
Applicable for	Connected Inter, Connected Intra
Range/mapping	Time difference is given with the resolution of one chip with the range [0, …, 9830399] chips.