TSG-RAN Meeting #14
Kyoto, Japan, 11 - 14, December, 2001

TSGRP#14(01) 0912

Title: **Agreed CRs to TS 25.433**

Source: **TSG-RAN WG3**

Agenda item: **8.3.3/8.3.4/9.4.3**

RP Tdoc	R3 Tdoc	Spec	CR_Num	Rev	Release	CR_Subject	Cat	Cur_Ver	New_Ver	Workitem
RP-010912	R3-013668	25.433	545	1	Rel-4	Correction to SFN-SFN Observed Time Difference Measurement report mapping	F	4.2.1	4.3.0	LCS1-UEPos-Iublur

3GPP TSG-RAN3 Meeting #25 ***R3-013668***
Makuhari, Japan, 26th – 30th November 2001

CR-Form-v3

CHANGE REQUEST

⌘ **25.433** **CR** **545** ⌘ rev **1** ⌘ Current version: **4.2.1** ⌘

*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 **X** Core Network ☐

Title:	⌘	Correction to SFN-SFN Observed Time Difference Measurement report mapping
Source:	⌘	Nokia
Work item code:	⌘	LCS1-UEPos-IublIur
Date:	⌘	November 2001
Category:	⌘	**F**
Release:	⌘	REL-4

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: ⌘ UTRAN SFN-SFN Observed time difference measurement for FDD mode of operation has been redefined to TS25.215 (Tdoc R1-011294 CR106r1). Measurement shall be performed to frame boundaries instead of slot boundaries. WG4 has aligned the report mapping of UTRAN SFN-SFN Observed Time Difference accordingly to TS25.133 (Tdoc R4-01409) as follow:

9.2.15.2 SFN-SFN observed time difference measurement report mapping

The SFN-SFN observed time difference reporting range is from –19200.0000 … 19200.0000 chip.

In table 9.62 the mapping of measured quantity is defined. The range in the signalling may be larger than the guaranteed accuracy range.

Table 9.62

Reported value	Measured quantity value	Unit
SFN-SFN_TIME _00000	-19200.0000 □ SFN-SFN observed time difference < -19199.9375	chip
SFN-SFN_TIME _00001	-19199.9375 □ SFN-SFN observed time difference < -19199.8750	chip
… … …		
SFN-SFN_TIME _614398	19199.8750 □ SFN-SFN observed time difference < 19199.9375	chip
SFN-SFN_TIME _614399	19199.9375 □ SFN-SFN observed time difference □ 19200.0000	chip

In NBAP *SFN-SFN Measurement Value Information* IE shall be corrected according to mapping table modification made to TS 25.133.

Summary of change:	⌘	IE Type and Reference for *SFN-SFN* IE corrected. Reported SFN-SFN Values for TDD and FDD mode of operation specified. Reported SFN-SFN Value for FDD mode of operation corrected according to mapping table modification made to TS 25.133. In *SN-SFN Measurement Time Stamp* IE reporting of reference cell Timeslot removed in FDD mode of operation. There is no use to report the reference cell Timeslot, since the UTRAN SFN-SFN Observed time difference measurement is always made at the beginning of one Primary CPICH frame i.e. TS0.
Consequences if not approved:	⌘	If this CR is not approved, the report mapping for SFN-SFN Observed Time Difference Measurement is not aligned with the TS25.133 Impact Analysis: Impact assessment towards the previous version of the specification (same release): This CR has isolated impact with the previous version of the specification because this CR corrects the report mapping of the measured SFN-SFN Observed Time Difference value for which the specification was incorrect. This CR has an impact under protocol and functional point of view. The impact can be considered isolated because the change affects one system function namely the SFN-SFN Observed Time Difference Measurements on Common Resources.

Clauses affected:	⌘	9.2.1.53D, 9.2.1.53E, 9.2.1.53F, 9.3.4			
Other specs affected:	⌘	**X**	Other core specifications	⌘	TS 25.423 v4.2.0 CR485
			Test specifications		
			O&M Specifications		
Other comments:	⌘				

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

9.2.1.53C SFN-SFN Measurement Threshold Information

The SFN-SFN Measurement Threshold Information defines the related thresholds SFN-SFN Observed Time Difference measurments which shall trigger the Event On Modification.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
SFN-SFN Change Limit	O		INTEGER(1. .16384)	Change of SFN-SFN value compared to previously reported value, which shall trigger a new report. Unit in 1/16 chip.
Predicted SFN-SFN Deviation Limit	O		INTEGER(1. .16384)	Deviation of the predicated SFN-SFN from the latest measurement result, which shall trigger a new report. Unit in 1/16 chip.

9.2.1.53D SFN-SFN Measurement Time Stamp

IE/Group Name	Presence	Range	IE type and reference	Semantics description
CHOICE *Mode*				
>FDD				
>>SFN	M		9.2.1.53A	Indicates the SFN of the reference cell at which the measurement has been performed.
>TDD				
>>SFN	M		9.2.1.53A	Indicates the SFN of the reference cell at which the measurement has been performed.
>>Time Slot	M		9.2.3.23	~~Indicates the Primary CPICH Time Slot of the reference cell at which this measurement has been performed (FDD Only).~~ Indicates the Time Slot of the reference cell at which this measurement has been performed ~~(TDD Only)~~.

9.2.1.53E SFN-SFN Measurement Value Information

The SFN-SFN Measurement Value Information IE indicates the measurement result related to SFN-SFN Observed Time Difference measurements.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Successful Neighbouring cell SFN-SFN Observed Time Difference Measurement Information		1..<maxnoMeasNCell>		
>UC-Id	M		9.2.1.65B	
>SFN-SFN Value	M		9.2.1.53F~~INTEGER(0..40961)~~	~~According to mapping in [22]. TBD by RAN4.~~
>SFN-SFN Quality	M		INTEGER(0..16383)	Indicates the standard deviation of the SFN-SFN measurements.
>SFN-SFN Drift Rate	M		INTEGER(-16383..+16383)	Indicates the SFN-SFN drift rate in 1/16 chip per second. A positive value indicates that the Referece cell clock is running at a greater frequency than the measured neighbouring cell.
>SFN-SFN Drift Rate Quality	M		INTEGER(0.. 16383)	Indicates the standard deviation of the SFN-SFN drift rate measurements.
>SFN-SFN Measurement Time Stamp	M		9.2.1.53D	
Unsuccessful Neighbouring cell SFN-SFN Observed Time Difference Measurement Information		0..<maxnoMeasNCell-1>		
>UC-Id	M		9.2.1.65B	

Range bound	Explanation
maxnoMeasNCell	Maximum number of neighbouring cells that can be measured on.

9.2.1.53F SFN-SFN Value

IE/Group Name	Presence	Range	IE type and reference	Semantics description
CHOICE *Mode*				
>FDD				
>>SFN-SFN	M		INTEGER(0..614399)	According to mapping in [22].
>TDD				
>>SFN-SFN	M		INTEGER(0..40961)	According to mapping in [23].

9.3.4 Information Elements Definitions

```
--**************************************************************************
--
-- Information Element Definitions
--
--**************************************************************************
```

. . . Partly Omitted . . .

```
SFNSFN-FDD ::= INTEGER (0..6143994~~0961~~)

SFNSFN-TDD ::= INTEGER (0..40961)

SFNSFNChangeLimit ::= INTEGER (0..16384)

SFNSFNDriftRate ::= INTEGER (-16384..16384)

SFNSFNDriftRateQuality ::= INTEGER (0..16384)

SFNSFNMeasurementThresholdInformation::= SEQUENCE {
    sFNSFNChangeLimit                   SFNSFNChangeLimit                   OPTIONAL,
    predictedSFNSFNDeviationLimit       PredictedSFNSFNDeviationLimit       OPTIONAL,
    iE-Extensions                   ProtocolExtensionContainer { { SFNSFNMeasurementThresholdInformation-ExtIEs} }    OPTIONAL,
    ...
}

SFNSFNMeasurementThresholdInformation-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

SFNSFNMeasurementValueInformation ::= SEQUENCE {
    successfullNeighbouringCellSFNSFNObservedTimeDifferenceMeasurementInformation       SEQUENCE (SIZE(1..maxNrOfMeasNCell)) OF
        SEQUENCE {
            uC-Id                       UC-Id,
            sFNSFNValue     SFNSFNValue,
            sFNSFNQuality       SFNSFNQuality,
            sFNSFNDriftRate     SFNSFNDriftRate,
            sFNSFNDriftRateQuality      SFNSFNDriftRateQuality,
            sFNSFNTimeStampInformation  SFNSFNTimeStampInformation,
            iE-Extensions       ProtocolExtensionContainer { { SuccessfullNeighbouringCellSFNSFNObservedTimeDifferenceMeasurementInformationItem-
ExtIEs} }       OPTIONAL,
            ...
        },
    unsuccessfullNeighbouringCellSFNSFNObservedTimeDifferenceMeasurementInformation     SEQUENCE (SIZE(0..maxNrOfMeasNCell-1)) OF
        SEQUENCE {
            uC-Id                       UC-Id,
            iE-Extensions       ProtocolExtensionContainer { { UnsuccessfullNeighbouringCellSFNSFNObservedTimeDifferenceMeasurementInformationItem-
ExtIEs} }       OPTIONAL,
```

```
                ...
        },
    iE-Extensions       ProtocolExtensionContainer { { SFNSFNMeasurementValueInformationItem-ExtIEs} }                OPTIONAL,
    ...
}

SFNSFNMeasurementValueInformationItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

SuccessfullNeighbouringCellSFNSFNObservedTimeDifferenceMeasurementInformationItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UnsuccessfullNeighbouringCellSFNSFNObservedTimeDifferenceMeasurementInformationItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

SFNSFNQuality ::= INTEGER (0..1048575)

ShutdownTimer ::= INTEGER (1..3600)
-- Unit sec

SIB-Originator ::= ENUMERATED {
    nodeB,
    cRNC,
    ...
}

SIR-Error-Value ::= INTEGER (0..125)

SFNSFNTimeStampInformation ::= CHOICE {
    sFNSFNTimeStamp-FDD     SFN,
    sFNSFNTimeStamp-TDD     SFNSFNTimeStamp-TDD,
    ...
}

SFNSFNTimeStamp-TDD::= SEQUENCE {
    sFN                 SFN,
    timeSlot            TimeSlot,
    iE-Extensions                   ProtocolExtensionContainer { { SFNSFNTimeStamp-ExtIEs} }                        OPTIONAL,
    ...
}

SFNSFNTimeStamp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

```
SFNSFNValue ::= CHOICE {
    sFNSFN-FDD      SFNSFN-FDD,
    sFNSFN-TDD      SFNSFN-TDD,
    ...
}
```