# **3GPP TSG RAN Meeting #14**

Clauses affected: # 9.1.9.2.2

# Kyoto, Japan, 11th - 14th december 2001

CHANGE REQUEST								CR-Form-v4				
*	25.	<mark>133</mark> (	CR 243		¥	ev		¥	Current ver	sion:	5.0.0	*
For <u><b>HELP</b></u> on us	sing ti	his form	, see botto	om of thi	s pag	ge or	look a	at the	pop-up tex	t over	r the ₩ syn	nbols.
Proposed change a	affect	's: ₩	(U)SIM	ME	E/UE	X	Radi	o Acc	cess Netwo	rk	Core Ne	twork
Title: #	Cor	rection t	to the map	ping of l	UE R	x-Tx	time o	differe	ence type 2			
Source: #	Nor	tel Netw	orks/									
Work item code: ₩									Date: ೫	11	Decembe	r 2001
Category:	Use of least	F (correct A (correct B (additi C (functi D (editor led expla	e following oction) sponds to a con of feature on all modifications of the GPP TR 21.	n correction re), cation of ation) the above	on in a featui	re)			2	f the for (GSI) (Rela (Rela (Rela (Rela	el-5 ollowing rele M Phase 2) ease 1996) ease 1997) ease 1999) ease 4) ease 5)	eases:
Reason for change	Reason for change:   There currently is a misalignment between the mapping defined in 25.133 for the UE Rx-Tx time difference type 2 measurement and the expectation of the signalling in 25.331. In particular, 25.331 defines 13 bits (8192 values) for the return value of the measurement while 25.133 defines a mapping with 8194 values (two more than allowed).						e or the					
Summary of chang	je: ૠ	8192 le		ign with	the s	ignall	ling in		type 2 is co 31. This is			
Consequences if not approved:	*	lsolate Correct Would implen	d in 25.33° mber of bit of Impact a ction to a function to a function and affect mentations or rected function and affect measured in the Umismat measured the Umismat measured function and a function a	I for the ts expectanalysis: unction will dictory be implement of the support of the twork in the tement questionality is the temperature of the tempe	where etwe- entating the ity is mplere num quanting e num	e the see the see the control the Uments of the control the	specif 5.133 behave rrected IE Rx- s the confidence change	fication and 2 ving lied function change expenses		d in the therwine UE repo	le misalign lent quantit le CR, wou ise. le 2 measu , there will orting of the	ement in ty.  Ild affect urement. be a ty.

Other specs affected:	¥	Other core specifications Test specifications O&M Specifications	*	
Other comments:	$\mathfrak{R}$			

#### How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at: <a href="http://www.3gpp.org/3G">http://www.3gpp.org/3G</a> 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 <a href="ftp://ftp.3gpp.org/specs/">ftp://ftp.3gpp.org/specs/</a> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 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.

### 9.1.9 UE Rx-Tx time difference

### 9.1.9.1 UE Rx-Tx time difference type 1

NOTE: This measurement is used for call set up purposes to compensate propagation delay of DL and UL.

The measurement period in CELL\_DCH state is [100 ms]

#### 9.1.9.1.1 Measurement requirement

**Table 9.25** 

Parameter	Unit	Accuracy [chip]	Conditions lo [dBm]
UE RX-TX time difference	chip	± 1.5	-9450

#### 9.1.9.1.2 UE Rx-Tx time difference type 1 measurement report mapping

The reporting range is for *UE Rx-Tx time difference type 1* is from 768 ... 1280 chip.

In table 9.26 the mapping of measured quantity is defined. The range in the signalling may be larger than the guaranteed accuracy range.

**Table 9.26** 

Reported value	Measured quantity value	Unit
RX-TX_TIME _0000	UE Rx-Tx Time difference type 1< 768.000	chip
RX-TX_TIME _0001	768.000 ≤ UE Rx-Tx Time difference type 1< 768.0625	chip
RX-TX_TIME _0002	768.0625 ≤ UE Rx-Tx Time difference type 1< 768.1250	chip
RX-TX_TIME _0003	768.1250 ≤ UE Rx-Tx Time difference type 1< 768.1875	chip
RX-TX_TIME _8190	1279.8125 ≤ UE Rx-Tx Time difference type 1<	chip
	1279.8750	
RX-TX_TIME _8191	1279.8750 ≤ UE Rx-Tx Time difference type 1<	chip
	1279.9375	
RX-TX_TIME _8192	1279.9375 ≤ UE Rx-Tx Time difference type 1<	chip
	1280.0000	
RX-TX_TIME _8193	1280.0000 ≤ UE Rx-Tx Time difference type 1	chip

## 9.1.9.2 UE Rx-Tx time difference type 2

NOTE: This measurement is used for UE positioning purposes.

It is optional for a terminal to support a subset of UE positioning methods. This measurement represents an instantaneous value that is time stamped as defined in the IE description in TS 25.331 [16].

#### 9.1.9.2.1 Measurement requirement

**Table 9.27** 

Parameter	Unit	Accuracy [chin]	Conditions
Farameter	Onit	Accuracy [chip]	lo [dBm]
UE RX-TX time difference	chip	± TBD	-9450

## 9.1.9.2.2 UE Rx-Tx time difference type 2 measurement report mapping

The reporting range is for *UE Rx-Tx time difference type2* is from 768 ... 1280 chip.

In table 9.28 the mapping of measured quantity is defined. The range in the signalling may be larger than the guaranteed accuracy range.

**Table 9.28** 

Reported value	Measured quantity value	Unit
RX-TX_TIME _0000	UE Rx-Tx Time difference type 2 < 768.000	chip
RX-TX_TIME _0001	768.000 ≤ UE Rx-Tx Time difference type 2 < 768.0625	chip
RX-TX_TIME _0002	768.0625 ≤ UE Rx-Tx Time difference type 2 < 768.1250	chip
RX-TX_TIME _0003	768.1250 ≤ UE Rx-Tx Time difference type 2 < 768.1875	chip
RX-TX TIME 8189	1279.7500 ≤ UE Rx-Tx Time difference type 2 < 1279.8125	<u>chip</u>
RX-TX_TIME _8190	1279.8125 ≤ UE Rx-Tx Time difference type 2 < 1279.8750	chip
RX-TX_TIME _8191	1279.8750 ≤ UE Rx-Tx Time difference type 2 < 1279.9375	chip
RX-TX_TIME _8192	1279.9375 ≤ UE Rx-Tx Time difference type 2 < 1280.0000	chip
RX-TX TIME 8193	1280.0000 ≤ UE Rx-Tx Time difference type 2	chip

# **3GPP TSG RAN Meeting #14**

Clauses affected: # 9.1.9.2.2

# Kyoto, Japan, 11th - 14th december 2001

	CHANGE REQUEST								
*	25.133	CR 241	ж	ev	ж	Current vers	ion:	3.7.0	Ж
For <u><b>HELP</b></u> on u	sing this fo	orm, see bottom	of this pa	ge or lo	ok at the	e pop-up text	over th	he ₩ syr	nbols.
Proposed change	affects: भ	B (U)SIM	ME/UE	X	Radio Ac	ccess Networl	k	Core Ne	etwork
Title: Ж	Correction	on to the mappin	g of UE R	x-Tx tir	ne diffe	rence type 2			
Source: #	Nortel Ne	etworks							
Work item code: ₩						Date: ₩	11 D	ecembe	r 2001
Category: 米	Use one of F (co. A (co. B (ao. C (fur D (co. Detailed ex	f the following cate rrection) rresponds to a co- ldition of feature), nctional modification (planations of the 13GPP TR 21.900	rrection in a on of featu n) above cate	re)		Release: % Use one of 2 e) R96 R97 R98 R99 REL-4 REL-5	the follo (GSM I (Relea (Relea (Relea	owing rele Phase 2) se 1996) se 1997) se 1998) se 1999) se 4)	eases:
Reason for change	Reason for change:   There currently is a misalignment between the mapping defined in 25.133 for the UE Rx-Tx time difference type 2 measurement and the expectation of the signalling in 25.331. In particular, 25.331 defines 13 bits (8192 values) for the return value of the measurement while 25.133 defines a mapping with 8194 values (two more than allowed).							e or the	
Summary of chang	819	mapping of the 2 levels to align two levels in the	with the s	ignallin	g in 25.				
Consequences if not approved:	defi the Isola Cor Wor imp	mismatch measurem  If the UE ir	r the signary pected for the signary between the porting the constitution where the properties of the number of th	e the spen 25.1 ions be the correct the UE ments the ber of ity	pecifications and the character of the c	causing a po of the measi ion was: 25.331 like indicated nctionality oth	in the nerwise e type e UE, t reporti	CR, would be considered will and of the considered will there will the consideration of th	ement in ty.  uld affect urement. be a be a

Other specs affected:	¥	Other core specifications Test specifications O&M Specifications	*	
Other comments:	$\mathfrak{R}$			

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- 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.

**Table 9.24** 

Reported value	Measured quantity value	Unit
T2_SFN-SFN_TIME _00000	SFN-SFN observed time difference type 2 < -1280.0000	chip
T2_SFN-SFN_TIME _00001	-1280.0000 ≤ SFN-SFN observed time difference type 2 < -1279.9375	chip
T2_SFN-SFN_TIME _00002	-1279.9375 ≤ SFN-SFN observed time difference type 2 < -1279.8750	chip
T2_SFN-SFN_TIME _40959	1279.8750 ≤ SFN-SFN observed time difference type 2 < 1279.9375	chip
T2_SFN-SFN_TIME _40960	1279.9375 ≤ SFN-SFN observed time difference type 2 < 1280.0000	chip
T2_SFN-SFN_TIME _40961	1280.0000 ≤ SFN-SFN observed time difference type 2	chip

## 9.1.9 UE Rx-Tx time difference

### 9.1.9.1 UE Rx-Tx time difference type 1

NOTE: This measurement is used for call set up purposes to compensate propagation delay of DL and UL.

The measurement period in CELL\_DCH state is [100 ms]

#### 9.1.9.1.1 Measurement requirement

**Table 9.25** 

Parameter	Unit	Accuracy [chip]	Conditions lo [dBm]
UE RX-TX time difference	chip	± 1.5	-9450

#### 9.1.9.1.2 UE Rx-Tx time difference type 1 measurement report mapping

The reporting range is for *UE Rx-Tx time difference type 1* is from 768 ... 1280 chip.

In table 9.26 the mapping of measured quantity is defined. The range in the signalling may be larger than the guaranteed accuracy range.

**Table 9.26** 

Reported value	Measured quantity value	Unit
RX-TX_TIME _0000	UE Rx-Tx Time difference type 1< 768.000	chip
RX-TX_TIME _0001	768.000 ≤ UE Rx-Tx Time difference type 1< 768.0625	chip
RX-TX_TIME _0002	768.0625 ≤ UE Rx-Tx Time difference type 1 < 768.1250	chip
RX-TX_TIME _0003	768.1250 ≤ UE Rx-Tx Time difference type 1< 768.1875	chip
RX-TX_TIME _8190	1279.8125 ≤ UE Rx-Tx Time difference type 1< 1279.8750	chip
RX-TX_TIME _8191	1279.8750 ≤ UE Rx-Tx Time difference type 1< 1279.9375	chip
RX-TX_TIME _8192	1279.9375 ≤ UE Rx-Tx Time difference type 1< 1280.0000	chip
RX-TX_TIME _8193	1280.0000 ≤ UE Rx-Tx Time difference type 1	chip

## 9.1.9.2 UE Rx-Tx time difference type 2

NOTE: This measurement is used for UE positioning purposes.

It is optional for a terminal to support a subset of UE positioning methods. This measurement represents an instantaneous value that is time stamped as defined in the IE description in TS 25.331 [16].

#### 9.1.9.2.1 Measurement requirement

**Table 9.27** 

Parameter	Unit	Accuracy [chip]	Conditions lo [dBm]
UE RX-TX time difference	chip	± TBD	-9450

#### 9.1.9.2.2 UE Rx-Tx time difference type 2 measurement report mapping

The reporting range is for *UE Rx-Tx time difference type2* is from 768 ... 1280 chip.

In table 9.28 the mapping of measured quantity is defined. The range in the signalling may be larger than the guaranteed accuracy range.

**Table 9.28** 

Reported value	Measured quantity value	Unit
RX-TX_TIME _0000	UE Rx-Tx Time difference type 2 < 768.000	chip
RX-TX_TIME _0001	768.000 ≤ UE Rx-Tx Time difference type 2 < 768.0625	chip
RX-TX_TIME _0002	768.0625 ≤ UE Rx-Tx Time difference type 2 < 768.1250	chip
RX-TX_TIME _0003	768.1250 ≤ UE Rx-Tx Time difference type 2 < 768.1875	chip
RX-TX TIME 8189	1279.7500 ≤ UE Rx-Tx Time difference type 2 < 1279.8125	<u>chip</u>
RX-TX_TIME _8190	1279.8125 ≤ UE Rx-Tx Time difference type 2 < 1279.8750	chip
RX-TX_TIME _8191	1279.8750 ≤ UE Rx-Tx Time difference type 2 < 1279.9375	chip
RX-TX_TIME _8192	1279.9375 ≤ UE Rx-Tx Time difference type 2 < 1280.0000	chip
RX-TX_TIME _8193	1280.0000 ≤ UE Rx-Tx Time difference type 2	chip

### 9.1.10 Observed time difference to GSM cell

NOTE: This measurement is used to determine the system time difference between UTRAN and GSM cells.

The requirements in this section are valid for terminals supporting UTRA and GSM.

#### 9.1.10.1 Measurement requirement

The measurement period for CELL\_DCH state is equal to the maximum time between two successive BSIC reconfirmations for one particular GSM cell according to sub clause 8.1.2.5.2. The measurement period for CELL\_FACH state is equal to the maximum time between two successive BSIC re-confirmations according to sub clause 8.4.2.5.2.

NOTE: The conditions for which the accuracy requirement in table 9.29 is valid are FFS.

**Table 9.29** 

Parameter	Unit	Accuracy [chip]	Conditions
Observed time difference to GSM cell	ms	± 20	

### 9.1.10.2 Observed time difference to GSM cell measurement report mapping

The reporting range is for *Observed time difference to GSM cell* is from 0 ... 3060/13 ms.

In table 9.30 the mapping of measured quantity is defined. The range in the signalling may be larger than the guaranteed accuracy range.

# **3GPP TSG RAN Meeting #14**

Clauses affected:

第 9.1.9.2.2

# Kyoto, Japan, 11th - 14th december 2001

	CR-Form-v4 CHANGE REQUEST
*	25.133 CR 242
For <u><b>HELP</b></u> on us	sing this form, see bottom of this page or look at the pop-up text over the X symbols.
Proposed change a	affects:   (U)SIM ME/UE X Radio Access Network Core Network
Title: #	Correction to the mapping of UE Rx-Tx time difference type 2
Source: #	Nortel Networks
Work item code: ₩	Date:   # 11 December 2001
Category: Ж	Release: # Rel4  Use one of the following categories:  F (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.  Release: # Rel4  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	There currently is a misalignment between the mapping defined in 25.133 for the UE Rx-Tx time difference type 2 measurement and the expectation of the signalling in 25.331. In particular, 25.331 defines 13 bits (8192 values) for the return value of the measurement while 25.133 defines a mapping with 8194 values (two more than allowed).
Summary of chang	The mapping of the UE Rx-Tx time difference type 2 is corrected to contain only 8192 levels to align with the signalling in 25.331. This is done by removing the last two levels in the current mapping.
Consequences if not approved:	The number of levels in the mapping will exceed the 8192 values or 13 bits defined in 25.331 for the signalling message causing a possible misalignement in the number of bits expected for the reporting of the measurement quantity.  Isolated Impact analysis:  Correction to a function where the specification was:  Contradictory between 25.133 and 25.331  Would not affect implementations behaving like indicated in the CR, would affect implementations supporting the corrected functionality otherwise.  The corrected functionality is the UE Rx-Tx time difference type 2 measurement.  If the network implements the change but not the UE, there will be a mismatch in the number of bits expected for the reporting of the measurement quantity  If the UE implements the change but not the network, there will be a mismatch in the number of bits expected for the reporting of the measurement quantity

Other specs affected:	¥	Other core specifications Test specifications O&M Specifications	*	
Other comments:	$\mathfrak{R}$			

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- 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.

### 9.1.9 UE Rx-Tx time difference

### 9.1.9.1 UE Rx-Tx time difference type 1

NOTE: This measurement is used for call set up purposes to compensate propagation delay of DL and UL.

The measurement period in CELL\_DCH state is [100 ms]

#### 9.1.9.1.1 Measurement requirement

**Table 9.25** 

Parameter	Unit	Accuracy [chip]	Conditions lo [dBm]
UE RX-TX time difference	chip	± 1.5	-9450

#### 9.1.9.1.2 UE Rx-Tx time difference type 1 measurement report mapping

The reporting range is for *UE Rx-Tx time difference type 1* is from 768 ... 1280 chip.

In table 9.26 the mapping of measured quantity is defined. The range in the signalling may be larger than the guaranteed accuracy range.

**Table 9.26** 

Reported value	Measured quantity value	Unit
RX-TX_TIME _0000	UE Rx-Tx Time difference type 1< 768.000	chip
RX-TX_TIME _0001	768.000 ≤ UE Rx-Tx Time difference type 1< 768.0625	chip
RX-TX_TIME _0002	768.0625 ≤ UE Rx-Tx Time difference type 1< 768.1250	chip
RX-TX_TIME _0003	768.1250 ≤ UE Rx-Tx Time difference type 1< 768.1875	chip
RX-TX_TIME _8190	1279.8125 ≤ UE Rx-Tx Time difference type 1<	chip
	1279.8750	
RX-TX_TIME _8191	1279.8750 ≤ UE Rx-Tx Time difference type 1<	chip
	1279.9375	
RX-TX_TIME _8192	1279.9375 ≤ UE Rx-Tx Time difference type 1<	chip
	1280.0000	
RX-TX_TIME _8193	1280.0000 ≤ UE Rx-Tx Time difference type 1	chip

## 9.1.9.2 UE Rx-Tx time difference type 2

NOTE: This measurement is used for UE positioning purposes.

It is optional for a terminal to support a subset of UE positioning methods. This measurement represents an instantaneous value that is time stamped as defined in the IE description in TS 25.331 [16].

#### 9.1.9.2.1 Measurement requirement

**Table 9.27** 

Parameter	Unit	Accuracy [chip]	Conditions
Farameter	Onit	Accuracy [criip]	lo [dBm]
UE RX-TX time difference	chip	± TBD	-9450

## 9.1.9.2.2 UE Rx-Tx time difference type 2 measurement report mapping

The reporting range is for *UE Rx-Tx time difference type2* is from 768 ... 1280 chip.

In table 9.28 the mapping of measured quantity is defined. The range in the signalling may be larger than the guaranteed accuracy range.

**Table 9.28** 

Reported value	Measured quantity value	Unit
RX-TX_TIME _0000	UE Rx-Tx Time difference type 2 < 768.000	chip
RX-TX_TIME _0001	768.000 ≤ UE Rx-Tx Time difference type 2 < 768.0625	chip
RX-TX_TIME _0002	768.0625 ≤ UE Rx-Tx Time difference type 2 < 768.1250	chip
RX-TX_TIME _0003	768.1250 ≤ UE Rx-Tx Time difference type 2 < 768.1875	chip
RX-TX TIME 8189	1279.7500 ≤ UE Rx-Tx Time difference type 2 < 1279.8125	<u>chip</u>
RX-TX_TIME _8190	1279.8125 ≤ UE Rx-Tx Time difference type 2 < 1279.8750	chip
RX-TX_TIME _8191	1279.8750 ≤ UE Rx-Tx Time difference type 2 < 1279.9375	chip
RX-TX_TIME _8192	1279.9375 ≤ UE Rx-Tx Time difference type 2 < 1280.0000	chip
RX-TX TIME 8193	1280.0000 ≤ UE Rx-Tx Time difference type 2	chip