3GPP TSG RAN Meeting #14 **RP-010913**

Kyoto, Japan, 11th - 14th december 2001

CR-Form-v4

CHANGE REQUEST

⌘ **25.133** **CR** **243** ⌘ ev ⌘ Current version: **5.0.0** ⌘

*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:	⌘	Correction to the mapping of UE Rx-Tx time difference type 2
Source:	⌘	Nortel Networks
Work item code:	⌘	***Date:*** ⌘ 11 December 2001
Category:	⌘	**A** ***Release:*** ⌘ Rel-5

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.

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 change:	⌘	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

Clauses affected:	⌘	9.1.9.2.2

Other specs affected:	⌘	Other core specifications 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:

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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 Io [dBm]
UE RX-TX time difference	chip	± 1.5	-94...-50

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 Io [dBm]
UE RX-TX time difference	chip	± TBD	-94...-50

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	chip
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~~

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CHANGE REQUEST

⌘ **25.133** **CR** **241** ⌘ ev ⌘ Current version: **3.7.0** ⌘

*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:	⌘	Correction to the mapping of UE Rx-Tx time difference type 2
Source:	⌘	Nortel Networks
Work item code:	⌘	***Date:*** ⌘ 11 December 2001
Category:	⌘	**F** ***Release:*** ⌘ Rel99

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)*
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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 change: ⌘ 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

Clauses affected: ⌘ 9.1.9.2.2

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

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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 Io [dBm]
UE RX-TX time difference	chip	± 1.5	-94...-50

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 Io [dBm]
UE RX-TX time difference	chip	± TBD	-94...-50

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	chip
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 re-confirmations 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.

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CR-Form-v4

CHANGE REQUEST

⌘ **25.133** **CR** **242** ⌘ ev ⌘ Current version: **4.2.0** ⌘

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Proposed change affects: ⌘ (U)SIM ☐ ME/UE ☒ Radio Access Network ☐ Core Network ☐

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Category:	⌘	**A** ***Release:*** ⌘ Rel4

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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 change: ⌘ 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

Clauses affected: ⌘ 9.1.9.2.2

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

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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 Io [dBm]
UE RX-TX time difference	chip	± 1.5	-94...-50

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
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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 Io [dBm]
UE RX-TX time difference	chip	± TBD	-94...-50

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
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RX-TX_TIME _8189	1279.7500 ≤ UE Rx-Tx Time difference type 2 < 1279.8125	chip
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~~