TSG RAN Meeting #17 **RP-020529**
Biarritz, France, 3 - 6 September, 2002

Title **CRs (R'99 and Rel-4/Rel-5 Category A) to TS 25.133 and TS 25.214 "Definition of valid range for Rx-Tx time difference"**
Source **TSG RAN WG4**
Agenda Item **7.4.6**

RAN4/RAN1 Tdoc	Spec	CR	R	Cat	Rel	Curr Ver	Title	Work Item
R4-021393	25.133	469	2	F	R99	3.10.0	Definition of valid range for Rx-Tx time difference	TEI
R4-021394	25.133	470	1	A	Rel-4	4.5.0	Definition of valid range for Rx-Tx time difference	TEI
R4-021395	25.133	471	1	A	Rel-5	5.3.0	Definition of valid range for Rx-Tx time difference	TEI
R1-02-1158	25.214	292		F	R99	3.10.0	Correction of reference linked to approval of CR 25.133-469	TEI
R1-02-1158	25.214	293		A	Rel-4	4.4.0	Correction of reference linked to approval of CR 25.133-470	TEI
R1-02-1158	25.214	294		A	Rel-5	5.1.0	Correction of reference linked to approval of CR 25.133-471	TEI

3GPP TSG-RAN WG4 Meeting #24
Helsinki, Finland, 12-16 August 2002

R4-021393

CR-Form-v7

CHANGE REQUEST

⌘ **25.133** **CR** **469** ⌘ **rev** **2** ⌘ Current version: **3.10.0** ⌘

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

Proposed change affects: UICC apps⌘ ☐ ME ☒ Radio Access Network ☐ Core Network ☐

Title:	⌘	Definition of valid range for UE Rx-Tx time difference
Source:	⌘	RAN WG4
Work item code:	⌘	TEI
Date:	⌘	27/8/2002
Category:	⌘	**F**
Release:	⌘	R99

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)*
Rel-6	*(Release 6)*

Reason for change:	⌘	The requirements on the valid range for the UE Rx-Tx time difference needs to be defined. The accuracy of the initial setting of the timing of downlink signals relative to the UE Rx-Tx time difference is specified in 25.214 as T_0 +/- 148 chips but the requirements on the valid range for UE Rx-Tx time difference after the initial settings are not defined.
Summary of change:	⌘	Define that the valid range for UE Rx-Tx Time difference is T_0 +/- 148 for the purpose of demodulation and combining of received signals. Keep the requirements on correct combining of TPC commands and on reaction time for changing the Tx power as already defined (+/- 148 chips).
Consequences if not approved:	⌘	If the valid range for UE Rx-Tx time difference is not defined, radio links in soft handover areas might be dropped. The behaviour with respect to support of soft handover might not be the same for different UE implementations. It could not be guaranteed that all UEs support the same minimum time window for reception of downlink signals from cells in the active set. When a downlink signal as seen by the UE is drifting too much, the timing of the downlink signal must be corrected. The only mechanism to correct the timing of a downlink signal in R99 is to tear down and re-establish the radio link. If there is no definition of a valid range for the UE Rx-Tx time difference, this tearing down and re-establishing rate is difficult to determine in networks, and may vary between UE manufacturers. This may cause dropping of radio links. **Isolated impact analysis:** This CR defines the core requirement on the valid range for UE Rx-Tx time

	difference. Implementations supporting the required range for UE Rx-Tx time difference will not be affected.

Clauses affected:	⌘	7.2			
Other specs affected:	⌘	**Y**	**N**		
			X	Other core specifications	⌘
			X	Test specifications	
			X	O&M Specifications	
Other comments:	⌘	Equivalent CRs in other Releases: CR470 cat. A to 25.133 v4.5.0, CR471 cat. A to 25.133 v5.3.0			

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at http://www.3gpp.org/specs/CR.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://ftp.3gpp.org/specs/ 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.

7 Timing and Signalling characteristics

7.1 UE Transmit Timing

7.1.1 Introduction

The UE shall have capability to follow the frame timing change of the connected Node B. The uplink DPCCH/DPDCH frame transmission takes place approximately T_0 chips after the reception of the first detected path (in time) of the corresponding downlink DPCCH/DPDCH frame from the reference cell. T_0 is defined in [2]. UE initial transmit timing accuracy, maximum amount of timing change in one adjustment, minimum and maximum adjustment rate are defined in the following requirements.

7.1.2 Requirements

The UE initial transmission timing error shall be less than or equal to ±1.5 Chip. The reference point for the UE initial transmit timing control requirement shall be the time when the first detected path (in time) of the corresponding downlink DPCCH/DPDCH frame is received from the reference cell plus T_0 chips. T_0 is defined in [2].

When the UE is not in soft handover, the reference cell shall be the one the UE has in the active set. The cell, which is selected as a reference cell, shall remain as a reference cell even if other cells are added to the active set. In case that the reference cell is removed from the active set the UE shall start adjusting its transmit timing no later than the time when the whole active set update message is available at the UE taking the RRC procedure delay into account.

The UE shall be capable of changing the transmission timing according the received downlink DPCCH/DPDCH frame. The maximum amount of the timing change in one adjustment shall be ¼ Chip.

The minimum adjustment rate shall be 233ns per second. The maximum adjustment rate shall be ¼ chip per 200ms. In particular, within any given 800*d ms period, the UE transmit timing shall not change in excess of +-1/4 chip from the timing at the beginning of this 800*d ms period, where $0 \leq d \leq 1/4$.

7.2 UE Receive - Transmit Time Difference

7.2.1 Introduction

The UE shall have the capability to be in soft handover with more than one cell. The downlink DPCH frame timing shall take place approximately T_0 chips before the transmission of the uplink DPDCH/DPCCH. The adjustment requirements for the uplink DPDCH/DPCCH timing are specified in 7.1.1. The valid range of the Receive to Transmit time difference at the UE is defined in the following requirements.

7.2.2 Requirements

A UE shall support reception, demodulation and combining of signals of a downlink DPCH when the receive timing is within a window of T_0 +/- 148 chip before the transmit timing where T_0 is defined in [2]. A UE is only required to react to TPC commands with a transmit power adjustment in the immediate next slot if the downlink receive timing of all cells in the active set is within a window of T_0 +/- 148 chip before the uplink transmit timing. If the downlink receive timing of one or more cells in the active set is outside the window of T_0 +/- 148 chip, the UE may also react with a power adjustment one slot later. The receive timing is defined as the first detected path in time.

3GPP TSG-RAN WG4 Meeting #24 **R4-021394**
Helsinki, Finland, 12-16 August 2002

CR-Form-v7

CHANGE REQUEST

⌘ **25.133** **CR** **470** ⌘ **rev** **1** ⌘ Current version: **4.5.0** ⌘

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

Proposed change affects: UICC apps⌘ ☐ ME ☒ Radio Access Network ☐ Core Network ☐

Title:	⌘	Definition of valid range for UE Rx-Tx time difference
Source:	⌘	RAN WG4
Work item code:	⌘	TEI
Date:	⌘	27/8/2002
Category:	⌘	**A**
Release:	⌘	Rel-4

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)*
Rel-6	*(Release 6)*

Reason for change: ⌘ The requirements on the valid range for the UE Rx-Tx time difference needs to be defined. The accuracy of the initial setting of the timing of downlink signals relative to the UE Rx-Tx time difference is specified in 25.214 as T_0 +/- 148 chips but the requirements on the valid range for UE Rx-Tx time difference after the initial settings are not defined.

Summary of change: ⌘ Define that the valid range for UE Rx-Tx Time difference is T_0 +/- 148 for the purpose of demodulation and combining of received signals. Keep the requirements on correct combining of TPC commands and on reaction time for changing the Tx power as already defined (+/- 148 chips).

Consequences if not approved: ⌘ If the valid range for UE Rx-Tx time difference is not defined, radio links in soft handover areas might be dropped. The behaviour with respect to support of soft handover might not be the same for different UE implementations. It could not be guaranteed that all UEs support the same minimum time window for reception of downlink signals from cells in the active set.

When a downlink signal as seen by the UE is drifting too much, the timing of the downlink signal must be corrected. The only mechanism to correct the timing of a downlink signal in R99 is to tear down and re-establish the radio link. If there is no definition of a valid range for the UE Rx-Tx time difference, this tearing down and re-establishing rate is difficult to determine in networks, and may vary between UE manufacturers. This may cause dropping of radio links.

Isolated impact analysis:
This CR defines the core requirement on the valid range for UE Rx-Tx time

	difference. Implementations supporting the required range for UE Rx-Tx time difference will not be affected.

Clauses affected:	⌘	7.2			
Other specs affected:	⌘	**Y** / **N** ☐ / **X**	Other core specifications	⌘	
		☐ / **X**	Test specifications		
		☐ / **X**	O&M Specifications		
Other comments:	⌘	Equivalent CRs in other Releases: CR469 cat. F to 25.133 v3.10.0, CR471 cat. A to 25.133 v5.3.0			

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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.

7 Timing and Signalling characteristics

7.1 UE Transmit Timing

7.1.1 Introduction

The UE shall have capability to follow the frame timing change of the connected Node B. The uplink DPCCH/DPDCH frame transmission takes place approximately T_0 chips after the reception of the first detected path (in time) of the corresponding downlink DPCCH/DPDCH frame from the reference cell. T_0 is defined in [2]. UE initial transmit timing accuracy, maximum amount of timing change in one adjustment, minimum and maximum adjustment rate are defined in the following requirements.

7.1.2 Requirements

The UE initial transmission timing error shall be less than or equal to ±1.5 Chip. The reference point for the UE initial transmit timing control requirement shall be the time when the first detected path (in time) of the corresponding downlink DPCCH/DPDCH frame is received from the reference cell plus T_0 chips. T_0 is defined in [2].

When the UE is not in soft handover, the reference cell shall be the one the UE has in the active set. The cell, which is selected as a reference cell, shall remain as a reference cell even if other cells are added to the active set. In case that the reference cell is removed from the active set the UE shall start adjusting its transmit timing no later than the time when the whole active set update message is available at the UE taking the RRC procedure delay into account.

The UE shall be capable of changing the transmission timing according the received downlink DPCCH/DPDCH frame. The maximum amount of the timing change in one adjustment shall be ¼ Chip.

The minimum adjustment rate shall be 233ns per second. The maximum adjustment rate shall be ¼ chip per 200ms. In particular, within any given 800*d ms period, the UE transmit timing shall not change in excess of +-1/4 chip from the timing at the beginning of this 800*d ms period, where $0 \leq d \leq 1/4$.

7.2 UE Receive - Transmit Time Difference

7.2.1 Introduction

The UE shall have the capability to be in soft handover with more than one cell. The downlink DPCH frame timing shall take place approximately T_0 chips before the transmission of the uplink DPDCH/DPCCH. The adjustment requirements for the uplink DPDCH/DPCCH timing are specified in 7.1.1. The valid range of the Receive to Transmit time difference at the UE is defined in the following requirements.

7.2.2 Requirements

A UE shall support reception, demodulation and combining of signals of a downlink DPCH when the receive timing is within a window of T_0 +/- 148 chip before the transmit timing where T_0 is defined in [2]. A UE is only required to react to TPC commands with a transmit power adjustment in the immediate next slot if the downlink receive timing of all cells in the active set is within a window of T_0 +/- 148 chip before the uplink transmit timing. If the downlink receive timing of one or more cells in the active set is outside the window of T_0 +/- 148 chip, the UE may also react with a power adjustment one slot later. The receive timing is defined as the first detected path in time.

3GPP TSG-RAN WG4 Meeting #24
Helsinki, Finland, 12-16 August 2002

R4-021395

CR-Form-v7

CHANGE REQUEST

⌘ **25.133** **CR** **471** ⌘ **rev** **1** ⌘ Current version: **5.3.0** ⌘

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

Proposed change affects: UICC apps⌘ ☐ ME ☒ Radio Access Network ☐ Core Network ☐

Title:	⌘	Definition of valid range for UE Rx-Tx time difference
Source:	⌘	RAN WG4
Work item code:	⌘	TEI
Date:	⌘	27/8/2002
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)*
Rel-6	*(Release 6)*

Reason for change: ⌘ The requirements on the valid range for the UE Rx-Tx time difference needs to be defined. The accuracy of the initial setting of the timing of downlink signals relative to the UE Rx-Tx time difference is specified in 25.214 as T_0 +/- 148 chips but the requirements on the valid range for UE Rx-Tx time difference after the initial settings are not defined.

Summary of change: ⌘ Define that the valid range for UE Rx-Tx Time difference is T_0 +/- 148 for the purpose of demodulation and combining of received signals. Keep the requirements on correct combining of TPC commands and on reaction time for changing the Tx power as already defined (+/- 148 chips).

Consequences if not approved: ⌘ If the valid range for UE Rx-Tx time difference is not defined, radio links in soft handover areas might be dropped. The behaviour with respect to support of soft handover might not be the same for different UE implementations. It could not be guaranteed that all UEs support the same minimum time window for reception of downlink signals from cells in the active set.

When a downlink signal as seen by the UE is drifting too much, the timing of the downlink signal must be corrected. The only mechanism to correct the timing of a downlink signal in R99 is to tear down and re-establish the radio link. If there is no definition of a valid range for the UE Rx-Tx time difference, this tearing down and re-establishing rate is difficult to determine in networks, and may vary between UE manufacturers. This may cause dropping of radio links.

Isolated impact analysis:
This CR defines the core requirement on the valid range for UE Rx-Tx time

	difference. Implementations supporting the required range for UE Rx-Tx time difference will not be affected.

Clauses affected:	⌘	7.2			
Other specs affected:	⌘	**Y** / **N** ☐ / **X**	Other core specifications	⌘	
		☐ / **X**	Test specifications		
		☐ / **X**	O&M Specifications		
Other comments:	⌘	Equivalent CRs in other Releases: CR469 cat. F to 25.133 v3.10.0, CR470 cat. A to 25.133 v4.5.0			

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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.

7 Timing and Signalling characteristics

7.1 UE Transmit Timing

7.1.1 Introduction

The UE shall have capability to follow the frame timing change of the connected Node B. The uplink DPCCH/DPDCH frame transmission takes place approximately T_0 chips after the reception of the first detected path (in time) of the corresponding downlink DPCCH/DPDCH frame from the reference cell. T_0 is defined in [2]. UE initial transmit timing accuracy, maximum amount of timing change in one adjustment, minimum and maximum adjustment rate are defined in the following requirements.

7.1.2 Requirements

The UE initial transmission timing error shall be less than or equal to ±1.5 Chip. The reference point for the UE initial transmit timing control requirement shall be the time when the first detected path (in time) of the corresponding downlink DPCCH/DPDCH frame is received from the reference cell plus T_0 chips. T_0 is defined in [2].

When the UE is not in soft handover, the reference cell shall be the one the UE has in the active set. The cell, which is selected as a reference cell, shall remain as a reference cell even if other cells are added to the active set. In case that the reference cell is removed from the active set the UE shall start adjusting its transmit timing no later than the time when the whole active set update message is available at the UE taking the RRC procedure delay into account.

The UE shall be capable of changing the transmission timing according the received downlink DPCCH/DPDCH frame. The maximum amount of the timing change in one adjustment shall be ¼ Chip.

The minimum adjustment rate shall be 233ns per second. The maximum adjustment rate shall be ¼ chip per 200ms. In particular, within any given 800*d ms period, the UE transmit timing shall not change in excess of +-1/4 chip from the timing at the beginning of this 800*d ms period, where $0 \leq d \leq 1/4$.

7.2 UE Receive - Transmit Time Difference

7.2.1 Introduction

The UE shall have the capability to be in soft handover with more than one cell. The downlink DPCH frame timing shall take place approximately T_0 chips before the transmission of the uplink DPDCH/DPCCH. The adjustment requirements for the uplink DPDCH/DPCCH timing are specified in 7.1.1. The valid range of the Receive to Transmit time difference at the UE is defined in the following requirements.

7.2.2 Requirements

A UE shall support reception, demodulation and combining of signals of a downlink DPCH when the receive timing is within a window of T_0 +/- 148 chip before the transmit timing where T_0 is defined in [2]. A UE is only required to react to TPC commands with a transmit power adjustment in the immediate next slot if the downlink receive timing of all cells in the active set is within a window of T_0 +/- 148 chip before the uplink transmit timing. If the downlink receive timing of one or more cells in the active set is outside the window of T_0 +/- 148 chip, the UE may also react with a power adjustment one slot later. The receive timing is defined as the first detected path in time.

3GPP TSG-RAN WG1 Meeting #28
Seattle, USA, 18-21 August 2002

Tdoc ⌘R1(02)1158

CR-Form-v7

CHANGE REQUEST

⌘ **25.214** **CR** **292** ⌘ **rev** **-** ⌘ Current version: **3.10.0** ⌘

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

Proposed change affects: UICC apps⌘ ☐ ME ☐ Radio Access Network ☐ Core Network ☐

Title:	⌘	Correction of reference linked to approval of CR 25.133-469r1
Source:	⌘	RAN WG1
Work item code:	⌘	TEI
Date:	⌘	08/21/2002
Category:	⌘	**F**
Release:	⌘	R99

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)*
Rel-6	*(Release 6)*

Reason for change:	⌘	Following introduction of the valid range for the Rx window in 25.133 by CR 25.133-469r1 the note indicating that RAN WG4 will specificy the requirements for maximum Tx timing adjustmenta and valid Rx window is not valid anymore.
Summary of change:	⌘	Removal of the note and introduction of reference to the corresponding requirements set in 25.133.
Consequences if not approved:	⌘	3GPP To-Do list in the core specification! Implication that the specification is not complete yet.

Clauses affected:	⌘	4.3.4

		Y	N			
Other specs affected:	⌘	X		Other core specifications	⌘	CR 25.133-469r1
				Test specifications		
				O&M Specifications		

Other comments:	⌘	**Isolated impact analysis:** This CR is editorial in nature and linked to the approval of the corresponding CR to 25.133. It has no impact in itself.

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downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ 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.

4.3.4 Transmission timing adjustments

During a connection the UE may adjust its DPDCH/DPCCH transmission time instant.

If the receive timing for any downlink DPCCH/DPDCH in the current active set has drifted, so the time between reception of the downlink DPCCH/DPDCH in question and transmission of uplink DPCCH/DPDCH lies outside the valid range, L1 shall inform higher layers of this, so that the network can be informed of this and downlink timing can be adjusted by the network.

The maximum rate of uplink TX time adjustment, and the valid range for the time between downlink DPCCH/DPDCH reception and uplink DPCCH/DPDCH transmission in the UE are defined by the requirements specified in [8].

~~NOTE: The maximum rate of uplink TX time adjustment, and the valid range for the time between downlink DPCCH/DPDCH reception and uplink DPCCH/DPDCH transmission in the UE is to be specified by RAN WG4.~~

3GPP TSG-RAN WG1 Meeting #28
Seattle, USA, 18-21 August 2002

Tdoc ⌘R1(02)1158

CR-Form-v7

CHANGE REQUEST

⌘ **25.214** **CR** **293** ⌘ **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: UICC apps⌘ ☐ ME ☐ Radio Access Network ☐ Core Network ☐

Title:	⌘	Correction of reference linked to approval of CR 25.133-470
Source:	⌘	RAN WG1
Work item code:	⌘	TEI
Date:	⌘	08/21/2002
Category:	⌘	**A**
Release:	⌘	Rel-4

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)*
Rel-6	*(Release 6)*

Reason for change:	⌘	Following introduction of the valid range for the Rx window in 25.133 by CR 25.133-470 the note indicating that RAN WG4 will specificy the requirements for maximum Tx timing adjustmenta and valid Rx window is not valid anymore.
Summary of change:	⌘	Removal of the note and introduction of reference to the corresponding requirements set in 25.133.
Consequences if not approved:	⌘	3GPP To-Do list in the core specification! Implication that the specification is not complete yet.

Clauses affected:	⌘	4.3.4

	Y	N			
Other specs affected:	X		Other core specifications	⌘	CR 25.133-470
			Test specifications		
			O&M Specifications		

Other comments:	⌘	**Isolated impact analysis:** This CR is editorial in nature and linked to the approval of the corresponding CR to 25.133. It has no impact in itself.

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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.

4.3.4 Transmission timing adjustments

During a connection the UE may adjust its DPDCH/DPCCH transmission time instant.

If the receive timing for any downlink DPCCH/DPDCH in the current active set has drifted, so the time between reception of the downlink DPCCH/DPDCH in question and transmission of uplink DPCCH/DPDCH lies outside the valid range, L1 shall inform higher layers of this, so that the network can be informed of this and downlink timing can be adjusted by the network.

The maximum rate of uplink TX time adjustment, and the valid range for the time between downlink DPCCH/DPDCH reception and uplink DPCCH/DPDCH transmission in the UE are defined by the requirements specified in [8].

~~NOTE: The maximum rate of uplink TX time adjustment, and the valid range for the time between downlink DPCCH/DPDCH reception and uplink DPCCH/DPDCH transmission in the UE is to be specified by RAN WG4.~~

3GPP TSG-RAN WG1 Meeting #28
Seattle, USA, 18-21 August 2002

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CR-Form-v7

CHANGE REQUEST

⌘ **25.214** **CR** **294** ⌘ **rev** **-** ⌘ Current version: **5.1.0** ⌘

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

Proposed change affects: UICC apps⌘ ☐ ME ☐ Radio Access Network ☐ Core Network ☐

Title:	⌘	Correction of reference linked to approval of CR 25.133-471
Source:	⌘	RAN WG1
Work item code:	⌘	TEI
Date:	⌘	08/21/2002
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)*
Rel-6	*(Release 6)*

Reason for change:	⌘	Following introduction of the valid range for the Rx window in 25.133 by CR 25.133-471 the note indicating that RAN WG4 will specificy the requirements for maximum Tx timing adjustmenta and valid Rx window is not valid anymore.
Summary of change:	⌘	Removal of the note and introduction of reference to the corresponding requirements set in 25.133.
Consequences if not approved:	⌘	3GPP To-Do list in the core specification! Implication that the specification is not complete yet.

Clauses affected:	⌘	4.3.4

	Y	N			
Other specs affected:	X		Other core specifications	⌘	CR 25.133-471
			Test specifications		
			O&M Specifications		

Other comments:	⌘	**Isolated impact analysis:** This CR is editorial in nature and linked to the approval of the corresponding CR to 25.133. It has no impact in itself.

How to create CRs using this form:
Comprehensive information and tips about how to create CRs can be found at http://www.3gpp.org/specs/CR.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://ftp.3gpp.org/specs/ 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.

4.3.4 Transmission timing adjustments

During a connection the UE may adjust its DPDCH/DPCCH transmission time instant.

When the UE autonomously adjusts its DPDCH/DPCCH transmission time instant, it shall simultaneously adjust the HS-DPCCH transmission time instant by the same amount so that the relative timing between DPCCH/DPDCH and HS-DPCCH is kept constant.

If the receive timing for any downlink DPCCH/DPDCH in the current active set has drifted, so the time between reception of the downlink DPCCH/DPDCH in question and transmission of uplink DPCCH/DPDCH lies outside the valid range, L1 shall inform higher layers of this, so that the network can be informed of this and downlink timing can be adjusted by the network.

The maximum rate of uplink TX time adjustment, and the valid range for the time between downlink DPCCH/DPDCH reception and uplink DPCCH/DPDCH transmission in the UE are defined by the requirements specified in [8].

~~NOTE: The maximum rate of uplink TX time adjustment, and the valid range for the time between downlink DPCCH/DPDCH reception and uplink DPCCH/DPDCH transmission in the UE is to be specified by RAN WG4.~~