TSG-RAN Meeting #12 *RP-010319*
Stockholm, Sweden, 12 - 15 June 2001

Title: **Agreed CRs (Release '99 and Rel-4 category A) to TS 34.109**

Source: **TSG-RAN WG2**

Agenda item: **8.2.3**

Doc-1st-	Status-	Spec	CR	Rev	Phase	Subject	Cat	Version	Versio
R2-011104	agreed	34.109	007		R99	Clarification to Loopback Delay requirement & BTFD in TDD mode	F	3.3.0	3.4.0
R2-011414	agreed	34.109	008		Rel-4	Clarification to Loopback Delay requirement & BTFD in TDD mode	A	4.0.0	4.1.0
R2-011208	agreed	34.109	009		R99	Expanding UE test loop buffering capabilities to enable testing of 2048 kbps radio bearers	F	3.3.0	3.4.0
R2-011209	agreed	34.109	010		Rel-4	Expanding UE test loop buffering capabilities to enable testing of 2048 kbps radio bearers	A	4.0.0	4.1.0

3GPP TSG-RAN WG2 Meeting#21
Pusan, Korea, 21-25 May 2001

R2-011104

CR-Form-v3

CHANGE REQUEST

⌘ **34.109 CR 007** ⌘ rev **-** ⌘ Current version: **3.3.0** ⌘

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

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

Title:	⌘	Clarification to Loopback Delay requirement & BTFD in TDD mode
Source:	⌘	TSG-RAN WG2
Work item code:	⌘	TEI
Date:	⌘	2001-04-27
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)

Reason for change:	⌘	- Loopback Delay is defined for FDD mode only. - The current explanation to BTFD is mainly made for FDD mode.
Summary of change:	⌘	- 5.3.2.9 Loopback Delay requirement is now definied also for TDD. The delay definition is corrected. - A.4, A5: Correction of references - A6: This section was set to FDD mode only. BACKWARD COMPATIBILITY: - No changes for FDD mode were made. - UEs that do not fullfill the proposed changes might be tested with a variation of the parameter set in SS during the test.
Consequences if not approved:	⌘	- The Loopback Delay for UEs in TDD mode is neither limited nor constant. This has to be considered during the tests. An adaption of the parameters for the test case has to be made for some UEs to equalize the unclear delay behaviour.

Clauses affected:	⌘	5.3.2.9, A.4, A.5, A.6
Other specs affected:	⌘	☐ Other core specifications ⌘ ☐ Test specifications ☐ O&M Specifications
Other comments:	⌘	

5.3.2.9 Loopback delay requirement ~~(FDD mode)~~

Loopback delay is specified as delay between received DL ~~DTCH~~ radio frames and their corresponding UL ~~DTCH~~ radio frames produced from the received data. The loopback delay is measured at the antenna connector of the UE and specified in the unit of radio frame(s). Timing offset between DL and UL radio frames, and timing errors are not included in the loopback delay.

For UE operating in UE test loop mode 1 the loopback delay requirement is applicable if the MAC and RLC protocols are configured for transparent operation and if the downlink RLC SDU size is equal to the downlink transport block size, i.e. no segmentation/concatenation takes place.

For UE operating in UE test loop mode 2 the loopback delay requirement is applicable independent of the radio bearer configuration.

While the UE test loop is closed and the radio bearer configuration is not changed, the UE shall maintain a fixed loopback delay (the loopback delay shall not vary during a test). The loopback delay shall not exceed the number of radio frames correspondent to 10 times the TTI of the actual transport channel configuration.

The loopback delay requirement for the 10ms TTI case is illustrated in figure 5.3.2.9.1.

NOTE: See [11] TS25.211, 7.6.3 for definition of the timing offset between DL and UL radio frames for FDD mode.

NOTE: See [12] TS25.133, 7.1 for definition of the timing error for FDDmode.

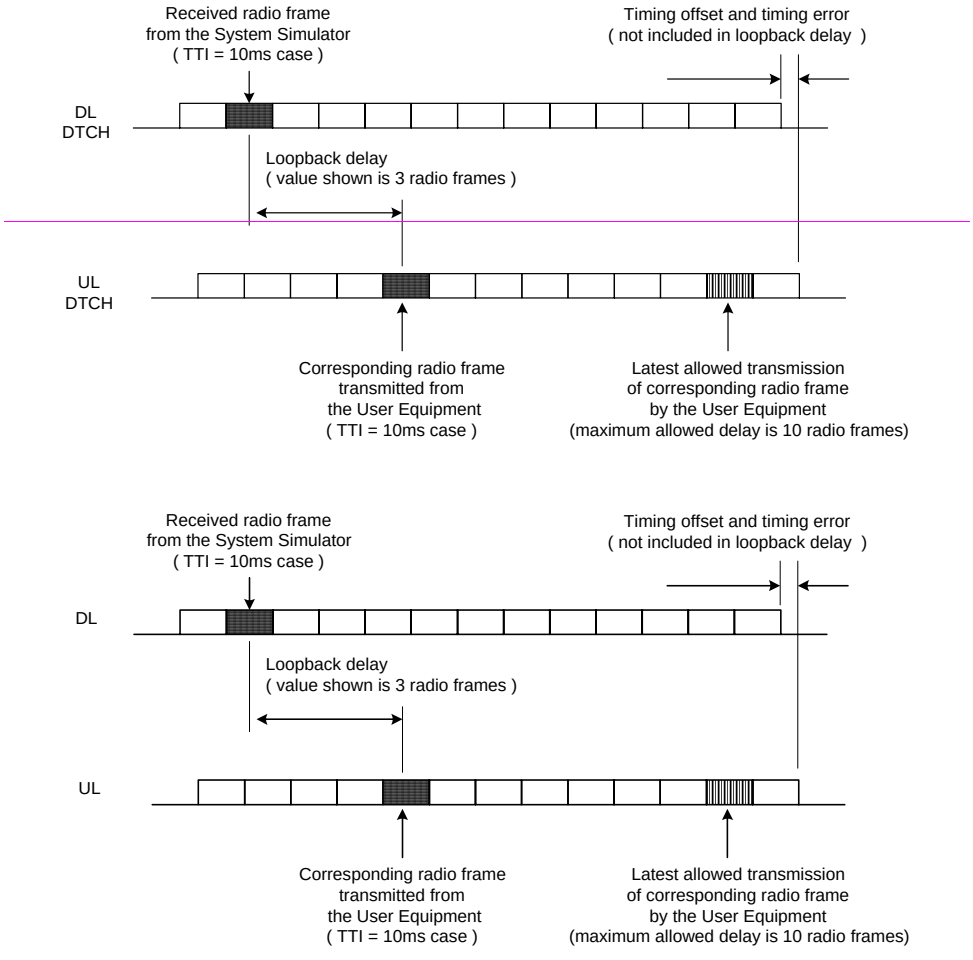

Figure 5.3.2.9.1: Loopback delay requirement (TTI=10 ms)

A.4 Measurement of transmitter characteristics

The SS sets up the radio bearer for DL and UL reference measurement channels 12,2 kbps using the generic setup procedure.

See [10] TS 34.108, clause 7 for specification of the generic setup procedure.

See [3] TS 25.101, A.2.1 and A.3.1 for definition of the DL and UL reference measurement channel 12,2 kbps for FDD mode.

See [4] TS 25.102, A.2.1 and A.~~3.1~~2.2 for definition of the DL and UL reference measurement channel 12.2 kbps for TDD mode.

The SS orders the UE to close its UE test loop by transmitting a CLOSE UE TEST LOOP CMD message.

When the SS receives the CLOSE UE TEST LOOP COMPLETE message from the UE the SS starts transmission of data to the UE.

Perform the transmitter test.

The SS sends the OPEN UE TEST LOOP message to the UE to open the UE test loop.

A.5 Measurement of transmitter DTX characteristics

The SS requests the UE to enable DTX and sets up the radio bearer for DL and UL reference measurement channels 12,2 kbps using the generic setup procedure.

See [10] TS 34.108, clause 7 for specification of the generic setup procedure.

See [3] TS 25.101, A.2.1 and A.3.1 for definition of the DL and UL reference measurement channel 12,2 kbps for FDD mode.

See [4] TS 25.102, A.2.1 and A.~~3.1~~2.2 for definition of the DL and UL reference measurement channel 12.2 kbps for TDD mode.

The SS orders the UE to close its UE test loop using UE test mode 1 by transmitting a CLOSE UE TEST LOOP message.

The UE confirms that the UE test loop is closed by sending the CLOSE UE TEST LOOP COMPLETE message to the SS.

Perform the transmitter DTX testing.

The SS sends the OPEN UE TEST LOOP message to the UE to open the UE test loop.

A.6 Using UE test loop mode 2 for testing of UE Blind Transport Format Detection (FDD mode)

When an UE operates in UE test loop mode 2 then the received downlink transport block and the downlink CRC data bits shall be returned in the uplink transport block, see 5.3.2.7. The UE shall select the uplink transport format with the smallest transport block size, which fits both the received downlink transport block and the downlink CRC bits. Table A.6.1 gives an example of an uplink radio bearer configuration for variable rate having three transports formats TF0, TF1 and TF2. Table A.6.2 gives some examples of UE selected uplink transport format versus size of received downlink transport block and downlink CRC bits.

The SS can use UE test loop mode 2 for testing UE blind transport format detection by taken the possible downlink transport formats into consideration when configuring the uplink transport formats. I.e. for every downlink transport format there should be an uplink transport format for which the transport block size is equal to the sum of the downlink transport block size and the number of downlink CRC bits. Thus the SS can check the TFI of the UE transmitted transport format to verify that the UE has detected the correct downlink transport format. Table A.6.3 gives an example of a configuration for testing blind transport format detection using 9 possible downlink transport formats TF0 to TF8.

The right hand column shows the minimum uplink transport block sizes the SS has to set-up to be able to test the UE blind transport format detection behaviour.

Table A.6.1: Uplink transport formats

UL transport format	Transport block size
TF0	0
TF1	55 bits
TF2	111 bits

Table A.6.2: Selected uplink transport format versus size of received downlink transport block and downlink CRC bits.

DL transport block size	Number of DL CRC bits	Selected UL TF	Comment
39 bits	16 bits	TF1	39+16=55 i.e. TF1 ok
40 bits	16 bits	TF2	TF1 not possible (40+16=56 > 55) TF2 OK (56 < 111)
95 bits	16 bits	TF2	TF2 OK (95+16=111)
96 bits	16 bits	TF2	96+16=112 is bigger than TF2 block size but no bigger TF available i.e. TF2 is selected and returned DL data and CRC is truncated (one bit of the DL CRC is not returned)

Table A.6.3: Example of configuration for testing behaviour of UE blind transport format detection.

DL TFI of DTCH		UL TFI of DTCH Minimum required UL transport block size if DL CRC size=12	
TF0	39 bits	TF0	51 bits (39+12)
TF1	95 bits	TF1	107 bits (95+12)
TF2	103 bits	TF2	115 bits (103+12)
TF3	118 bits	TF3	130 bits (118+12)
TF4	134 bits	TF4	146 bits (134+12)
TF5	148 bits	TF5	160 bits (148+12)
TF6	159 bits	TF6	171 bits (159+12)
TF7	204 bits	TF7	216 bits (204+12)
TF8	244 bits	TF8	256 bits (244+12)

3GPP TSG-RAN WG2 Meeting#21
Pusan, Korea, 21-25 May 2001

R2-011414

CR-Form-v3

CHANGE REQUEST

⌘ **34.109 CR 008** ⌘ rev **-** ⌘ Current version: **4.0.0** ⌘

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

Title:	⌘	Clarification to Loopback Delay requirement & BTFD in TDD mode
Source:	⌘	TSG-RAN WG2
Work item code:	⌘	TEI
Date:	⌘	2001-05-21
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)

Reason for change:	⌘	- Loopback Delay is defined for FDD mode only. - The current explanation to BTFD is mainly made for FDD mode.
Summary of change:	⌘	- 5.3.2.9 Loopback Delay requirement is now definied also for TDD. The delay definition is corrected. - A.4, A5: Correction of references - A6: This section was set to FDD mode only. This is the corresponding shadow CR to CR 007.
Consequences if not approved:	⌘	- The Loopback Delay for UEs in TDD mode is neither limited nor constant. This has to be considered during the tests. An adaption of the parameters for the test case has to be made for some UEs to equalize the unclear delay behaviour.

Clauses affected:	⌘	5.3.2.9, A.4, A.5, A.6
Other specs affected:	⌘	☐ Other core specifications ⌘ ☐ Test specifications ☐ O&M Specifications
Other comments:	⌘	

5.3.2.9 Loopback delay requirement ~~(FDD mode)~~

Loopback delay is specified as delay between received DL ~~DTCH~~ radio frames and their corresponding UL ~~DTCH~~ radio frames produced from the received data. The loopback delay is measured at the antenna connector of the UE and specified in the unit of radio frame(s). Timing offset between DL and UL radio frames, and timing errors are not included in the loopback delay.

For UE operating in UE test loop mode 1 the loopback delay requirement is applicable if the MAC and RLC protocols are configured for transparent operation and if the downlink RLC SDU size is equal to the downlink transport block size, i.e. no segmentation/concatenation takes place.

For UE operating in UE test loop mode 2 the loopback delay requirement is applicable independent of the radio bearer configuration.

While the UE test loop is closed and the radio bearer configuration is not changed, the UE shall maintain a fixed loopback delay (the loopback delay shall not vary during a test). The loopback delay shall not exceed the number of radio frames correspondent to 10 times the TTI of the actual transport channel configuration.

The loopback delay requirement for the 10ms TTI case is illustrated in figure 5.3.2.9.1.

NOTE: See [11] TS25.211, 7.6.3 for definition of the timing offset between DL and UL radio frames for FDD mode.

NOTE: See [12] TS25.133, 7.1 for definition of the timing error for FDDmode.

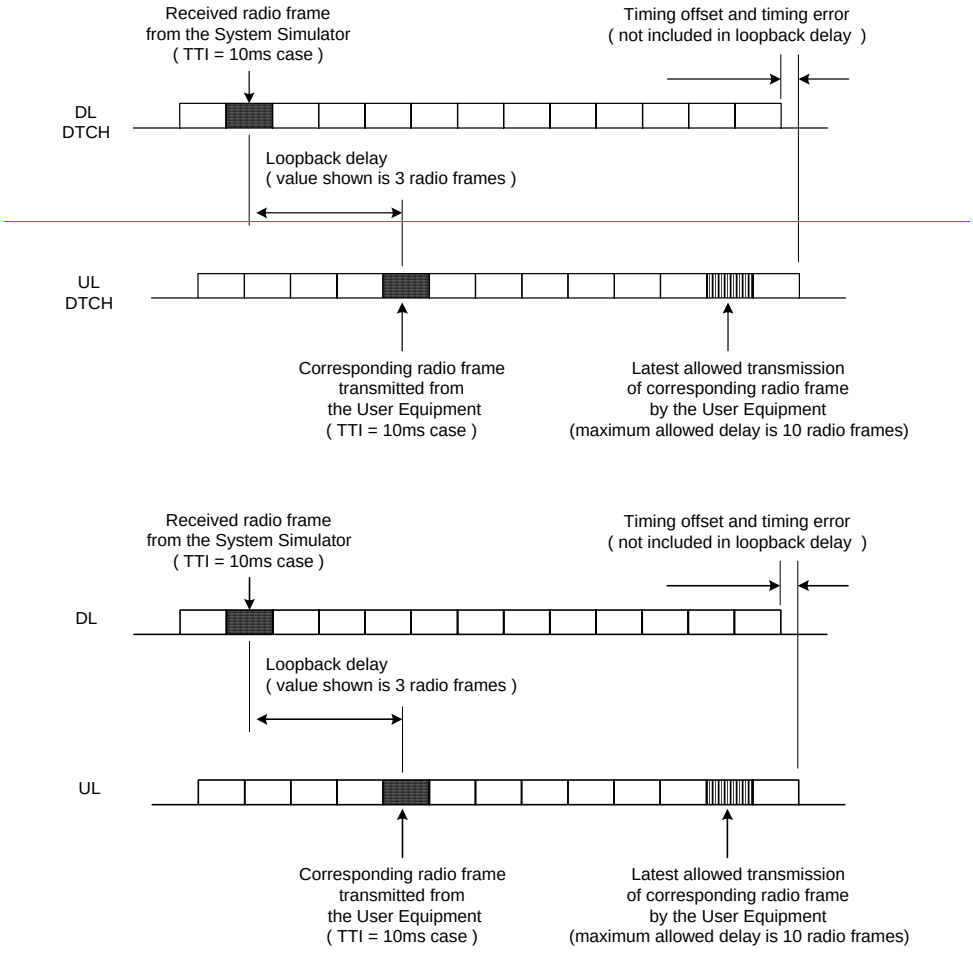

Figure 5.3.2.9.1: Loopback delay requirement (TTI=10 ms)

A.4 Measurement of transmitter characteristics

The SS sets up the radio bearer for DL and UL reference measurement channels 12,2 kbps using the generic setup procedure.

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See [3] TS 25.101, A.2.1 and A.3.1 for definition of the DL and UL reference measurement channel 12,2 kbps for FDD mode.

See [4] TS 25.102, A.2.1 and A.~~3.1~~2.2 for definition of the DL and UL reference measurement channel 12.2 kbps for TDD mode.

The SS orders the UE to close its UE test loop by transmitting a CLOSE UE TEST LOOP CMD message.

When the SS receives the CLOSE UE TEST LOOP COMPLETE message from the UE the SS starts transmission of data to the UE.

Perform the transmitter test.

The SS sends the OPEN UE TEST LOOP message to the UE to open the UE test loop.

A.5 Measurement of transmitter DTX characteristics

The SS requests the UE to enable DTX and sets up the radio bearer for DL and UL reference measurement channels 12,2 kbps using the generic setup procedure.

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See [4] TS 25.102, A.2.1 and A.~~3.1~~2.2 for definition of the DL and UL reference measurement channel 12.2 kbps for TDD mode.

The SS orders the UE to close its UE test loop using UE test mode 1 by transmitting a CLOSE UE TEST LOOP message.

The UE confirms that the UE test loop is closed by sending the CLOSE UE TEST LOOP COMPLETE message to the SS.

Perform the transmitter DTX testing.

The SS sends the OPEN UE TEST LOOP message to the UE to open the UE test loop.

A.6 Using UE test loop mode 2 for testing of UE Blind Transport Format Detection (FDD mode)

When an UE operates in UE test loop mode 2 then the received downlink transport block and the downlink CRC data bits shall be returned in the uplink transport block, see 5.3.2.7. The UE shall select the uplink transport format with the smallest transport block size, which fits both the received downlink transport block and the downlink CRC bits. Table A.6.1 gives an example of an uplink radio bearer configuration for variable rate having three transports formats TF0, TF1 and TF2. Table A.6.2 gives some examples of UE selected uplink transport format versus size of received downlink transport block and downlink CRC bits.

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The right hand column shows the minimum uplink transport block sizes the SS has to set-up to be able to test the UE blind transport format detection behaviour.

Table A.6.1: Uplink transport formats

UL transport format	Transport block size
TF0	0
TF1	55 bits
TF2	111 bits

Table A.6.2: Selected uplink transport format versus size of received downlink transport block and downlink CRC bits.

DL transport block size	Number of DL CRC bits	Selected UL TF	Comment
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40 bits	16 bits	TF2	TF1 not possible (40+16=56 > 55) TF2 OK (56 < 111)
95 bits	16 bits	TF2	TF2 OK (95+16=111)
96 bits	16 bits	TF2	96+16=112 is bigger than TF2 block size but no bigger TF available i.e. TF2 is selected and returned DL data and CRC is truncated (one bit of the DL CRC is not returned)

Table A.6.3: Example of configuration for testing behaviour of UE blind transport format detection.

DL TFI of DTCH		UL TFI of DTCH Minimum required UL transport block size if DL CRC size=12	
TF0	39 bits	TF0	51 bits (39+12)
TF1	95 bits	TF1	107 bits (95+12)
TF2	103 bits	TF2	115 bits (103+12)
TF3	118 bits	TF3	130 bits (118+12)
TF4	134 bits	TF4	146 bits (134+12)
TF5	148 bits	TF5	160 bits (148+12)
TF6	159 bits	TF6	171 bits (159+12)
TF7	204 bits	TF7	216 bits (204+12)
TF8	244 bits	TF8	256 bits (244+12)

3GPP TSG RAN WG2 Meeting #21
Busan, Korea, 21 - 25 May 2001

Tdoc R2-011208

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CHANGE REQUEST

⌘ **34.109 CR 009** ⌘ rev **-** ⌘ Current version: **3.3.0** ⌘

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

Title:	⌘	Expanding UE test loop buffering capabilities to enable testing of 2048 kbps radio bearers
Source:	⌘	TSG-RAN WG2
Work item code:	⌘	TEI
Date:	⌘	2001-05-23
Category:	⌘	**F**
Release:	⌘	R99

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:	⌘	Current specification of the CLOSE UE TEST LOOP message limits the range for selecting the UL RLC SDU size to 16383 bits. To enable testing of radio bearers for 2048 kbps data rates then UL RLC SDU size bigger than 16383 bits is needed. E.g. for reference radio bearer configuration "Interactive or background / UL:64 DL:2048 kbps / PS RAB / 20 ms TTI" in test case 14.2.35.2 of TS 34.123-1 the required UL RLC SDU size is 41984 bits. Backward Compatibility Analysis: The CR is backwards compatible. No new functionality is added.
Summary of change:	⌘	• Reference to TS 34.123-2 added to list of references • For the CLOSE UE TEST LOOP message the maximum value for the UL RLC SDU size parameter has been changed from 16383 to 65535.
Consequences if not approved:	⌘	The UE test loop function will not be possible to use for testing of 2048 kbps radio bearers.

Clauses affected:	⌘	2 and 6.2
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:

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 not relevant to the change request.

<Start of modified section>

2 References

The following documents contain provisions that, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

[1] 3GPP TS 24.007: "Mobile radio interface signalling layer 3; General aspects".

[2] 3GPP TS 24.008: "Digital cellular telecommunications system (Phase 2+); Mobile radio interface layer 3 specification".

[3] 3GPP TS 25.101: "UE Radio transmission and reception (FDD)".

[4] 3GPP TS 25.102: "UE Radio transmission and reception (TDD)".

[5] 3GPP TS 25.331: "Radio Resource Control; Protocol Specification".

[6] 3GPP TR 21.905: "3G Vocabulary".

[7] 3GPP TS 31.101: "UICC Physical and Logical Characteristics".

[8] 3GPP TS 34.121: "Terminal Conformance Specification; Radio transmission and reception (FDD)".

[9] 3GPP TS 34.122: "Terminal Conformance Specification; Radio transmission and reception (TDD)".

[10] 3GPP TS 34.108: "Reference test environment".

[11] 3GPP TS 25.211: "Physical channels and mapping of transport channels onto physical channels (FDD)".

[12] 3GPP TS 25.133: "Requirements for support of RRM (FDD)".

[13] 3GPP TS 04.14: "Individual equipment type requirements and interworking; Special conformance testing functions".

[14] 3GPP TS 27.005: "Use of Data Terminal Equipment - Data Circuit terminating; Equipment (DTE - DCE) interface for Short Message Service (SMS) and Cell Broadcast Service (CBS)".

[15] 3GPP TS 27.007: "AT command set for 3G User Equipment (UE)".

[16] 3GPP TS 27.060: "Mobile Stations (MS) supporting packet switched services".

[17] 3GPP TS 34.123-2: "User Equipment (UE) conformance specification; Part 2: Implementation Conformance Statement (ICS) proforma specification".~~3GPP TS 34.123-2: "Mobile Station (MS) Conformance Specification, Part 2 - ICS".~~

<End of modified section>

<Start of modified section>

6.2 CLOSE UE TEST LOOP

This message is only sent in the direction SS to UE.

Information Element	Reference	Presence	Format	Length
Protocol discriminator	[1] TS 24.007, 11.2.3.1.1	M	V	½
Skip indicator	[1] TS 24.007, 11.2.3.1.2	M	V	½
Message type		M	V	1
UE test loop mode		M	V	1
UE test loop mode 1 LB setup		C	LV	1-13

where message type is:

8	7	6	5	4	3	2	1	bit no.
0	1	0	0	0	0	0	0	octet 1

where UE test loop mode is:

8	7	6	5	4	3	2	1	bit no.
0	0	0	0	0	Y1	X2	X1	octet 1

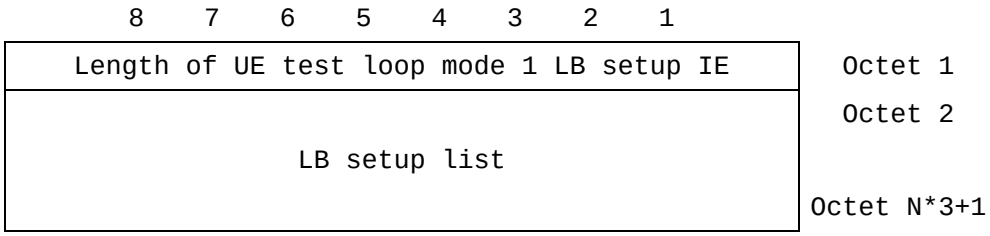
X2=0 and X1=0 then UE test loop mode 1 loop back scheme according to 5.3.2.6 shall be performed by the UE (loopback of RLC SDUs or PDCP SDUs).

X2=0 and X1=1 then UE test loop mode 2 loop back scheme according to 5.3.2.7 shall be performed by the UE (loopback of transport block data and CRC bits).

Y1 =0 then the DCCH dummy transmission according to 5.3.2.8 shall be disabled.

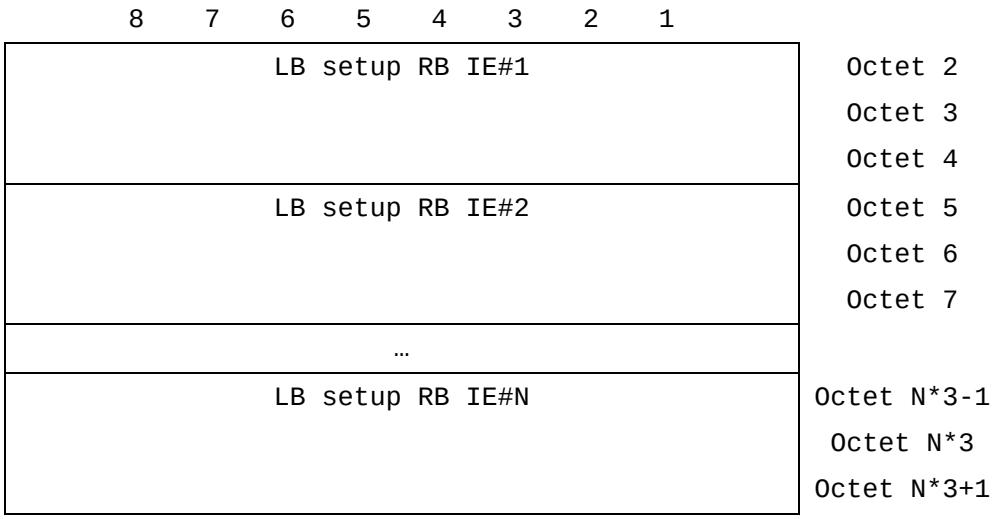
Y1 =1 then the DCCH dummy transmission according to 5.3.2.8 shall be enabled.

where UE test loop mode 1 LB setup is:



N is the number of LB entities in the LB setup list and is less than or equal to 4.

where LB setup list is:



where LB Setup RB IE#k is:

8	7	6	5	4	3	2	1	bit no.
Z15~~0~~	Z14~~0~~	Z13	Z12	Z11	Z10	Z9	Z8	octet 1
Z7	Z6	Z5	Z4	Z3	Z2	Z1	Z0	octet 2
Reserved			Q4	Q3	Q2	Q1	Q0	octet 3

Z15~~3~~..Z0 = Uplink RLC SDU size in bits 0.. 6553516383 (binary coded, Z15~~3~~ is most significant bit and Z0 least significant bit), see Note 1.

Q4..Q0 = RB identity number, 5..32 (binary coded, Q4 is most significant bit and Q0 least significant bit), where RB identity identifies the radio bearer, see [5] TS 25.331. The range is limited to 5..32 due to RB0 to RB4 are reserved for signalling radio bearers.

NOTE 1: The parameter UL RLC SDU size is only applicable for UE test loop mode 1 and for radio bearers not using the PDCP protocol layer, see 5.3.2.6.2. The UE capability for the parameter UL RLC SDU size is stated by the UE manufacturer as an Implementation Conformations Statement (ICS) as defined in [17] TS 34.123-2, clause A.4.3.1 table A.13.

<End of modified section>

3GPP TSG RAN WG2 Meeting #21
Busan, Korea, 21 - 25 May 2001

Tdoc R2-011209

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CHANGE REQUEST

⌘ **34.109 CR 010** ⌘ rev **-** ⌘ Current version: **4.0.0** ⌘

*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 **X** Radio Access Network ☐ Core Network ☐

Title:	⌘	Expanding UE test loop buffering capabilities to enable testing of 2048 kbps radio bearers
Source:	⌘	TSG-RAN WG2
Work item code:	⌘	TEI
Date:	⌘	2001-05-23
Category:	⌘	**F**
Release:	⌘	REL-4

Use one of the following categories:
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R97 (Release 1997)
R98 (Release 1998)
R99 (Release 1999)
REL-4 (Release 4)
REL-5 (Release 5)

Reason for change:	⌘	Current specification of the CLOSE UE TEST LOOP message limits the range for selecting the UL RLC SDU size to 16383 bits. To enable testing of radio bearers for 2048 kbps data rates then UL RLC SDU size bigger than 16383 bits is needed. E.g. for reference radio bearer configuration "Interactive or background / UL:64 DL:2048 kbps / PS RAB / 20 ms TTI" in test case 14.2.35.2 of TS 34.123-1 the required UL RLC SDU size is 41984 bits. Backward Compatibility Analysis: The CR is backwards compatible. No new functionality is added.
Summary of change:	⌘	• Reference to TS 34.123-2 added to list of references • For the CLOSE UE TEST LOOP message the maximum value for the UL RLC SDU size parameter has been changed from 16383 to 65535.
Consequences if not approved:	⌘	The UE test loop function will not be possible to use for testing of 2048 kbps radio bearers.

Clauses affected:	⌘	2 and 6.2
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:

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 not relevant to the change request.

<Start of modified section>

2 References

The following documents contain provisions that, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

[1] 3GPP TS 24.007: "Mobile radio interface signalling layer 3; General aspects".

[2] 3GPP TS 24.008: "Digital cellular telecommunications system (Phase 2+); Mobile radio interface layer 3 specification".

[3] 3GPP TS 25.101: "UE Radio transmission and reception (FDD)".

[4] 3GPP TS 25.102: "UE Radio transmission and reception (TDD)".

[5] 3GPP TS 25.331: "Radio Resource Control; Protocol Specification".

[6] 3GPP TR 21.905: "3G Vocabulary".

[7] 3GPP TS 31.101: "UICC Physical and Logical Characteristics".

[8] 3GPP TS 34.121: "Terminal Conformance Specification; Radio transmission and reception (FDD)".

[9] 3GPP TS 34.122: "Terminal Conformance Specification; Radio transmission and reception (TDD)".

[10] 3GPP TS 34.108: "Reference test environment".

[11] 3GPP TS 25.211: "Physical channels and mapping of transport channels onto physical channels (FDD)".

[12] 3GPP TS 25.133: "Requirements for support of RRM (FDD)".

[13] 3GPP TS 04.14: "Individual equipment type requirements and interworking; Special conformance testing functions".

[14] 3GPP TS 27.005: "Use of Data Terminal Equipment - Data Circuit terminating; Equipment (DTE - DCE) interface for Short Message Service (SMS) and Cell Broadcast Service (CBS)".

[15] 3GPP TS 27.007: "AT command set for 3G User Equipment (UE)".

[16] 3GPP TS 27.060: "Mobile Stations (MS) supporting packet switched services".

[17] 3GPP TS 34.123-2: "User Equipment (UE) conformance specification; Part 2: Implementation Conformance Statement (ICS) proforma specification".~~3GPP TS 34.123-2: "Mobile Station (MS) Conformance Specification, Part 2 - ICS".~~

<End of modified section>

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6.2 CLOSE UE TEST LOOP

This message is only sent in the direction SS to UE.

Information Element	Reference	Presence	Format	Length
Protocol discriminator	[1] TS 24.007, 11.2.3.1.1	M	V	½
Skip indicator	[1] TS 24.007, 11.2.3.1.2	M	V	½
Message type		M	V	1
UE test loop mode		M	V	1
UE test loop mode 1 LB setup		C	LV	1-13

where message type is:

8	7	6	5	4	3	2	1	bit no.
0	1	0	0	0	0	0	0	octet 1

where UE test loop mode is:

8	7	6	5	4	3	2	1	bit no.
0	0	0	0	0	Y1	X2	X1	octet 1

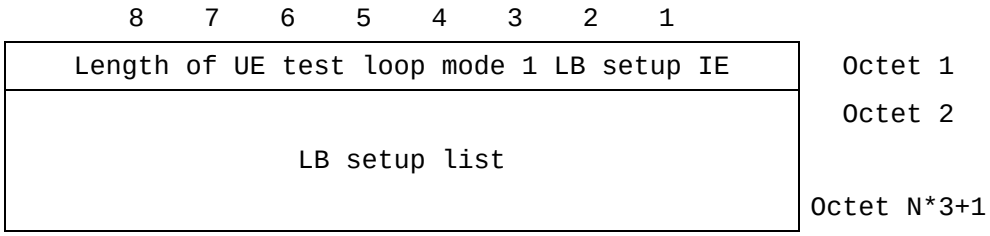
X2=0 and X1=0 then UE test loop mode 1 loop back scheme according to 5.3.2.6 shall be performed by the UE (loopback of RLC SDUs or PDCP SDUs).

X2=0 and X1=1 then UE test loop mode 2 loop back scheme according to 5.3.2.7 shall be performed by the UE (loopback of transport block data and CRC bits).

Y1 =0 then the DCCH dummy transmission according to 5.3.2.8 shall be disabled.

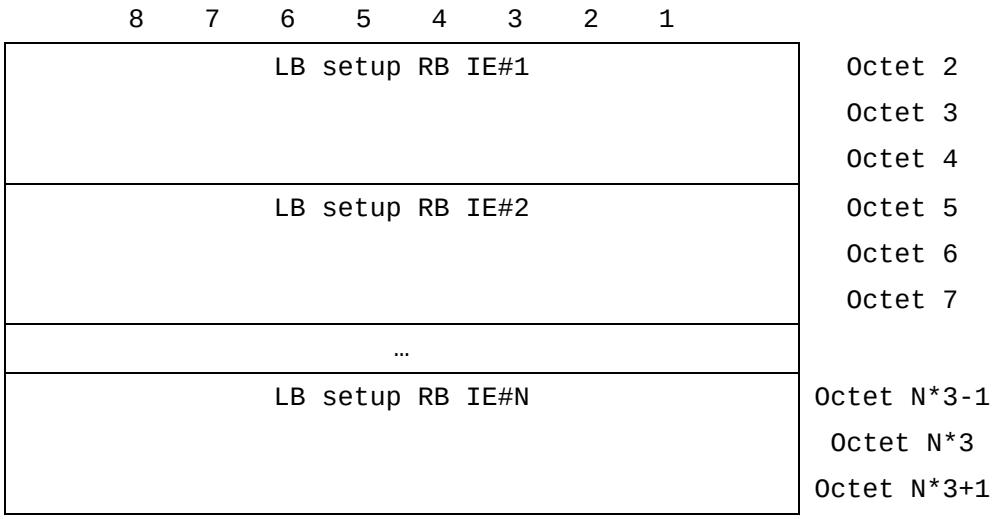
Y1 =1 then the DCCH dummy transmission according to 5.3.2.8 shall be enabled.

where UE test loop mode 1 LB setup is:



N is the number of LB entities in the LB setup list and is less than or equal to 4.

where LB setup list is:



where LB Setup RB IE#k is:

8	7	6	5	4	3	2	1	bit no.
Z15~~0~~	Z14~~0~~	Z13	Z12	Z11	Z10	Z9	Z8	octet 1
Z7	Z6	Z5	Z4	Z3	Z2	Z1	Z0	octet 2
Reserved			Q4	Q3	Q2	Q1	Q0	octet 3

Z15~~3~~..Z0 = Uplink RLC SDU size in bits 0.. 6553516383 (binary coded, Z15~~3~~ is most significant bit and Z0 least significant bit), see Note 1.

Q4..Q0 = RB identity number, 5..32 (binary coded, Q4 is most significant bit and Q0 least significant bit), where RB identity identifies the radio bearer, see [5] TS 25.331. The range is limited to 5..32 due to RB0 to RB4 are reserved for signalling radio bearers.

NOTE 1: The parameter UL RLC SDU size is only applicable for UE test loop mode 1 and for radio bearers not using the PDCP protocol layer, see 5.3.2.6.2. The UE capability for the parameter UL RLC SDU size is stated by the UE manufacturer as an Implementation Conformations Statement (ICS) as defined in [17] TS 34.123-2, clause A.4.3.1 table A.13.

<End of modified section>