

TSG RAN Meeting #19
Birmingham, United Kingdom, 11 - 14 March, 2003

RP-030031

Title CRs (R'99 and Rel-4/Rel-5/Rel-6 Category A) to TS 25.133 on "Correction of UE parameters for Random Access test" (Linked to CR239 to TS34.121 in TP-030045)

Source TSG RAN WG4

Agenda Item 8.4.3

RAN4 Tdoc	Spec	CR	R	Cat	Rel	Curr Ver	Title	Work Item
R4-020278	25.133	548		F	R99	3.12.0	Correction of UE parameters for Random Access test	TEI
R4-020279	25.133	549		A	Rel-4	4.7.0	Correction of UE parameters for Random Access test	TEI
R4-020280	25.133	550		A	Rel-5	5.5.0	Correction of UE parameters for Random Access test	TEI
R4-020281	25.133	551		A	Rel-6	6.0.0	Correction of UE parameters for Random Access test	TEI

Madrid, Spain 17 - 22 February, 2003

CR-Form-v7

CHANGE REQUEST⌘ **25.133 CR 548** ⌘ rev **3.12.0** ⌘ Current version: **3.12.0** ⌘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 UE parameter for Random Access test		
Source:	⌘ RAN WG4		
Work item code:	⌘ TEI	Date:	⌘ 05/03/2003
Category:	⌘ F	Release:	⌘ R99
	Use <u>one</u> of the following categories:		Use <u>one</u> of the following releases:
	F (correction)		2 (GSM Phase 2)
	A (corresponds to a correction in an earlier release)		R96 (Release 1996)
	B (addition of feature),		R97 (Release 1997)
	C (functional modification of feature)		R98 (Release 1998)
	D (editorial modification)		R99 (Release 1999)
	Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Rel-4 (Release 4)
			Rel-5 (Release 5)
			Rel-6 (Release 6)

Reason for change:	⌘ Maximum allowed UL TX power was changed from 0 dBm to 21 dBm in the table A.6.6 (R4-021651, 25.133 CR504). This change was intended for "Correct behaviour in Time-out" test case, because a good UE may fail the test when transmit power reaches the limit before sending prescribed number of preambles. Anyhow, table A.6.6 applies also for "Correct behaviour when reaching maximum transmit power" test case. The test requirement in clause A.6.2.2.4 states as follows: "The absolute power of any preambles belonging to the first or second preamble cycle shall not exceed 0 dBm with more than the tolerance given in section 6.5." However, the absolute power of UE is not suppressed less than 0 dBm, since the Maximum allowed UE TX power is set to 21 dBm.
Summary of change:	⌘ Value of Maximum allowed UL TX Power parameter in table A.6.6 is changed from 21 dBm to 0 dBm in table A.6.6. New table is added to clause A.6.2.2.3, where specific Maximum allowed UL TX Power value (21 dBm) for "Correct behaviour at Time-out" test case is proposed. Isolated Impact Analysis: This CR only corrects the value of UE parameter for Random Access test. Therefore, it does not have any impact on any other requirements or implementations.
Consequences if not approved:	⌘ Test requirement of "Correct behaviour when reaching maximum transmit power" can not be achieved successfully.

Clauses affected: ⌘ A.6.2

Other specs affected:		Y	N		
	⌘		X	Other core specifications	⌘
		X		Test specifications	34.121
			X	O&M Specifications	
Other comments:	⌘	Equivalent CRs in other Releases: CR549 cat. A to 25.133 v4.7.0, CR550 cat. A to 25.133 v5.5.0, CR551 cat. A to 25.133 v6.0.0			

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.

A.6.2 Random Access

A.6.2.1 Test Purpose and Environment

The purpose of these tests are to verify that the behaviour of the random access procedure is according to the requirements and that the PRACH power settings are within specified limits. This tests will verify the requirements in section 6.3.2.

Table A.6.5: RF Parameters for Random Access test

Parameter	Unit	Cell 1
UTRA RF Channel Number		Channel 1
CPICH_Ec/Ior	dB	-10
PCCPCH_Ec/Ior	dB	-12
SCH_Ec/Ior	dB	-12
Number of other transmitted Acquisition Indicators	-	0
AICH_Ec/Ior	dB	-10
PICH_Ec/Ior	dB	-15
OCNS_Ec/Ior when an AI is not transmitted	dB	-0.941
OCNS_Ec/Ior when an AI is transmitted	dB	-1.516
\hat{I}_{or}/I_{oc}	dB	0
I_{oc}	dBm/3.84 MHz	-70
CPICH_Ec/Io	dB	-13
Propagation Condition		AWGN

The test parameters "System Information Block (SIB) type 5 (ASC #0)" defined in section 6.1 of TS34.108, shall be used in all random access tests. Crucial parameters for the test requirements are repeated in Table A.6.6 and A.6.7 and these overrule the parameters defined in SIB type 5.

Table A.6.6: UE parameters for Random Access test

Parameter	Unit	Value
Access Service Class (ASC#0)		
- Persistence value	0..1	1
Maximum number of preamble ramping cycles (M_{max}).		2
Maximum number of preambles in one preamble ramping cycle (Preamble Retrans Max)		12
The backoff time T_{B01} $N_{B01min}=N_{B01max}$	ms #TTI	N/A 10
Power step when no acquisition indicator is received (Power offset P0)	dB	3
Power offset between the last transmitted preamble and the control part of the message (Power offset P p-m)	dB	0
Maximum allowed UL TX power	dBm	24 0

Table A.6.7: UTRAN parameters for Random Access test

Parameter	Unit	Value
Primary CPICH DL TX power	dBm	-8
UL interference	dBm	-102
SIR in open loop power control (Constant value)	dB	0
AICH Power Offset	dB	0

A.6.2.2 Test Requirements

A.6.2.2.1 Correct behaviour when receiving an ACK

The UE shall stop transmitting preambles upon a ACK on the AICH has been received and then transmit a message. An ACK shall be transmitted after 10 preambles have been received by the UTRAN.

The absolute power applied to the first preamble shall be -30 dBm with an accuracy as specified in section 6.4.1.1 of TS 25.101 [3]. The relative power applied to additional preambles shall have an accuracy as specified in section 6.5.2.1 of TS 25.101 [3].

The UE shall transmit 10 preambles and 1 message.

A.6.2.2.2 Correct behaviour when receiving an NACK

The UE shall stop transmitting preambles upon a NACK on the AICH has been received and then repeat the ramping procedure when the back off timer T_{B01} expires. The NACK shall be transmitted after the 10 preambles have been received by the UTRAN.

The UE shall transmit 10 preambles in the first ramping cycle and no transmission shall be done by the UE within 100 ms after the NACK has been transmitted by the UTRAN. Then the UE shall start the second preamble ramping cycle.

A.6.2.2.3 Correct behaviour at Time-out

The UE shall stop transmit preambles when reaching the maximum number of preambles allowed in a cycle. The UE shall then repeat the ramping procedure until the maximum number of preamble ramping cycles are reached. No ACK/NACK shall be sent by UTRAN during this test.

The UE shall transmit 2 preambles cycles, consisting of 12 preambles in each preamble cycle.

Table A.6.7A: Specific UE parameter for Correct behaviour at Time-out test

<u>Parameter</u>	<u>Unit</u>	<u>Value</u>
<u>Maximum allowed UL TX power</u>	<u>dBm</u>	<u>21</u>

A.6.2.2.4 Correct behaviour when reaching maximum transmit power

The UE shall not exceed the maximum allowed UL TX power configured by the UTRAN. No ACK/NACK shall be sent by UTRAN during this test.

The absolute power of any preambles belonging to the first or second preamble cycle shall not exceed 0 dBm with more than the tolerance given in section 6.5.

Madrid, Spain 17 - 22 February, 2003

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CHANGE REQUEST⌘ **25.133 CR 549** ⌘ rev **4.7.0** ⌘ Current version: **4.7.0** ⌘For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	⌘ Correction of UE parameter for Random Access test		
Source:	⌘ RAN WG4		
Work item code:	⌘ TEI	Date:	⌘ 05/03/2003
Category:	⌘ A	Release:	⌘ Rel-4
	Use <u>one</u> of the following categories:		Use <u>one</u> of the following releases:
	F (correction)		2 (GSM Phase 2)
	A (corresponds to a correction in an earlier release)		R96 (Release 1996)
	B (addition of feature),		R97 (Release 1997)
	C (functional modification of feature)		R98 (Release 1998)
	D (editorial modification)		R99 (Release 1999)
	Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Rel-4 (Release 4)
			Rel-5 (Release 5)
			Rel-6 (Release 6)

Reason for change:	⌘ Maximum allowed UL TX power was changed from 0 dBm to 21 dBm in the table A.6.6 (R4-021651, 25.133 CR504). This change was intended for "Correct behaviour in Time-out" test case, because a good UE may fail the test when transmit power reaches the limit before sending prescribed number of preambles. Anyhow, table A.6.6 applies also for "Correct behaviour when reaching maximum transmit power" test case. The test requirement in clause A.6.2.2.4 states as follows: "The absolute power of any preambles belonging to the first or second preamble cycle shall not exceed 0 dBm with more than the tolerance given in section 6.5." However, the absolute power of UE is not suppressed less than 0 dBm, since the Maximum allowed UE TX power is set to 21 dBm.
Summary of change:	⌘ Value of Maximum allowed UL TX Power parameter in table A.6.6 is changed from 21 dBm to 0 dBm in table A.6.6. New table is added to clause A.6.2.2.3, where specific Maximum allowed UL TX Power value (21 dBm) for "Correct behaviour at Time-out" test case is proposed. Isolated Impact Analysis: This CR only corrects the value of UE parameter for Random Access test. Therefore, it does not have any impact on any other requirements or implementations.
Consequences if not approved:	⌘ Test requirement of "Correct behaviour when reaching maximum transmit power" can not be achieved successfully.

Clauses affected: ⌘ A.6.2

Other specs affected:		Y	N	Other core specifications	⌘	34.121	
			X				Test specifications
		X					O&M Specifications
Other comments:	⌘	Equivalent CRs in other Releases: CR548 cat. F to 25.133 v3.12.0, CR550 cat. A to 25.133 v5.5.0, CR551 cat. A to 25.133 v6.0.0					

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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.

A.6.2 Random Access

A.6.2.1 Test Purpose and Environment

The purpose of these tests are to verify that the behaviour of the random access procedure is according to the requirements and that the PRACH power settings are within specified limits. This tests will verify the requirements in section 6.3.2.

Table A.6.5: RF Parameters for Random Access test

Parameter	Unit	Cell 1
UTRA RF Channel Number		Channel 1
CPICH_Ec/I _{or}	dB	-10
PCCPCH_Ec/I _{or}	dB	-12
SCH_Ec/I _{or}	dB	-12
Number of other transmitted Acquisition Indicators	-	0
AICH_Ec/I _{or}	dB	-10
PICH_Ec/I _{or}	dB	-15
OCNS_Ec/I _{or} when an AI is not transmitted	dB	-0.941
OCNS_Ec/I _{or} when an AI is transmitted	dB	-1.516
\hat{I}_{or}/I_{oc}	dB	0
I_{oc}	dBm/3.84 MHz	-70
CPICH_Ec/I _o	dB	-13
Propagation Condition		AWGN

The test parameters "System Information Block (SIB) type 5 (ASC #0)" defined in section 6.1 of TS34.108, shall be used in all random access tests. Crucial parameters for the test requirements are repeated in Table A.6.6 and A.6.7 and these overrule the parameters defined in SIB type 5.

Table A.6.6: UE parameters for Random Access test

Parameter	Unit	Value
Access Service Class (ASC#0)		
- Persistence value	0..1	1
Maximum number of preamble ramping cycles (M_{max}).		2
Maximum number of preambles in one preamble ramping cycle (Preamble Retrans Max)		12
The backoff time T_{B01} $N_{B01min}=N_{B01max}$	ms #TTI	N/A 10
Power step when no acquisition indicator is received (Power offset P ₀)	dB	3
Power offset between the last transmitted preamble and the control part of the message (Power offset P _{p-m})	dB	0
Maximum allowed UL TX power	dBm	24 ₀

Table A.6.7: UTRAN parameters for Random Access test

Parameter	Unit	Value
Primary CPICH DL TX power	DBm	-8
UL interference	DBm	-102
SIR in open loop power control (Constant value)	DB	0
AICH Power Offset	DB	0

A.6.2.2 Test Requirements

A.6.2.2.1 Correct behaviour when receiving an ACK

The UE shall stop transmitting preambles upon a ACK on the AICH has been received and then transmit a message. An ACK shall be transmitted after 10 preambles have been received by the UTRAN.

The absolute power applied to the first preamble shall be -30 dBm with an accuracy as specified in section 6.4.1.1 of TS 25.101 [3]. The relative power applied to additional preambles shall have an accuracy as specified in section 6.5.2.1 of TS 25.101 [3].

The UE shall transmit 10 preambles and 1 message.

A.6.2.2.2 Correct behaviour when receiving an NACK

The UE shall stop transmitting preambles upon a NACK on the AICH has been received and then repeat the ramping procedure when the back off timer T_{B01} expires. The NACK shall be transmitted after the 10 preambles have been received by the UTRAN.

The UE shall transmit 10 preambles in the first ramping cycle and no transmission shall be done by the UE within 100 ms after the NACK has been transmitted by the UTRAN. Then the UE shall start the second preamble ramping cycle.

A.6.2.2.3 Correct behaviour at Time-out

The UE shall stop transmit preambles when reaching the maximum number of preambles allowed in a cycle. The UE shall then repeat the ramping procedure until the maximum number of preamble ramping cycles are reached. No ACK/NACK shall be sent by UTRAN during this test.

The UE shall transmit 2 preambles cycles, consisting of 12 preambles in each preamble cycle.

Table A.6.7A: Specific UE parameter for Correct behaviour at Time-out test

Parameter	Unit	Value
Maximum allowed UL TX power	dBm	21

A.6.2.2.4 Correct behaviour when reaching maximum transmit power

The UE shall not exceed the maximum allowed UL TX power configured by the UTRAN. No ACK/NACK shall be sent by UTRAN during this test.

The absolute power of any preambles belonging to the first or second preamble cycle shall not exceed 0 dBm with more than the tolerance given in section 6.5.

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CHANGE REQUEST⌘ **25.133 CR 550** ⌘ rev **5.5.0** ⌘ Current version: **5.5.0** ⌘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:	⌘ Correction of UE parameter for Random Access test		
Source:	⌘ RAN WG4		
Work item code:	⌘ TEI	Date:	⌘ 05/03/2003
Category:	⌘ A	Release:	⌘ Rel-5
	Use <u>one</u> of the following categories:		Use <u>one</u> of the following releases:
	F (correction)		2 (GSM Phase 2)
	A (corresponds to a correction in an earlier release)		R96 (Release 1996)
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	Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Rel-4 (Release 4)
			Rel-5 (Release 5)
			Rel-6 (Release 6)

Reason for change:	⌘ Maximum allowed UL TX power was changed from 0 dBm to 21 dBm in the table A.6.6 (R4-021651, 25.133 CR504). This change was intended for "Correct behaviour in Time-out" test case, because a good UE may fail the test when transmit power reaches the limit before sending prescribed number of preambles. Anyhow, table A.6.6 applies also for "Correct behaviour when reaching maximum transmit power" test case. The test requirement in clause A.6.2.2.4 states as follows: "The absolute power of any preambles belonging to the first or second preamble cycle shall not exceed 0 dBm with more than the tolerance given in section 6.5." However, the absolute power of UE is not suppressed less than 0 dBm, since the Maximum allowed UE TX power is set to 21 dBm.
Summary of change:	⌘ Value of Maximum allowed UL TX Power parameter in table A.6.6 is changed from 21 dBm to 0 dBm in table A.6.6. New table is added to clause A.6.2.2.3, where specific Maximum allowed UL TX Power value (21 dBm) for "Correct behaviour at Time-out" test case is proposed. Isolated Impact Analysis: This CR only corrects the value of UE parameter for Random Access test. Therefore, it does not have any impact on any other requirements or implementations.
Consequences if not approved:	⌘ Test requirement of "Correct behaviour when reaching maximum transmit power" can not be achieved successfully.

Clauses affected: ⌘ A.6.2

Other specs affected:	⌘	<table border="1"><tr><td>Y</td><td>N</td></tr><tr><td></td><td>X</td></tr><tr><td>X</td><td></td></tr><tr><td></td><td>X</td></tr></table>	Y	N		X	X			X	Other core specifications	⌘	34.121
	Y	N											
		X											
X													
	X												
		Test specifications											
		O&M Specifications											
Other comments:	⌘	Equivalent CRs in other Releases: CR548 cat. F to 25.133 v3.12.0, CR549 cat. A to 25.133 v4.7.0, CR551 cat. A to 25.133 v6.0.0											

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A.6.2 Random Access

A.6.2.1 Test Purpose and Environment

The purpose of these tests are to verify that the behaviour of the random access procedure is according to the requirements and that the PRACH power settings are within specified limits. This tests will verify the requirements in section 6.3.2.

Table A.6.5: RF Parameters for Random Access test

Parameter	Unit	Cell 1
UTRA RF Channel Number		Channel 1
CPICH_Ec/Ior	dB	-10
PCCPCH_Ec/Ior	dB	-12
SCH_Ec/Ior	dB	-12
Number of other transmitted Acquisition Indicators	-	0
AICH_Ec/Ior	dB	-10
PICH_Ec/Ior	dB	-15
OCNS_Ec/Ior when an AI is not transmitted	dB	-0.941
OCNS_Ec/Ior when an AI is transmitted	dB	-1.516
\hat{I}_{or}/I_{oc}	dB	0
I_{oc}	dBm/3.84 MHz	-70
CPICH_Ec/Io	dB	-13
Propagation Condition		AWGN

The test parameters "System Information Block (SIB) type 5 (ASC #0)" defined in section 6.1 of TS34.108, shall be used in all random access tests. Crucial parameters for the test requirements are repeated in Table A.6.6 and A.6.7 and these overrule the parameters defined in SIB type 5.

Table A.6.6: UE parameters for Random Access test

Parameter	Unit	Value
Access Service Class (ASC#0)		
- Persistence value	0..1	1
Maximum number of preamble ramping cycles (M_{max}).		2
Maximum number of preambles in one preamble ramping cycle (Preamble Retrans Max)		12
The backoff time T_{B01} $N_{B01min}=N_{B01max}$	ms #TTI	N/A 10
Power step when no acquisition indicator is received (Power offset P0)	dB	3
Power offset between the last transmitted preamble and the control part of the message (Power offset P p-m)	dB	0
Maximum allowed UL TX power	dBm	240

Table A.6.7: UTRAN parameters for Random Access test

Parameter	Unit	Value
Primary CPICH DL TX power	dBm	-8
UL interference	dBm	-102
SIR in open loop power control (Constant value)	dB	0
AICH Power Offset	dB	0

A.6.2.2 Test Requirements

A.6.2.2.1 Correct behaviour when receiving an ACK

The UE shall stop transmitting preambles upon a ACK on the AICH has been received and then transmit a message. An ACK shall be transmitted after 10 preambles have been received by the UTRAN.

The absolute power applied to the first preamble shall be -30 dBm with an accuracy as specified in section 6.4.1.1 of TS 25.101 [3]. The relative power applied to additional preambles shall have an accuracy as specified in section 6.5.2.1 of TS 25.101 [3].

The UE shall transmit 10 preambles and 1 message.

A.6.2.2.2 Correct behaviour when receiving an NACK

The UE shall stop transmitting preambles upon a NACK on the AICH has been received and then repeat the ramping procedure when the back off timer T_{B01} expires. The NACK shall be transmitted after the 10 preambles have been received by the UTRAN.

The UE shall transmit 10 preambles in the first ramping cycle and no transmission shall be done by the UE within 100 ms after the NACK has been transmitted by the UTRAN. Then the UE shall start the second preamble ramping cycle.

A.6.2.2.3 Correct behaviour at Time-out

The UE shall stop transmit preambles when reaching the maximum number of preambles allowed in a cycle. The UE shall then repeat the ramping procedure until the maximum number of preamble ramping cycles are reached. No ACK/NACK shall be sent by UTRAN during this test.

The UE shall transmit 2 preambles cycles, consisting of 12 preambles in each preamble cycle.

Table A.6.7A: Specific UE parameter for Correct behaviour at Time-out test

Parameter	Unit	Value
Maximum allowed UL TX power	dBm	21

A.6.2.2.4 Correct behaviour when reaching maximum transmit power

The UE shall not exceed the maximum allowed UL TX power configured by the UTRAN. No ACK/NACK shall be sent by UTRAN during this test.

The absolute power of any preambles belonging to the first or second preamble cycle shall not exceed 0 dBm with more than the tolerance given in section 6.5.

CHANGE REQUEST

⌘ **25.133 CR 551** ⌘ rev ⌘ Current version: **6.0.0** ⌘

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

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

Title:	⌘ Correction of UE parameter for Random Access test		
Source:	⌘ RAN WG4		
Work item code:	⌘ TEI	Date:	⌘ 05/03/2003
Category:	⌘ A	Release:	⌘ Rel-6
	Use <u>one</u> of the following categories:		Use <u>one</u> of the following releases:
	F (correction)		2 (GSM Phase 2)
	A (corresponds to a correction in an earlier release)		R96 (Release 1996)
	B (addition of feature),		R97 (Release 1997)
	C (functional modification of feature)		R98 (Release 1998)
	D (editorial modification)		R99 (Release 1999)
	Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Rel-4 (Release 4)
			Rel-5 (Release 5)
			Rel-6 (Release 6)

Reason for change:	⌘ Maximum allowed UL TX power was changed from 0 dBm to 21 dBm in the table A.6.6 (R4-021651, 25.133 CR504). This change was intended for "Correct behaviour in Time-out" test case, because a good UE may fail the test when transmit power reaches the limit before sending prescribed number of preambles. Anyhow, table A.6.6 applies also for "Correct behaviour when reaching maximum transmit power" test case. The test requirement in clause A.6.2.2.4 states as follows: "The absolute power of any preambles belonging to the first or second preamble cycle shall not exceed 0 dBm with more than the tolerance given in section 6.5." However, the absolute power of UE is not suppressed less than 0 dBm, since the Maximum allowed UE TX power is set to 21 dBm.
Summary of change:	⌘ Value of Maximum allowed UL TX Power parameter in table A.6.6 is changed from 21 dBm to 0 dBm in table A.6.6. New table is added to clause A.6.2.2.3, where specific Maximum allowed UL TX Power value (21 dBm) for "Correct behaviour at Time-out" test case is proposed.
Consequences if not approved:	⌘ Test requirement of "Correct behaviour when reaching maximum transmit power" can not be achieved successfully.

Clauses affected:	⌘ A.6.2								
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="padding: 2px;">Y</td> <td style="padding: 2px;">N</td> </tr> <tr> <td style="padding: 2px;"> </td> <td style="padding: 2px;">X</td> </tr> <tr> <td style="padding: 2px;">X</td> <td style="padding: 2px;"> </td> </tr> </table>	Y	N		X	X		Other core specifications	⌘
	Y	N							
	X								
X									
	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="padding: 2px;"> </td> <td style="padding: 2px;"> </td> </tr> <tr> <td style="padding: 2px;">X</td> <td style="padding: 2px;"> </td> </tr> </table>			X		Test specifications	⌘ 34.121		
X									

O&M Specifications

Other comments: ☼

Equivalent CRs in other Releases: CR548 cat. F to 25.133 v3.12.0, CR549 cat. A to 25.133 v4.7.0, CR550 cat. A to 25.133 v5.5.0

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.

A.6.2 Random Access

A.6.2.1 Test Purpose and Environment

The purpose of these tests are to verify that the behaviour of the random access procedure is according to the requirements and that the PRACH power settings are within specified limits. This tests will verify the requirements in section 6.3.2.

Table A.6.5: RF Parameters for Random Access test

Parameter	Unit	Cell 1
UTRA RF Channel Number		Channel 1
CPICH_Ec/Ior	dB	-10
PCCPCH_Ec/Ior	dB	-12
SCH_Ec/Ior	dB	-12
Number of other transmitted Acquisition Indicators	-	0
AICH_Ec/Ior	dB	-10
PICH_Ec/Ior	dB	-15
OCNS_Ec/Ior when an AI is not transmitted	dB	-0.941
OCNS_Ec/Ior when an AI is transmitted	dB	-1.516
\hat{I}_{or}/I_{oc}	dB	0
I_{oc}	dBm/3.84 MHz	-70
CPICH_Ec/Io	dB	-13
Propagation Condition		AWGN

The test parameters "System Information Block (SIB) type 5 (ASC #0)" defined in section 6.1 of TS34.108, shall be used in all random access tests. Crucial parameters for the test requirements are repeated in Table A.6.6 and A.6.7 and these overrule the parameters defined in SIB type 5.

Table A.6.6: UE parameters for Random Access test

Parameter	Unit	Value
Access Service Class (ASC#0)		
- Persistence value	0..1	1
Maximum number of preamble ramping cycles (M_{max}).		2
Maximum number of preambles in one preamble ramping cycle (Preamble Retrans Max)		12
The backoff time T_{B01} $N_{B01min}=N_{B01max}$	ms #TTI	N/A 10
Power step when no acquisition indicator is received (Power offset P0)	dB	3
Power offset between the last transmitted preamble and the control part of the message (Power offset P p-m)	dB	0
Maximum allowed UL TX power	dBm	240

Table A.6.7: UTRAN parameters for Random Access test

Parameter	Unit	Value
Primary CPICH DL TX power	dBm	-8
UL interference	dBm	-102
SIR in open loop power control (Constant value)	dB	0
AICH Power Offset	dB	0

A.6.2.2 Test Requirements

A.6.2.2.1 Correct behaviour when receiving an ACK

The UE shall stop transmitting preambles upon a ACK on the AICH has been received and then transmit a message. An ACK shall be transmitted after 10 preambles have been received by the UTRAN.

The absolute power applied to the first preamble shall be -30 dBm with an accuracy as specified in section 6.4.1.1 of TS 25.101 [3]. The relative power applied to additional preambles shall have an accuracy as specified in section 6.5.2.1 of TS 25.101 [3].

The UE shall transmit 10 preambles and 1 message.

A.6.2.2.2 Correct behaviour when receiving an NACK

The UE shall stop transmitting preambles upon a NACK on the AICH has been received and then repeat the ramping procedure when the back off timer T_{B01} expires. The NACK shall be transmitted after the 10 preambles have been received by the UTRAN.

The UE shall transmit 10 preambles in the first ramping cycle and no transmission shall be done by the UE within 100 ms after the NACK has been transmitted by the UTRAN. Then the UE shall start the second preamble ramping cycle.

A.6.2.2.3 Correct behaviour at Time-out

The UE shall stop transmit preambles when reaching the maximum number of preambles allowed in a cycle. The UE shall then repeat the ramping procedure until the maximum number of preamble ramping cycles are reached. No ACK/NACK shall be sent by UTRAN during this test.

The UE shall transmit 2 preambles cycles, consisting of 12 preambles in each preamble cycle.

Table A.6.7A: Specific UE parameter for Correct behaviour at Time-out test

Parameter	Unit	Value
Maximum allowed UL TX power	dBm	21

A.6.2.2.4 Correct behaviour when reaching maximum transmit power

The UE shall not exceed the maximum allowed UL TX power configured by the UTRAN. No ACK/NACK shall be sent by UTRAN during this test.

The absolute power of any preambles belonging to the first or second preamble cycle shall not exceed 0 dBm with more than the tolerance given in section 6.5.