

Source: TSG CN WG 1
Title: CR to R99 (with mirror CRs) on Work Item Security towards 24.008
Agenda item: 7.2
Document for: APPROVAL

Introduction:

This document contains 3 CRs, R99 with mirror CRs to Work Item " Security", that have been agreed by TSG CN WG1, and are forwarded to TSG CN Plenary meeting #18 for approval.

Spec	CR #	Rev	CAT	Rel	Tdoc Title	Meeting	TDoc #	C_Version
24.008	705	2	F	R99	Cell barring after Network authentication rejection from the UE	N1-26	N1-022150	3.13.0
24.008	706	1	A	Rel-4	Cell barring after Network authentication rejection from the UE	N1-26	N1-022074	4.8.0
24.008	707	1	A	Rel-5	Cell barring after Network authentication rejection from the UE	N1-26	N1-022075	5.5.0

CR-Form-v7

CHANGE REQUEST

⌘ **24.008 CR 705** ⌘ rev **2** ⌘ Current version: **3.13.0** ⌘

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:	⌘ Cell barring after Network authentication rejection from the UE		
Source:	⌘ ETSI- NEC Technologies (UK) LTD		
Work item code:	⌘ security	Date:	⌘ 26/09/2002
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:	⌘ 25.331 newly defines this procedure : “The purpose of this procedure is to release the RRC connection and bar the current cell or cells. The procedure is requested by upper layers when they determine that the network has failed an authentication check”. This procedure can be found in chapter 8.1.4a and is an Access Stratum procedure. 24.008 now words “If the MS deems that the network has failed the authentication check, then it should abort the RR connection and the PS signalling connection. Additionally, the MS shall treat the cell where the first failed AUTHENTICATION REQUEST message which lead to sending of AUTHENTICATION FAILURE was received as barred.” A contradiction can be seen between the two descriptions.
Summary of change:	⌘ As far as this procedure is Access Stratum related, and has just been created during last RAN meeting, 24.008 should give the reference to this 25.331 RAN defined procedure. 2G cell barring still has to be taken into account, since network authentication is a R99 issue, and can also take place within a 2G access stratum.
Consequences if not approved:	⌘ There would still be contradictions between 24.008 and 25.331 UE described behaviours when the network has failed an authentication check.

Clauses affected:	⌘ 4.3.2.6.1, 4.7.7.6.1						
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;"><input type="checkbox"/></td> <td style="padding: 2px;"><input checked="" type="checkbox"/></td> </tr> </table>	Y	N	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Other core specifications	⌘
Y	N						
<input type="checkbox"/>	<input checked="" type="checkbox"/>						
	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="padding: 2px;"><input type="checkbox"/></td> <td style="padding: 2px;"><input checked="" type="checkbox"/></td> </tr> </table>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Test specifications	⌘		
<input type="checkbox"/>	<input checked="" type="checkbox"/>						

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/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.

4.3.2.6.1 MS behaviour towards a network that has failed the authentication procedure

In addition to the cases specified in subclause 4.3.2.6, the MS may deem that the network has failed the authentication check after any combination of three consecutive authentication failures, regardless whether ‘MAC failure’, ‘invalid SQN’, or ‘GSM authentication unacceptable’ was diagnosed. The authentication failures shall be considered as consecutive only, if the authentication challenges causing the second and third authentication failure are received by the MS, while the timer T3214 or T3216 started after the previous authentication failure is running.

If the MS deems that the network has failed the authentication check, then it shall request RR or RRC to release the RR connection and the PS signalling connection, if any, and bar the active cell or cells (see 3GPP TS 25.331 and 3GPP TS 04.18). ~~should abort the RR connection and the PS signalling connection. Additionally, the MS shall treat the cell where the first failed AUTHENTICATION REQUEST message was received as barred, until refresh of system information data.~~ The MS shall start any retransmission timers (e.g. T3210, T3220 or T3230), if they were running and stopped when the MS received the first AUTHENTICATION REQUEST message containing an invalid MAC or invalid SQN, or no AUTN when a UMTS authentication challenge was expected..

***** NEXT MODIFIED SECTION *****

4.7.7.6.1 MS behaviour towards a network that has failed the authentication procedure

In addition to the cases specified in subclause 4.7.7.6, the MS may deem that the network has failed the authentication check after any combination of three consecutive authentication failures, regardless whether ‘MAC failure’, ‘invalid SQN’, or ‘GSM authentication unacceptable’ was diagnosed. The authentication failures shall be considered as consecutive only, if the authentication challenges causing the second and third authentication failure are received by the MS, while the timer T3318 or T3320 started after the previous authentication failure is running.

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CR-Form-v7

CHANGE REQUEST

⌘ **24.008 CR 706** ⌘ rev **1** ⌘ Current version: **4.8.0** ⌘

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:	⌘ Cell barring after Network authentication rejection from the UE		
Source:	⌘ ETSI- NEC Technologies (UK) LTD		
Work item code:	⌘ security	Date:	⌘ 26/08/2002
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:	⌘ 25.331 newly defines this procedure : “The purpose of this procedure is to release the RRC connection and bar the current cell or cells. The procedure is requested by upper layers when they determine that the network has failed an authentication check”. This procedure can be found in chapter 8.1.4a and is an Access Stratum procedure.
	24.008 now words “If the MS deems that the network has failed the authentication check, then it should abort the RR connection and the PS signalling connection. Additionally, the MS shall treat the cell where the first failed AUTHENTICATION REQUEST message which lead to sending of AUTHENTICATION FAILURE was received as barred.”
	A contradiction can be seen between the two descriptions.
Summary of change:	⌘ As far as this procedure is Access Stratum related, and has just been created during last RAN meeting, 24.008 should give the reference to this 25.331 RAN defined procedure.
	2G cell barring still has to be taken into account, since network authentication is a R99 issue, and can also take place within a 2G access stratum.
Consequences if not approved:	⌘ There would still be contradictions between 24.008 and 25.331 UE described behaviours when the network has failed an authentication check.

Clauses affected:	⌘ 4.3.2.6.1, 4.7.7.6.1						
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;"><input type="checkbox"/></td> <td style="padding: 2px;"><input checked="" type="checkbox"/></td> </tr> </table>	Y	N	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Other core specifications	⌘
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O&M Specifications

Other comments: ☞

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4.3.2.6.1 MS behaviour towards a network that has failed the authentication procedure

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If the MS deems that the network has failed the authentication check, then it shall request RR or RRC to release the RR connection and the PS signalling connection, if any, and bar the active cell or cells (see 3GPP TS 25.331 and 3GPP TS 44.018), ~~should abort the RR connection and the PS signalling connection. Additionally, the MS shall treat the cell where the first failed AUTHENTICATION REQUEST message was received as barred, until refresh of system information data.~~ The MS shall start any retransmission timers (e.g. T3210, T3220 or T3230), if they were running and stopped when the MS received the first AUTHENTICATION REQUEST message containing an invalid MAC or invalid SQN, or no AUTN when a UMTS authentication challenge was expected.

***** NEXT MODIFIED SECTION *****

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CR-Form-v7

CHANGE REQUEST

⌘ **24.008 CR 707** ⌘ rev **1** ⌘ Current version: **5.5.0** ⌘

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

Title:	⌘ Cell barring after Network authentication rejection from the UE		
Source:	⌘ ETSI- NEC Technologies (UK) LTD		
Work item code:	⌘ security	Date:	⌘ 26/08/2002
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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4.3.2.6.1 MS behaviour towards a network that has failed the authentication procedure

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