TSGS#22(03)0605

Source: **SA WG3 (Security)**

Title: **CRs to 33.203: Network behaviour when a new REGISTER is challenged during an on going authentication (Rel-5 / Rel-6)**

Document for: **Approval**

Agenda Item: **7.3.3**

SA Doc number	Spec	CR	Rev	Phase	Subject	Cat	Version-Current	SA WG3 Doc number	Workitem
SP-030605	33.203	062	-	Rel-5	Network behaviour when a new REGISTER is challenged during an on going authentication	F	5.7.0	S3-030770	IMS-ASEC
SP-030605	33.203	063	-	Rel-6	Network behaviour when a new REGISTER is challenged during an on going authentication	A	6.0.0	S3-030771	IMS-ASEC

3GPP TSG-SA-WG3 Meeting #31
18th – 21st November 2003, Munich, Germay

Tdoc ⌘S3-030770

CR-Form-v7

CHANGE REQUEST

⌘ **TS 33.203** **CR** **062** ⌘ **rev** **-** ⌘ Current version: **5.7.0** ⌘

*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:	⌘	Network behaviour when a new REGISTER is challenged during an on going authentication
Source:	⌘	**SA WG3**
Work item code:	⌘	IMS-ASEC
Date:	⌘	19/11/2003
Category:	⌘	**F**
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:	⌘	It was agreed in the SA3/CN1 joint meeting that the S-CSCF may challenge a UE when it already has an authentication running with that UE, but the CSCFs should have only one authentication running with a particular UE. This CR is an implementation of that conclusion.
Summary of change:	⌘	When the S-CSCF challenges a new REGISTER while still waiting for a response to a previous challenge then - The S-CSCF should abandon the previous challenge, - The P-CSCF should delete the previous registration SA to the same UE, and insert the one that is associated with new challenge.
Consequences if not approved:	⌘	Not allowing the S-CSCF to start a new authentication and abandon the previous authentication (before it has timed out) severely increases the ability of an attacker to prevent a genuine UE from registering with the network.

Clauses affected:	⌘	6.1.2.3, 7.3.1.4			
Other specs affected:	⌘	**Y** / **N**	Other core specifications	⌘	TS 24.229, TS 29.228
		X /	Other core specifications		
		/ **X**	Test specifications		
		/ **X**	O&M Specifications		
Other comments:	⌘				

6.1.2.3 Incomplete authentication

When the S-CSCF receives a new REGISTER request and challenges this request, it considers any previous authentication to have failed. It shall delete any information relating to the previous authentication, although the S-CSCF may send a response if the previous challenge is answered. A challenge to the new request proceeds as described in clause 6.1.1.

If the S-CSCF- does not receive a response to an authentication within an acceptable time, it considers the authentication to have failed. If the IMPU was not already registered, the S-CSCF shall send a Cx-Put to the HSS to set the registration-flag for that IMPU to unregistered (see message CM3 in clause 6.1.2.2). If the IMPU was already registered, the S-CSCF does not change the registration-flag.

------ NEXT CHANGE------

7.3.1.4 Incomplete authentication

If the UE responds to an authentication challenge from a S-CSCF, but does not receive a reply before the request times out, the UE shall start a registration procedure if it still requires any IM services. The first message in this registration should be protected with an SA created by a previous successful authentication if one exists.

When the P-CSCF receives a challenge from the S-CSCF and creates the corresponding SAs during a registration procedure, it shall delete any information relating to any previous registration procedure (including the SAs created during the previous registration procedure).

If the P-CSCF deletes a registration SA due to its lifetime being exceeded, the P-CSCF should delete any information relating to ~~that~~ the registration procedure that created the SA.

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CHANGE REQUEST

⌘ **TS 33.203** **CR** **063** ⌘ **rev** **-** ⌘ Current version: **6.0.0** ⌘

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Source:	⌘	**SA WG3**
Work item code:	⌘	IMS-ASEC
Date:	⌘	19/11/2003
Category:	⌘	**A**
Release:	⌘	Rel-6

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
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Use one of the following releases:

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R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*

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		X /	Other core specifications		
		/ **X**	Test specifications		
		/ **X**	O&M Specifications		
Other comments:	⌘				

6.1.2.3 Incomplete authentication

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------ NEXT CHANGE------

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