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TSG-SA1 SWG #18  
Beijing, China, 14 -18 October 2002

S1-022109  
Agenda Item:

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**Title:** Requirement to allow access to IMS by means of SIM

**Release:** 5 and 6

**Source:** SA1

**To:** SA2, SA3

**Cc:** T3, SA

**Contact Persons:**

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**Attachments:** CR titled "SIM access to IMS"for rel. 5, Tdoc: S1-022040; and CR titled "SIM access to IMS"for rel. 6, Tdoc: S1-022041.

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**1. Rationale:**

Requirements on access to the IMS services via existing R99/R4 USIMs were agreed by SA1 some time ago to enable a smoother customer transition towards new IM services. However this decision has been proposed to be re-evaluated as now there seems to be a need among some operators to launch the first IMS services with SIMs. For these operators the number of 2G SIMs will not be negligible and the migration towards new USIMs will not happen overnight.

During the transition period some operators will want to offer IMS services to existing subscribers still having a SIM. Moreover, operators should be given flexibility in planning SIMs replacements and not be forced to change to USIM due to lack of specifications supporting use of legacy SIM cards.

The costs of the transition are not negligible; in addition to the SIM intrinsic cost, provision cost shall be considered, and the procedure itself is not so simple (in most of the cases the SIM are physically sold by means of franchising business relation, and it is not clear who will pay the cost).

We believe that this option will help significantly the rollout and availability IMS services.

SA1 only identified one potential issue, which seems to be the authentication.

Currently the access to the IMS has to be performed using the UMTS AKA, this will imply that access to the IMS will be denied to subscribers using a SIM rather than a USIM. Other methods based on GSM SIM algorithms (e.g. EAP SIM) could be applied to IMS authentication to enable access via legacy SIMs as well, although they don't guarantee mutual authentication like IMS AKA.

It should be an operator decision to balance out the savings against the reduced security offered by the SIM. Similarly to the access to the UTRAN using a SIM, the choice on whether to allow it or disallow it should be left to the operator.

## **2. S1 IMS SWG position:**

Several, but not all, incumbent GSM operators supported the requirements and its meaningfulness was agreed in principle.

Nevertheless S1 delegates are recognizing that S1 is not in the position to completely evaluate the implementation impact of such requirement, and therefore is kindly asking S2 and S3 to provide:

- evaluation about the feasibility of the implementation of this requirement for Rel 5,
- and
- an general feedback about its introduction in Rel 6.

Two CRs were drafted at the IMS SWG ad hoc meeting in Beijing (one for Rel 5 and the other for REL 6, attached also to this LS) and will be presented for S1 approval at the Pusan S1 meeting (11-15 November 2002).

These CRs are heavily dependant on S2 and S3 feedback; especially the release 5 CR due to imminent timeframe. Approval of the CRs will be based on S2 feedback, and in case of S1 approval, it will be considered on conditional basis respect to S3 feedback for next SA plenary. (S3 unfortunately will meet only after the next S1 meeting).

S1 thanks in advance for the S2 and S3 help on the topic.

## **2. Actions:**

### **To S2 group.**

#### **ACTION:**

- Verify urgently the technical impact of the requirement (especially on security and terminal impacts) and its feasibility within the Rel 5 timeframe.
- Provide general feedback on its introduction in Rel.6

### **To S3 group.**

#### **ACTION:**

- Verify urgently the technical impact of the requirement and its feasibility within the Rel 5 timeframe.
- Provide general feedback on its introduction in Rel.6

## **3. Date of Next TSG-SA1 Meeting:**

SA1#18

11-15 November 2002,

Korea.

CR-Form-v7

## CHANGE REQUEST

⌘ **22.101 CR CRNum** ⌘ 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

<b>Title:</b>	⌘ SIM access to IMS				
<b>Source:</b>	⌘ Telecom Italia				
<b>Work item code:</b>	⌘ IMS	<b>Date:</b>	⌘ 09/10/2002		
<b>Category:</b>	⌘ <b>F</b>	<b>Release:</b>	⌘ REL-5		
	Use <u>one</u> of the following categories:		Use <u>one</u> of the following releases:		
	<b>F</b> (correction)		<b>2</b> (GSM Phase 2)		
	<b>A</b> (corresponds to a correction in an earlier release)		<b>R96</b> (Release 1996)		
	<b>B</b> (addition of feature),		<b>R97</b> (Release 1997)		
	<b>C</b> (functional modification of feature)		<b>R98</b> (Release 1998)		
	<b>D</b> (editorial modification)		<b>R99</b> (Release 1999)		
	Detailed explanations of the above categories can be found in 3GPP TR 21.900.		<b>Rel-4</b> (Release 4)		
			<b>Rel-5</b> (Release 5)		
			<b>Rel-6</b> (Release 6)		

<b>Reason for change:</b>	⌘ Requirements on access to the IMS services via existing R99/R4 USIMs were agreed by SA1 to enable a smoother customer transition towards new IM services. However it seems more and more realistic that at the launch of first IMS services, the amount of operator's 2G SIMs will not be neglectable as the migration towards new USIMs will not happen overnight. Moreover, operators should be given flexibility in planning SIMs replacements and not be urged by incoming SIM-incompatible new IM services. Requiring support of GSM SIM for IMS doesn't pose any new functional requirement with respect to existing requirements. On the security side, other methods based on GSM SIM algorithms (e.g. EAP SIM) could be applied to IMS authentication to enable access via legacy SIMs as well, although they don't guarantee mutual authentication like IMS AKA. SA3 may need to further investigate such security issues, while completing work on IMS access control.
<b>Summary of change:</b>	⌘ A requirement is clarified by which a UE can run IMS services also with unmodified pre-Release 5 GSM SIMs. This has been reflected in section 13.1.1, stating that "Access to the IMS services shall be possible using GSM SIM, 3GPP release 99 and release 4 UICCs".
<b>Consequences if not approved:</b>	⌘ IM Services could not be provided to terminals equipped with GSM SIMs.

<b>Clauses affected:</b>	⌘ 13.1.1
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<b>Other specs affected:</b>		<b>Y</b>	<b>N</b>	Other core specifications	⌘ TS 33.203	
	⌘	<b>X</b>				Test specifications
						O&M Specifications
<b>Other comments:</b>	⌘					

**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:

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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.

\*\*\*\*\* next modified section \*\*\*\*\*

## 13.1 The USIM/ISIM and User Profiles

### 13.1.1 The USIM

Every USIM shall have a unique identity and shall be associated with one and only one home environment.

It shall be possible for a home environment to uniquely identify a user by the USIM.

The USIM shall be used to provide security features.

For access to services, provided by PS or CS CN domains, a valid USIM shall be required.

The USIM shall be able to support SIM Application Toolkit as specified in 3GPP TS 22.038 [3].

The USIM shall reside on a UICC, 3GPP specifications shall adopt both of the GSM SIM card physical formats. Other formats may also be supported. USIM specific information shall be protected against unauthorised access or alteration.

It shall be possible to update USIM specific information via the air interface, in a secure manner.

Access to the IMS services shall be possible using 3GPP release 99 and release 4 UICCs (USIM and SIM applications), and GSM SIMs (release 4 and earlier).

CR-Form-v7

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