

3GPP TSG-T3 #27  
Sapporo, Hokkaido Japan, 20 – 23 May 2003

*Tdoc T3-030411*

**Title:** LS on WLAN interworking

**Source:** 3GPP T3

**To:** 3GPP-SA1

**Cc:** 3GPP SA2, SA3

**Contact Person:**

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**Attached:** WID in Tdoc T3-030394

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**1. Overall Description:**

T3 thank SA1 for their LS in Tdoc T3-030331/S1-030546 regarding WLAN interworking.  
T3 have agreed a WI for supporting other groups in defining a solution using (U)SIM for WLAN interworking. Work is expected to be finished at T#22 (see attached WID).

From T3 perspective, three technical solutions are feasible that meet the SA1, SA2, SA3 requirements we have at the moment:

- 1) EAP-SIM (using a legacy SIM): possible consequences are:
  - no need to change 2G HLR nor SIMs
  - security threats as identified by SA3
  - impact on T3 specs: none (all mechanisms in S3 specs)
- 2) Secured EAP-SIM (using an enhanced SIM): possible consequences are:
  - no need to change the 2G HLR
  - need to replace or upgrade the SIM
  - impact on T3 specs : yes, and there is the issue that the SIM specification (TS 51.011) is frozen.
  - Some non-security related additions could be useful: provisioning files, etc...
- 3) EAP-AKA (using a USIM): possible consequences are:
  - need a 3G HSS/HLR (might be necessary anyway in Rel-5, because Rel-5 GSM terminals support USIM)
  - this could work with legacy USIMs (R99 to Rel-5), some enhancement might also be proposed (Rel-6)
  - impact on T3 specs : none if existing USIM (R99 to Rel-5) is used
  - Some non-security related additions could be useful: provisioning files, etc...

T3 ask guidance from SA1 about the service aspects of these solutions: which of the 3 solutions is there is a service requirement for? There might also be room for several solutions.

Regarding solution 2), some T3 delegates expressed doubts that we need a SIM-based solution requiring upgraded SIMs, knowing that migration to USIM is likely to happen in a few years time.

We would also welcome use cases, scenarios and draft specifications or reports drafted by S1.

**2. Actions:**

**SA1** to clarify the requirements in order for T3 to choose one or several solutions using the (U)SIM.

**SA1** to give appropriate background information to T3 about use cases & scenarios on WLAN interworking.

**3. Date of Next T3 Meetings:**

T3#28, 19-22 August 2003, Marseilles

T3#29, 18-21 November 2003, USA

## **Work Item Description**

### **Title**

WLAN Interworking impact on UICC applications

### **1 3GPP Work Area**

	Radio Access
	Core Network
X	Services
X	Terminals

### **2 Linked work items**

*SP-020542 (SA2), SP-020574 (SA1), SP-020514 (SA3)*

### **3 Justification**

Some operators are requesting smartcard based authentication solutions for WLAN interworking. As a result, SA1 endorsed investigations by T3 on optional enhancements to its specifications to properly address this need and ensure compliance with SA3 specifications.

Potential impacts are foreseen in the following areas:

- Authentication: While EAP AKA provides a satisfactory authentication mechanism using a USIM, the current solution for using a SIM, EAP-SIM, is open to potential attacks. An IETF draft "EAP support in Smartcards", proposes potential improvements on top of EAP SIM to address these concerns. These proposals need to be considered.
- The above concern also applies when using a USIM for WLAN authentication in a GSM security context.
- Provisioning of WLAN specific parameters: for example, the temporary identifiers specified in TS 23.234 R6 could be stored on the USIM.

### **4 Objective**

In liaison with other 3GPP groups involved in WLAN interworking activities, develop Release 6 change requests to the existing T3 specifications, or a new release 6 specification, as appropriate, to address the above demands.

A liaison with EP SCP will also be established as some developments might have applications beyond the 3GPP specific context.

Depending on the guidance from other groups, the following three possible solutions for authentication will be considered:

- 1) EAP SIM
- 2) EAP for Smartcard
- 3) EAP AKA

### **5 Service Aspects**

*Service requirements defined by SA1 will be met.*

**6 MMI-Aspects**

*None.*

**7 Charging Aspects**

*Potentially, but none identified by T3.*

**8 Security Aspects**

*Security requirements defined by SA3 will be met.*

**9 Impacts**

Affects:	UICC Apps	ME	AN	CN	Others
Yes	X	X		X	
No			X		X
Don't know					

**10 Expected Output and Time scale (to be updated at each plenary)**

New specifications						
Spec No.	Title	Prime resp. WG	2ndary resp. WG(s)	Presented for information at plenary#	Approved at plenary#	Comments
TBD		T3		T#21	T#22	Depending on the outcome of the work item
Affected existing specifications						
Spec No.	CR	Subject		Approved at plenary#	Comments	
TBD	TBD				Depending on the outcome of the work item	

**11 Work item rapporteurs**

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**12 Work item leadership**

TSG T WG3

**13 Supporting Companies**

SchlumbergerSema, Orange France, Gemplus, Telefonica Moviles, Giesecke & Devrient

**14**                      **Classification of the WI (if known)**

	Feature (go to 14a)
X	Building Block (go to 14b)
	Work Task (go to 14c)

14a      The WI is a Feature: List of building blocks under this feature

14b      The WI is a Building Block: parent Feature

Parent feature "Wireless LAN Interworking", as given in *SP-020574 (SA1)*.

14c      The WI is a Work Task: parent Building Block