

3GPP1 TSG (Common meeting)
Sophia Antipolis 7-8/12/98

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Doc For	TSG SA	TSG CN	TSG RAN	TSG T
Decision				X
Discussion				X
Information	X	X	X	

Agenda Item:

Source: SMG 9 Chairman, SMG9 UMTS WP chairman

Title: Proposal for USIM working party in TSG Terminals

Background

Work on the USIM, the UMTS application residing on the UICC (the UMTS Integrated Circuit Card), has been underway for quite some time in ETSI SMG9 "SIM Aspects", resulting in a requirements specification for the USIM (UMTS 21.11).

SMG9 believes that this document together with other specifications developed or under development by SMG9 could form a viable basis for the work on a security module in UMTS supporting a range of telecom and other sector applications.

Two documents SMG9 is currently working on are of particular interest to UMTS. These are a document on the electrical and mechanical interface of a UICC and a new specification for a standardised way of downloading applications into a SIM/UICC.

The first document is based on existing standards and will be available within in the next two months. It comprises the relevant parts of GSM 11.11, the basic interface specification between a SIM card and a (mobile) terminal, of GSM 11.12, which is the world's first three Volt interface specification for smart cards, and of the recently approved low voltage (1.8V) standard GSM 11.18. It is also intended to add mechanical aspects.

The API (Application Protocol Interface) standard is elaborated in close co-operation with the JAVA™ Card Forum. Furthermore, VISA and SMG9 will work together in employing the VISA Open Platform for a truly interworking standard allowing applications not only from the telecommunications sector to be loaded remotely from a GSM/UMTS network into a SIM/UICC. The stage one version (GSM 02.19) is available as an approved GSM specification, while the stage 2 technical specification is planned to have been finalised by June 1999.

It is the belief of SMG9 that these two documents would be greatly beneficial to the 3rd generation of (mobile) communications.

Two documents have been attached for information. The position paper on the UICC for early UMTS systems was approved by SMG #27. The additional sentence on "plastic roaming" was added by SMG9 for clarification. The second paper contains a proposal for the Terms of Reference for the proposed Working Party "UICC" within TSG Terminals.

Proposal

To advance the work on a UMTS UICC in a timely and technically professionally manner it is proposed to form a WP USIM within TSG Terminals.

Source: SMG

Position Paper on the UICC for early UMTS systems

SMG have been looking at the requirements for the UMTS (Third Generation) USIM, noting particularly, the requirement that UMTS evolves from GSM. As part of the evolutionary approach from GSM to Third generation systems, it is a requirement that 3G terminals support existing (Phase 2) SIMs (at three volts, but not five volt SIMs), but it is not a requirement that GSM terminals support 3G USIMs. It is the strong opinion of SMG that the UICC (UMTS Integrated Circuit Card) is a mandatory element of Third Generation systems. This UICC should be a (user) removable device, in order to facilitate "plastic" roaming. (*note: the previous sentence was added by SMG9 #16 for clarification*).

It is recognised that the existing physical interface should remain unchanged (to accommodate the need for interworking with GSM), however, that there may be the need to enhance the interface, both in terms of protocol (for example, employing the T=1 protocol), and speeding up the bit transmission rate across the interface.

It is recognised that the existing two physical sizes may prove to be limiting to mobile equipment (ME) designs for 3G mobiles, so consideration is being given to a third physical size of SIM, (e.g. a cut down version of existing "Plug-in" SIM, without affecting the existing mandatory physical interface). The UICC / terminal interface remains mandatory.

The other important feature of the SIM is the SIM Application Toolkit; this is a powerful tool for operators, and can be easily exploited and enhanced for 3G operations, especially in the area of Virtual Home Environment. Allied to this is the security for the Toolkit, where end-to-end messaging between the Application area in the SIM and its partner entity in, or behind, the network, can be secured, to prevent fraud or interception. Enhancements exploiting newer bearer services will be included for the Toolkit.

The next generation SIM will be a multi-application card, including support for application loading; SMG fully expect this work to be completed and approved in June 1999.

It is the opinion of SMG that the existing SIM technology and functionality is an ideal baseline platform for early third generation systems; it is recognised that there will of necessity be alterations and additions to the file structure in the existing SIM to accommodate UMTS functionality, but this is believed to be easily undertaken.

Draft Terms of Reference for a USIM Working Group in 3GPP TSG Terminals

Source: SMG9 Chairman, Vice-Chairmen and Rapporteur SMG9 UMTS

1 Responsibilities

Development of phase 1 specifications and associated test specifications for the UMTS USIM, and its interface with the Mobile Terminal.

2 Tasks

- to design USIM functionality to support UMTS security requirements;
- to provide capabilities for service creation; e.g. evolution of SIM Application Toolkit, APIs, ecommerce, multi-application cards, multi-card reader terminals etc.;
- to produce specifications such that existing SIM capabilities are transferred into the USIM;
- to evolve current capabilities based on the SIM into a form suitable for UMTS; such as physical format (e.g. smaller physical size) and electrical interface and protocols, nevertheless maintaining backwards compatibility with the SIM;
- to facilitate backward roaming between UMTS and GSM (including "plastic roaming").

3 Organisation

[to be decided by TSG Terminals]

4 Liaisons

- with SMG9 for compatibility with GSM and generic IC Cards issues;
- with other forums; e.g. Java Card Forum, WAP Forum, EP UMTS, EP SMG etc.