

27 - 30 November, 2001

Sophia Antipolis, France

ETSI Project Smart Card Platform (EP SCP) Meeting #7
Marseille, France, 5 - 7 September 2001

Tdoc SCP-010291
(supersedes SCP-010249)

Title: Liaison Statement on Technical Solution for Prepaid Cards Using Smart Cards with Real-Time Clock

Source: ETSI EP SCP

To: GSM-A SCAG

Cc: S3

Response to: SCAG Doc 56/01 on Technical Solution for Prepaid Cards Using Smart Cards with Internal Clock from GSMA SCAG.

Contact Person:

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Attachments: none

1. Overall Description:

SCP thanks GSMA SCAG for their timely contribution to the ongoing discussion of the pros and cons of an internal clock in the UICC in their LS SCAG Doc 56/01. EP SCP understands the term "internal clock" in the context of a real-time clock rather than a clock to be used for cryptographic purposes.

The provision of a real-time clock in the UICC that would be acceptable to all parties for charging and payment purposes poses a number of technical challenges and would require changes to some existing standards. Amongst issues raised were the need for this clock to run even when the card is in "clock-stopped" mode and still conform to the current consumption in this mode.

It is our understanding that AoC function was not designed to be used as the basis for secure billing, hence the term *advice* of charge. Network operators have therefore addressed this by concentrating the charging function in the network rather than in the mobile. As this solution has been adopted widely, it would seem to moot the need to improve charging functions on the ME/UICC.

On the other hand, there are certainly proposals that envision UICC involvement in micro-payment and digital rights management functions. The needs of GSMA SCAG for ME/UICC charging could be met by a general solution in this area.

2. Actions:

SCP would like to learn from GSMA SCAG their views as to the service requirements for building an acceptable charging capability into the UICC given trends in the industry.

3. Date of Next SCP Meetings:

EP SCP #8 7 - 9 November, 2001 (Kyoto, Japan)

EP SCP #9 March 2002

Attached: Original LS from GSM-A SCAG

**ETSI Project Smart Card Platform (EP SCP) Meeting #7
Marseille, France, 5 - 7 September 2001**

Tdoc SCP-010237

Meeting Number **18**
Meeting Date **7-9 August 2001**
Meeting Location **Chicago**

SCAG Doc 56/01

Title **LS to SCP on technical solution for prepaid cards using smart cards with
internal clock**
Source **SCAG**
Date **8 August 2001**

To: SCP

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Introduction

Some operators are using the AoC functionality for prepaid SIM's, rechargeable via OTA. This is a very simple and customer friendly solution. The drawback is, that AoC is not fraud resistance. A card with a secure internal clock could be a basis for a fraud proof prepaid card.

Solution

The card contains an application with a tariff model. The calls have to be under the control of the card, means the card has to know begin and end of the call and the dialled number. With the secure internal clock and this information, the card can now in real time calculate the price of the call and decrements the credit counter on the card.

Request from SCP

We are interested to know, if a SIM with an internal clock is a real basis for a simple and secure prepaid solution. We think the important questions are:

- Is the internal clock secure so that it is not possible to modify it in a fraudulent way?
- Can a call be controlled by the card, so that the dialled number, begin and end of the call cannot be modified in a fraudulent way?