Technical Specification Group Services and System Aspects **TSGS#17(02)0526**
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Source: AT&T Wireless, Cingular Wireless, SBC, Rogers Wireless
Title: Storage of MMS Parameters on the SIM
Document for: Discussion and Decision

Attachment: MMS Storage on SIM Discussion Charts.ppt

1 Introduction

The attached PowerPoint slides summarise an issue that has recently been discussed at length within GSM-NA, GSMA – SerG, and 3GPP SA WG1, regarding storage of MMS connectivity parameters on the Release 4 SIM card. North American operators as represented by the GSMNA CTO Advisory Committee (see liaison statement submitted to this plenary), as well as several European operators feel very strongly that this requirement is essential to guarantee service continuity to the subscriber and limit the impact on operators if and when subscribers change terminals. Many handset vendors feel equally strongly that this requirement will impact cost and delivery schedules for their Release 4 handsets. The attached slides present a compromise position that we feel adequately mitigates the concerns of the handset manufacturers, and provides some degree of MMS service continuity while limiting (though not eliminating) the impacts on operators.

2 Discussion

To provide GSM subscribers with MMS service today, GSM handsets must be provisioned with parameters that enable the terminal to establish a link to the MMS Relay/Server. These parameters may include the address of the MMS Relay/Server as well as specific Bearer and Gateway parameters. For 3G subscribers, however, a recently approved feature allows storage of these MMS connectivity parameters on the Rel 4 (and beyond) USIM. When a 3G subscriber changes handsets and inserts their USIM into the new handset, the MMS parameters are transferred to the new terminal and the subscriber maintains consistent MMS service. But for the 2G subscriber, the parameters are not stored on the card and if the subscriber changes phones these parameters must be re-provisioned onto the new phone. This will most likely result in a call to the operator's Customer Care facility, increasing operating costs and frustrating the subscriber. This presents a significant competitive disadvantage for operators who intend to migrate from

2G/2.5G to 3G over a relatively longer time frame, hence the sought-after solution regarding storage of MMS parameters on the Rel 4 SIM.

3 Proposal

From the operator's standpoint, the best solution would be to standardise a method for storing MMS parameters on Rel 4 SIMs, and then require that Rel 4 terminals support this feature. Some terminal manufacturers have argued that Rel 4 terminal software designs are complete however, and establishing a requirement to support this feature would increase costs and cause delays to delivery schedules. With this in mind, we propose the following:

1. Establish a Stage 1 requirement for storing MMS parameters on the Rel 4 SIM. This would be a change to TS 22.140.

2. Establish a Stage 2 requirement for terminal support of MMS parameters on the SIM, but make this terminal requirement ***optional*** for Rel 4 2G terminals and mandatory only for Rel 5 2G terminals. This would be accomplished via the appropriate CRs to TS 23.140.

3. Implement a standard for storing MMS connectivity parameters on Release 4 SIMs. Although Rel 4 is "frozen", there is a precedent for adding new data fields to Rel 4 USIMs (ie, MMS parameters). This requires no modification to the SIM ROM code, and this change can be implemented via OTA provisioning. This would be a accomplished via a CR to TS 51.011. Such a CR was authored by Gemplus at T3 #24 in Seattle, agreed by the plenary, and is an input to T #24.

By making terminal support of this feature optional for Rel 4, handset manufacturers will not be required to modify software on, or delay shipment of existing Rel 4 products. Operators will still face the problem of calls to Customer Care when subscribers change handsets, but this problem will lessen over time as compliant handsets become available.

We ask TSG SA to endorse the establishment of a Stage 1 requirement to store MMS parameters on the SIM (item 1, above) and recommend the establishment of a requirement for terminals to support this capability, which is <u>optional</u> for Rel 4 and mandatory for Rel 5 (item 2, above).

MMS Storage on SIM - Proposal

Where We Are Today

- Small number of 2G MMS-capable phones available today
- Today, some MMS connectivity parameters (e.g. MMS Relay/Server address, Bearer Preference, etc.) stored on 2G phones
  - **Non-standardized – each vendor has proprietary approach**
  - **Not all phones support OTA provisioning of phone parameters**
  - **Not all operators have infrastructure to support OTA provisioning of phones**
    - **May require vendor specific provisioning equipment**
- No standard for storing MMS parameters on SIM
- Standard approved for storage of MMS parameters on USIM **for Rel 4**
- When network parameters change (e.g. MMS-C address changes) or subscriber changes phone, MMS parameters must be re-provisioned on phone

Statement of Problem

- If MMS connectivity parameters are not stored on the SIM card, a 2G subscriber with MMS service will experience an interruption to that service each time he/she changes terminals, or when the operator updates/changes network parameters
  - **If parameters are stored on phone, changing terminals will cause subscriber to lose those parameters unless & until subscriber has those parameters installed on the new phone.**
  - **Phone is a consumer device – subscriber should not have to know or care about Relay/Server addresses, NAP Address Types, etc. etc.**
  - **Most likely subscriber response:**
    - **call operator's Customer Care Center, explain the situation and either take phone into retail outlet or have parameters provisioned OTA … OR;**
    - **go back to the old phone … OR;**
    - **churn to another operator.**

Benefits to Storing Parameters on SIM

- Service Continuity guaranteed for subscribers today
  - **2G card (MMS aware SIM)**
    - **Changing terminals - MMS available**
    - **Carrier settings change – OTA SIM settings using existing OTA platforms – MMS available**
- Service Continuity guaranteed for carriers migrating from 2G card to 3G card platforms in the future
  - **2G card (MMS aware SIM)**
    - **Placed in a 3G phone – SIM used for 2G access – MMS available**
    - **Placed in a 2G phone – SIM used for 2G access – MMS available**
    - **Placed in a 2G/3G phone - SIM used for 2G access – MMS available**
  - **3G card (contains MMS aware USIM and MMS aware SIM)**
    - **Placed in a 3G phone – USIM used for 3G and 2G access – MMS available**
    - **Placed in a 2G phone – SIM used for 2G access – MMS available**
    - **Placed in a 2G/3G phone – USIM used for 2G and 3G access – MMS available**
- Standardizing MMS parameters and their storage ensures interoperability between terminals and cards

Way Forward

- Both sides have valid business arguments. Need to compromise.
- Proposal: Implement changes to TS 22.140 and TS 51.011 to allow storage of MMS connectivity parameters on the SIM
  - **Make terminal support of this SIM feature optional for Rel 4 and mandatory only for Rel 5 and beyond (via CRs to TS 23.140)**
- Vendor Impacts:
  - **Changes to Rel 4 handsets not mandated**
  - **No delay to existing product**
- Operator Impacts:
  - **“Legacy” problem lessens over time**
  - **Is a business decision & not a technical issue whether terminal vendors meet operator requirements**