Technical Specification Group Services and System Aspects
Meeting #18, New Orleans, USA, 9-12 December 2002

TSGS#17(02)0649

Source: SA1

Title: Release 4/5 CRs to 21.140 on Storage of configuration information on the (U)SIM

Document for: Approval

Agenda Item: 7.1.3

SA Doc	Spec	CR	Rev	Phase	Cat	Subject	Old Vers	New Vers	SA1 Doc
SP-020649	22.140	018		Rel-4	F	Storage of configuration information on the (U)SIM - for Rel 4	4.2.0	4.3.0	S1-022386
SP-020649	22.140	019		Rel-5	A	Storage of configuration information on the (U)SIM - for Rel 5	5.3.0	5.4.0	S1-022387

3GPP TSG-SA1#18
Busan, Korea
11-15 November 2002

S1-022386

CR-Form-v5

CHANGE REQUEST

⌘ **22.140** **CR** **018** ⌘ **rev** **-** ⌘ Current version: **4.2.0** ⌘

*For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.*

Proposed change affects: ⌘ (U)SIM [X] ME/UE [X] Radio Access Network [ ] Core Network [ ]

Title:	⌘	Storage of MMS configuration information in the (U)SIM
Source:	⌘	SA1 (GEMPLUS Card International / SchlumbergerSema)
Work item code:	⌘	MMS REL-4
Date:	⌘	November 11, 2002
Category:	⌘	**F**
Release:	⌘	REL-4

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:
2 (GSM Phase 2)
R96 (Release 1996)
R97 (Release 1997)
R98 (Release 1998)
R99 (Release 1999)
REL-4 (Release 4)
REL-5 (Release 5)

Reason for change:	⌘	TSG-SA agreed that SA1 should provide CRs to include MMS configuration parameter storage on the (U)SIM. It was agreed that Rel-4 MMS parameter capability is mandatory for the SIM and optional for the ME. Moreover, this CR provides the USIM and ME behaviour, with respect to MMS configuration parameter storage on the USIM. Finally, T2 and T3 have introduced the support for the MMS notifications and MMS user preferences on the (U)SIM. This service has to be reflected in the Stage 1 specification MMS is an application level service that will be deployed in both the GSM system and the third generation mobile systems. The ability to store MMS parameters on the (U)SIM will ensure service continuity as operators migrate their networks from 2G to 3G, and will help reduce operating costs and enhance subscriber experience.
Summary of change:	⌘	This CR reflects the support for the storage of MMS configuration information, of MMS notifications and of MMS user preferences in the (U)SIM, and clarifies the handling of preferred bearer in the (U)SIM.
Consequences if not approved:	⌘	If not implemented there is a possibility of MMS service disruption if a subscriber changes handsets. The subscriber may then need to have MMS parameters re-provisioned on their handsets, which may: 1) Cause them to call the operator's Customer Care, increasing operating costs and frustrating the subscriber, or 2) Require them to enter the parameters manually, possibly leading to errors

Clauses affected:	⌘	5.1, 5.2

Other specs Affected:	⌘	X	Other core specifications Test specifications O&M Specifications	⌘	3GPP TS 51.011 and 3GPP TS 31.102
Other comments:	⌘				

5 General Requirements

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5.1 Multimedia message management

- **Terminal-sensitive MM management**

  The MMS shall be able to support the capability for the terminal and network to take account of the capability of the user's terminal (e.g. deliver a MM / notification in a manner compatible with the terminals capability).

- **Terminal status-sensitive MM Management**

  The MMS shall be able to support the capability of the network to take account of the availability, changes of the state of availability of the terminal (e.g. store messages if the recipient is not available).

- **MMS Control by the operator**

  The MMS shall be able to support a request from the operator to enable/disable MM delivery and submission.

- **MMS Control by the user**

  The MMS shall be able to support a request from the user to enable/disable MM delivery and submission.

  This requirement shall be supported at the application layer in the terminal, and will not be further elaborated.

- **Storage of MMS parameters**

  The (U)SIM shall be able to store the following types of MMS related data:

  i) ~~i)~~ a number of sets of issuer configuration information to allow access to MMS services.

  At least one of these sets of configuration information should be stored on the (U)SIM by the issuer of the (U)SIM.

  The first issuer configuration information set is denoted as the default configuration set.

  This configuration information shall only be configurable by the issuer of the (U)SIM.

  ii) a number of sets of user configuration information to allow access to MMS services.

  If more than one set of configuration information is present, it shall be possible for the user to select which set is used. If the user has not selected any of the configuration information sets, then the default set in the active (U)SIM is used.

  iii) MMS notifications

  iv) MMS user preferences

  A terminal using a SIM with these MMS parameters, if it is aware of the presence of these parameters on the SIM, shall by default use them and the related preferred bearer, to access to the MMS services.

  A terminal using a USIM, shall by default use the MMS parameters and the related preferred bearer stored in USIM, to access to the MMS services.

- **Personalise multimedia messaging**

  The MMS shall be able to support a request by the user to manage the Service Preferences of his User Service Profile related to this MMS [2](e.g. customise his MM environment within the capabilities of the terminal, network and MM application. This could be unconditional or conditional e.g. depending on roaming conditions or operator restrictions).

- **MM creation**

  The MMS shall be able to support the request to create a MM by the user or an application.

  This requirement shall be supported at the application layer in the terminal, and will not be further elaborated.

- **MM Time Stamping**

  The MMS shall be able to support the request to include a reliable time value in an MM, a notification and an acknowledgement as appropriate.

- **Multiple Media**

  Multimedia messages may be composed of either a single medium (e.g. voice) or multi-media (e.g. Voice and video). The MMS shall be able to support a request for media synchronisation / sequencing.

- **Media Type Conversion**

  The MMS shall be able to support a request to convert between media types (e.g. Fax to image).

  This requirement shall be supported at the application layer in the network, and will not be further elaborated.

- **Media Format Conversion**

  The MMS shall be able to support a request by the user or the application to convert between MM media formats (e.g. JPEG to GIF).

  This requirement shall be supported at the application layer in the terminal and/or in the network, and will not be further elaborated.

- **Message forwarding**

  The MMS shall be able to support a request to forward multimedia messages or multimedia message elements without having to first download the MM to the terminal.

- **Storage of Multi-Media Messages**

  The MMS shall be able to support a request for multimedia messages or message elements to be stored until delivered to the recipient's terminal, until they expire, or until they are deleted by the user (unless configured differently). The MMS shall be able to support a request to store and manage all MMs in a network based repository rather than on the mobile terminal.

  This requirement shall be supported at the application layer in the network, and will not be further elaborated.

NOTE: There is no requirement for the MMS to be responsible for the processing/presentation of the MM message, after it has been delivered to the terminal.

- **Prioritisation of Messages**

  The MMS shall be able to support a request for MM prioritisation subject to the capabilities of the network (e.g. the sender of the MM may request to prioritise the importance of the multimedia messages).

- **Message qualification**

  The MMS shall be able to support a request for MM qualification (e.g. subject) for the purpose of advanced user experience and awareness.

- **Screening of Messages**

  The MMS shall be able to support a request for MM screening subject to the capabilities of the network (e.g. automatically delete "junk mail", anonymous messages without delivery to the recipient's terminal).

  This requirement shall be supported at the application layer in the terminal an/or in the network, and will not be further elaborated.

- **Validity Period**

The MMS shall be able to support a request by the originator of a message to define validity periods (earliest and latest desired time) for message delivery (e.g. if a message can not be delivered within a certain time it will be automatically deleted). The MMS service provider shall be able to set the MAXIMUM allowable validity period for any message.

5.2 Multimedia message delivery and submission

- **Submission mechanism**

  The MMS shall support multimedia messages or messages elements to be submitted to the recipient's terminal.

- **Push Mechanism**

  The MMS shall be able to support a request for multimedia messages or messages elements to be automatically delivered to the recipient's terminal.

- **Pull Mechanism**

  The MMS shall be able to support a request for multimedia messages or messages elements to be delivered to the recipient's terminal on request by the recipient.

Editor's Note: push and pull delivery mechanisms could be identical; the criteria which decide on the type of mechanism (push / pull) are either described in the User Services Profile or out of the scope of this specification.

- **Concurrency**

  The MMS shall be able to support MM delivery to and from the user's terminal not be restricted during other active services (subject to the capabilities of the terminal and the network).

- **Streaming**

  The MMS shall be able to support streaming for MM delivery from the MMS system to the terminal.

  Support for streaming for MM upload from the terminal to the MMS system will be considered for future releases.

- **Preferred Bearer**

  It shall be possible to define a list of precedence for bearers in the configuration information sets for delivery and submission of MM (e.g. GPRS, CSD). By default, the terminal shall support automatic bearer selection (i.e. without user intervention) based on the order of precedence defined in the configuration information sets on the (U)SIM.
  The user shall be able to enable or disable automatic bearer selection. When disabled, manual bearer selection shall be available from the list of bearers.

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CR-Form-v5

CHANGE REQUEST

⌘ **22.140** **CR** **019** ⌘ **rev** **-** ⌘ Current version: **5.3.0** ⌘

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Proposed change affects: ⌘ (U)SIM [X] ME/UE [X] Radio Access Network [ ] Core Network [ ]

Title:	⌘	Storage of MMS configuration information in the USIM
Source:	⌘	SA1 (GEMPLUS Card International / SchlumbergerSema)
Work item code:	⌘	MESS5-MMS
Date:	⌘	November 11, 2002
Category:	⌘	**A**
Release:	⌘	REL-5

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
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REL-5 (Release 5)

Reason for change:	⌘	TSG-SA agreed that SA1 should provide CRs to include MMS configuration parameter storage on the USIM. It was agreed that Rel-5 MMS parameter capability is mandatory for the USIM and mandatory for the ME. Moreover T2 and T3 have introduced the support for the MMS notifications and MMS user preferences on the USIM. This service has to be reflected in the Stage 1 specification MMS is an application level service that will be deployed in both the GSM system and the third generation mobile systems. The ability to store MMS parameters on the USIM will ensure service continuity as operators migrate their networks from 2G to 3G, and will help reduce operating costs and enhance subscriber experience.
Summary of change:	⌘	This CR reflects the support for the storage of MMS configuration information, of MMS notifications and of MMS user preferences in the USIM, and clarifies the handling of preferred bearer in the USIM.
Consequences if not approved:	⌘	If not implemented there is a possibility of MMS service disruption if a subscriber changes handsets. The subscriber may then need to have MMS parameters re-provisioned on their handsets, which may: 1) Cause them to call the operator's Customer Care, increasing operating costs and frustrating the subscriber, or 2) Require them to enter the parameters manually, possibly leading to errors

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Other comments:	⌘			

5 General Requirements

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5.1 Multimedia message management

- **Terminal-sensitive MM management**

  The MMS shall be able to support the capability for the terminal and network to take account of the capability of the user's terminal (e.g. deliver a MM / notification in a manner compatible with the terminals capability).

- **Terminal status-sensitive MM Management**

  The MMS shall be able to support the capability of the network to take account of the availability, changes of the state of availability of the terminal (e.g. store messages if the recipient is not available).

- **MMS Control by the operator**

  The MMS shall be able to support a request from the operator to enable/disable MM delivery and submission.

- **MMS Control by the user**

  The MMS shall be able to support a request from the user to enable/disable MM delivery and submission.

  This requirement shall be supported at the application layer in the terminal, and will not be further elaborated.

~~- **Storage of configuration information in the USIM**~~

~~It shall be possible to store in the USIM a number of sets of configuration information to allow access to MMS services. One of these sets of configuration information is preset by the issuer of the USIM. Such preset configuration information set shall only be configurable by issuer of the USIM.~~

~~The preset configuration information, is selected and , unless otherwise specified by the user.~~

~~It shall be possible to retain the configuration information when the UICC is used in different terminals.~~

- **Storage of MMS parameters**

The USIM shall be able to store the following types of MMS related data:

i) a number of sets of issuer configuration information to allow access to MMS services.

At least one of these sets of configuration information should be stored on the USIM by the issuer of the USIM.

The first issuer configuration information set is denoted as the default configuration set.

This configuration information shall only be configurable by the issuer of the USIM.

ii) a number of sets of user configuration information to allow access to MMS services.

If more than one set of configuration information is present, it shall be possible for the user to select which set is used. If the user has not selected any of the configuration information sets, then the default set in the active USIM is used.

iii) MMS notifications

iv) MMS user preferences

A terminal using a USIM or a SIM with these MMS parameters, shall by default use them and the related preferred bearer, to access to the MMS services.

- **Personalise multimedia messaging**

  The MMS shall be able to support a request by the user to manage the Service Preferences of his User Service Profile related to this MMS [2](e.g. customise his MM environment within the capabilities of the terminal, network and MM application. This could be unconditional or conditional e.g. depending on roaming conditions or operator restrictions).

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- **Multiple Media**

  Multimedia messages may be composed of either a single medium (e.g. voice) or multi-media (e.g. Voice and video). The MMS shall be able to support a request for media synchronisation / sequencing.

- **Media Type Conversion**

  The MMS shall be able to support a request to convert between media types (e.g. Fax to image). The MMS shall be able to support an indication from a VASP that VASP originated content of an MM should not be converted or changed by the MMS service provider before it is delivered to the recipient.

  This requirement shall be supported at the application layer in the network, and will not be further elaborated.

- **Media Format Conversion**

  The MMS shall be able to support a request by the user or the application to convert between MM media formats (e.g. JPEG to GIF).

  This requirement shall be supported at the application layer in the terminal and/or in the network, and will not be further elaborated.

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NOTE: There is no requirement for the MMS to be responsible for the processing/presentation of the MM message, after it has been delivered to the terminal.

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- **Multimedia Message Processing by a VASP**

The MMS shall be able to support a request for messages to be processed by a VASP. An example of such processing may be where an MM is sent to a VASP before delivery to the recipient so that the VASP can add multimedia element(s) to the original message.

- **Replacing MM**

The MMS shall be able to support a request by a VASP to replace a previously sent MM from the VASP with a second newer MM.

- **Cancellation of MM**

The MMS shall be able to support a request by a VASP to delete a MM that had previously been sent from the VASP but not yet delivered to the terminal.

5.2 Multimedia message delivery and submission

- **Submission mechanism**

The MMS shall support multimedia messages or messages elements to be submitted from the sender’s terminal.

- **Push Mechanism**

The MMS shall be able to support a request for multimedia messages or messages elements to be automatically delivered to the recipient's terminal.

- **Pull Mechanism**

The MMS shall be able to support a request for multimedia messages or messages elements to be delivered to the recipient’s terminal on request by the recipient.

Note: Push and pull delivery mechanisms could be identical; the criteria which decide on the type of mechanism (push / pull) are either described in the User Services Profile or out of the scope of this specification.

- **Concurrency**

The MMS shall be able to support MM delivery to and from the user’s terminal not be restricted during other active services (subject to the capabilities of the terminal and the network).

- **Streaming**

The MMS shall be able to support streaming for MM delivery from the MMS system to the terminal.

Support for streaming for MM upload from the terminal to the MMS system will be considered for future releases.

- **Preferred Bearer**

It shall be possible to define a list of precedence for bearers in the configuration ~~parameters~~ information- setsfor delivery and submission of MM (e.g. GPRS, CSD). By default, the ~~T~~the terminal shall be able to support automatic bearer selection (i.e. without user intervention) based on the order of precedence defined in the

configuration information setsa list of bearers on the SIM or USIM. The user shall be able to enable or disable automatic bearer selection. When disabled, manual bearer selection shall be available from the list of bearers.