3GPP TSG-T (Terminals) Meeting #24
Seoul, Korea
2 - 4 June, 2004

TP-040095

Agenda Item: 5.2.3

Source: T2

Title: Change Request on MMS

Document for: Approval

Spec	CR	Rev	Rel	Subject	Cat	Vers-Current	Vers-New	Doc-2nd-Level	Workitem
23.140	158	-	Rel-6	Addition of recipient list to MM4_Forward.RES	B	6.5.0	6.6.0	T2-040258	MMS6
23.140	159	-	Rel-6	Correcting “X-Mms-Read-Status” erroneous mapping on Annex I	F	6.5.0	6.6.0	T2-040257	MMS6
23.140	160	-	Rel-5	Changing erroneous OMA references from MMS1.1 to MMS1.2	F	5.10.0	5.11.0	T2-040236	MMS5-MMS
23.140	161	-	Rel-6	Changing erroneous OMA references from MMS1.1 to MMS1.2	F	6.5.0	6.6.0	T2-040237	MMS6
23.140	162	-	Rel-6	MM7 delivery conditions for MMS	B	6.5.0	6.6.0	T2-040260	MMS6
23.140	163	-	Rel-6	Size indication by MMS UA	C	6.5.0	6.6.0	T2-040243	MMS6

3GPP TSG-T2 #25
Edinburgh, UK
19 -23 April 2004

T2-040258

CR-Form-v7

CHANGE REQUEST

⌘ **23.140** **CR** **158** ⌘ **rev** **-** ⌘ Current version: **6.5.0** ⌘

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

Proposed change affects: UICC apps⌘ ☐ ME ☐ Radio Access Network ☐ Core Network ☒

Title:	⌘	Addition of recipient list to MM4_Forward.RES
Source:	⌘	T2 (Nokia)
Work item code:	⌘	MMS6
Date:	⌘	31/03/2004
Category:	⌘	**B**
Release:	⌘	Rel-6

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)*
Rel-6	*(Release 6)*

Reason for change:	⌘	Since release 4 the MM4 interface supports sending of messages that have multiple recipients to another MMS Relay/Server in a MM4_forward.REQ PDU. The PDU carries a message ID that is applicable to all recipients. If the recipient MMS Relay/Server requests an MM4_forward.RES (Acknowledge request) the R/S may respond with multiple MM4_forward.RES PDU(s) because of a partial addressing failure. Currently it cannot be ascertained exactly which of the recipients actually caused the failure since the MM4_forward.RES PDU only contains a message ID, but no indication of the recipient(s) that caused the partial addressing failure.
Summary of change:	⌘	The CR proposes to add a new element to the MM4 interface supporting identification of individual recipients.
Consequences if not approved:	⌘	It may not be possible to recover from a partial addressing failure when sending a MM4_forward.REQ with multiple recipients.

Clauses affected:	⌘	8.4.1.3, 8.4.1.4

Other specs affected:	⌘	Y	N		⌘	
		X		Other core specifications		32.270
			X	Test specifications		
			X	O&M Specifications		

Other comments:	⌘	

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at http://www.3gpp.org/specs/CR.htm. Below is a brief summary:

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

8.4.1.3 Features

Addressing: The recipient(s) of a routed forward MM shall be indicated in the addressing-relevant information field(s) of the MM4_forward.REQ. If the addresses of several MM recipients of the MM are associated with a single MMS Relay/Server then more than one MM recipient may be indicated in the addressing-relevant information field(s) of the MM4_forward.REQ. Addresses of all MM recipients of the MM (including those that are not associated with the MMS Relay/Server the MM is forwarded to) shall be conveyed in the MM4_forward.REQ for the MM recipient's informational purposes.

The MM originator of a routed forward MM shall be indicated in addressing-relevant information field(s) of the MM4_forward.REQ. If the originator MMS User Agent requested to hide its identity from the MM recipient then the information about this request shall also be conveyed in the MM4_forward.REQ.

Time stamping: The MM4_forward.REQ shall carry the date and time-of the most recent handling of the MM by an MMS User Agent (i.e. either submission or forwarding of the MM). In the case of forwarding the MM4_forward.REQ may carry the date and time of the submission of the MM.

Time constraints: If the originator MMS User Agent requested a time of expiry for the MM then this information shall be conveyed in the MM4_forward.REQ.

Message class, priority and subject: If the MM is qualified further by message class, priority, subject and/or additional qualifiers then this information shall be conveyed in the MM4_forward.REQ.

Reporting: If either the originator MMS User Agent, or the originator MMS Relay/Server requested a delivery report for the MM then the information about this request shall be conveyed in the MM4_forward.REQ. If, in addition, the originator MMS User Agent requested a read-reply report then the information about this request shall be conveyed in the MM4_forward.REQ.

Identification: The originator MMS Relay/Server shall always provide a unique message identification for an MM, which it routed forward to a peer MMS Relay/Server in the MM4_forward.REQ.

Content Type: The type of the multimedia content shall always be identified in the MM4_forward.REQ.

Acknowledgement Request: The originator MMS Relay/Server may request a MM4_forward.RES from the recipient MMS Relay/Server acknowledging the successful reception of the MM.

Request Status: The recipient MMS Relay/Server shall indicate the status of the MM4_forward.REQ in the associated MM4_forward.RES if requested.

Request Recipients: A list of recipients to whom the request status applies.

Message Type: The type of message used on reference point MM4 indicating MM4_forward.REQ and MM4_forward.RES as such.

Transaction Identification: If the originator MMS Relay/Server requests an MM4_forward.RES from the recipient MMS Relay/Server it shall provide a transaction identification within an MM4_forward.REQ. The MM4_forward.RES shall unambiguously refer to the corresponding MM4_forward.REQ using the same transaction identification.

Forward_Counter: A Counter indicating the number of times the particular MM was forwarded.

Previously-sent-by: The address(es) of the MMS User Agent(s) that submitted or forwarded the MM prior to the last forwarding MMS User Agent. In the multiple forwarding case the order of the provided addresses shall be indicated and the address of the originator MMS User Agent shall be marked, if present.

NOTE: The address of the last forwarding MMS User Agent is carried in other addressing elements.

Version: The MMS protocol shall provide unique means to identify the current version in the particular protocol environment.

8.4.1.4 Information Elements

Table 1: Information elements in the MM4_forward.RES.

Information element	Presence	Description
3GPP MMS Version	Mandatory	The MMS version of the recipient MMS Relay/Server as defined by the present document.
Message Type	Mandatory	The type of message used on reference point MM4: "MM4_forward.RES".
Transaction ID	Mandatory	The identification of the MM4_forward.REQ/ MM4_forward.RES pair.
Message ID	Mandatory	The Message ID of the MM which has been forwarded within the corresponding MM4_forward.REQ
Request Recipients	Conditional	List of recipients to whom the Request Status value applies. If this element is absent the Request Status value is applicable to all recipients of the corresponding MM4_forward.REQ
Request Status	Mandatory	The status of the request to route forward the MM.
Request Status text	Optional	Status text corresponding to the Request Status

8.4.4.3 MM4_Forward.RES Header Mappings

The MM4 Forward response information element mappings are detailed in the table below.

The transmission of the Forward Response from the recipient MMS Relay/Server requires a properly addressed STD 11 message. While the addressing of the MM4_Forward.REQ is clearly that of the intended recipients and originator, the MM4_Forward.RES addressing is related to neither the recipients nor the originator of the original MM. Instead, the MM4_Forward.RES addressing is based on special systems addresses. MMS Service Provider should configure appropriate system addresses which will be used as both the recipient and originator of these administrative messages. It is suggested that the administrative addressing be based on the pattern:

system-user@mms-relay-host.mmse-domain.

The STD 11 "To:" header value shall be according to the STD 11 "X-Mms-Originator-System:" header value provided in MM4_Forward.REQ.

Table 2: MM4_Forward.RES Information Elements to STD 11 Header Mappings

Information element	STD 11 Header
3GPP MMS Version	X-Mms-3GPP-MMS-Version:
Message Type	X-Mms-Message-Type:
Transaction ID	X-Mms-Transaction-ID:
Message ID	X-Mms-Message-ID:
Request Status	X-Mms-Request-Status-Code:
Request Status text	X-Mms-Status-Text:
Request Recipients	X-Mms-Request-Recipients
-	Sender:
-	To:
-	Message-ID:
-	Date:

The STD 11 "Sender: " and "To:" headers contain system addresses as described above, and do not map to MM4_Forward.RES information elements. The STD 11 message requires a "Date:" header, but there currently is no corresponding MM4_Forward.RES information element.

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CHANGE REQUEST

⌘ **23.140** **CR** **159** ⌘ **rev** **-** ⌘ Current version: **6.5.0** ⌘

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

Proposed change affects: UICC apps⌘ ☐ ME ☐ Radio Access Network ☐ Core Network ☒

Title:	⌘	Correcting "X-Mms-Read-Status" erroneous mapping on Annex I
Source:	⌘	T2 (Ericsson)
Work item code:	⌘	MMS6
Date:	⌘	08/04/2004
Category:	⌘	**F**
Release:	⌘	Rel-6

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)*
Rel-6	*(Release 6)*

Reason for change:	⌘	There are duplicate entries for "X-Mms-Read-Status:"
Summary of change:	⌘	Remove duplicate entries for "X-Mms-Read-Status:"
Consequences if not approved:	⌘	Duplicate entries would remain causing confusion to implementors

Clauses affected:	⌘	Annex I Tables I.11, I.12

		Y	N		
Other specs affected:	⌘		X	Other core specifications	⌘
			X	Test specifications	
			X	O&M Specifications	

Other comments: ⌘

How to create CRs using this form:
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2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

Annex I (normative): MM1 <-> MM4 header mapping

This annex maps the information elements found on MM1 onto the STD 11 header fields of MM4.

The tables below are provided to give a normative end-to-end description of MMS. It provides mapping of MM1 with respect to MM4/STD11.

In many cases there is no mapping between MM1 information elements and MM4 STD 11 header fields, this is according to specifications. These information elements are included in the tables below in order to give a complete picture of how the MM1 information elements are handled.

Table I.11: Mapping MM1_read_reply_recipient.REQ -> MM4_read_reply_report.REQ

Information elements in MM1_read_reply_recipient.REQ	STD11 Header fields in Egress MM4_read_reply_report.REQ
Message Type	-
MMS Version	-
Recipient address	From:
Originator address	To:
Message ID	X-Mms-Message-ID:
Date and Time	Date:
Read Status	X-Mms-Read-Status:
-	X-Mms-3GPP-MMS-Version
-	X-Mms-Message-Type
-	X-Mms-Transaction-Id
-	X-Mms-Acq-Request
-	~~X-Mms-Read-Status~~

Table I.12: Mapping MM1_ read_reply_originator.REQ <- MM4_ read_reply_report.REQ

Information elements in MM1_read_reply_originator.REQ	Ingress STD11 Header fields in MM4_read_reply_report.REQ
Message Type	-
MMS Version	-
Recipient address	From:
Originator address	To:
Message ID	X-Mms-Message-ID:
Date and Time	Date:
Read Status	X-Mms-Read-Status:
-	X-Mms-3GPP-MMS-Version
-	X-Mms-Message-Type
-	X-Mms-Transaction-Id
-	X-Mms-Acq-Request
-	~~X-Mms-Read-Status~~

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CHANGE REQUEST

⌘ **23.140** **CR** **160** ⌘ **rev** **-** ⌘ Current version: **5.10.0** ⌘

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

Proposed change affects: UICC apps⌘ ☐ ME ☐ Radio Access Network ☐ Core Network ☒

Title:	⌘	Changing erroneous OMA references from MMS1.1 to MMS1.2
Source:	⌘	T2 (Ericsson)
Work item code:	⌘	MMS5-MMS
Date:	⌘	20/04/2004
Category:	⌘	**F**
Release:	⌘	Rel-5

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)*
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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)
Rel-6 (Release 6)

Reason for change:	⌘	Release 5 uses v1.2 Encapsulation specification, not v1.1
Summary of change:	⌘	Replace OMA-MMS-ENC- v1_1 with v1_2
Consequences if not approved:	⌘	Misleading OMA reference

Clauses affected:	⌘	2			
Other specs affected:	⌘	**Y**	**N**		
			X	Other core specifications	⌘
			X	Test specifications	
			X	O&M Specifications	
Other comments:	⌘				

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2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

[1] 3GPP TS 22.140: "Multimedia Messaging Service; Stage 1".

[2] 3GPP TR 21.905: "Vocabulary for 3GPP Specifications".

[3] WAP Forum: "Wireless Application Environment Specification, Version 1.2", WAP-WAESpec-19991104, . URL: http://www.wapforum.org/.

[4] 3GPP TS 23.057: "Mobile Execution Environment (MExE); Functional description; Stage 2".

[5] IETF; STD 0011 (RFC 2822): "Internet Message Format", URL: http://www.ietf.org/rfc/rfc2822.txt.

[6] IETF; RFC 2046: "Multipurpose Internet Mail extension (MIME) Part Two: Media Types", URL: http://www.ietf.org/rfc/rfc2046.txt.

[7] The Unicode Consortium: "The Unicode Standard", Version 2.0, Addison-Wesley Developers Press, 1996.URL: http://www.unicode.org/.

[8] ANSI X3.4, 1986: "Information Systems; Coded Character Set 7 Bit; American National Standard Code for Information Interchange".

[9] ISO/IEC 8859-1:1998: "Information Processing; 8-bit Single-Byte Coded Graphic Character Sets; Part 1: Latin Alphabet No. 1".

[10] IETF; RFC 2279: "UTF-8, A Transformation format of ISO 10646", URL: http://www.ietf.org/rfc/rfc2279.txt.

[11] 3GPP TS 24.011: "Point-to-Point (PP) Short Message Service (SMS) support on mobile radio interface".

[12] void

[13] void

[14] void

[15] void

[16] void

[17] void

[18] void

[19] void

[20] void

[21] void

[22] IETF; STD 0010 (RFC 2821): "Simple Mail Transfer Protocol", URL: http://www.ietf.org/rfc/rfc2821.txt.

[23] WAP Forum (November 1999): "WAP Wireless Session Protocol", WAP-WSP-19991105- , URL: http://www.wapforum.org/.

[24] WAP Forum (November 1999): "WAP Push Access Protocol", WAP-PAP-19991108, URL: http://www.wapforum.org/.

[25] WAP Forum (November 1999): "WAP User Agent Profile Specification", WAP-UAProf-19991110, URL: http://www.wapforum.org/.

[26] W3C Recommendation 22 February 1999 "Resource Description Framework (RDF) Model and Syntax Specification", URL: http://www.w3.org/TR/REC-rdf-syntax.

[27] WAP Forum (November 1999): "WAP Wireless Markup Language Specification, Version 1.2 ", WAP-WML-19991104, URL: http://www.wapforum.org/.

[28] W3C Recommendation 15-June-1998: "Synchronized Multimedia Integration Language (SMIL) 1.0 Specification" - http://www.w3.org/TR/REC-smil/.

[29] WAP Forum (November 1999): "WAP Wireless Transport Layer Security Specification", WAP-WTLS-19991105, URL: http://www.wapforum.org/.

[30] WAP Forum (November 1999): "WAP Identity Module Specification", WAP-WIM-19991105, URL: http://www.wapforum.org/.

[31] ITU-T Recommendation T.37 (06/98): "Procedures for the transfer of facsimile data via store-and-forward on the Internet".

[32] ITU-T Recommendation T.30 (1996): "Procedures for document facsimile transmission in the general switched telephone network".

[33] IETF; RFC 2421 (Sept. 1998): "Voice Profile for Internet Mail – version 2, VPIM" , URL: http://www.ietf.org/rfc/rfc2421.txt.

[34] IETF; STD 0053 (RFC 1939): "POP 3, Post Office Protocol - Version 3" , URL: http://www.ietf.org/rfc/rfc1939.txt.

[35] IETF; RFC 1730 (December 1994): "IMAP4, Internet Message Access Protocol - Version 4" , URL: http://www.ietf.org/rfc/rfc1730.txt..

[36] Adobe Systems: "Tag Image File Format (TIFF), Version 6", URL:, http://www.adobe.com.

[37] 3GPP TR 23.039: "Interface protocols for the connection of Short Message Service Centres (SMSCs) to Short Message Entities (SMEs)".

[38] void

[39] void

[40] 3GPP TS 26.233: "End-to-end transparent streaming Service (PSS); General Description".

[41] 3GPP TS 26.234: "End-to-end transparent streaming Service (PSS); Protocols and Codecs".

[42] IETF; RFC 3481: "TCP over Second (2.5G) and Third (3G) Generation Wireless Networks"; URL: http://www.ietf.org/rfc/rfc3481.txt

[43] WAP Forum: "Wireless profiled TCP", WAP-225-TCP-20010331-a, URL: http://www.wapforum.org

[44] IETF; RFC 2045: "Multipurpose Internet Mail Extensions (MIME) Part One: Format of Internet Message Bodies", URL: http://www.ietf.org/rfc/rfc2045.txt

[45] IETF; RFC 2047: "Multipurpose Internet Mail Extensions (MIME) Part Three: Message Header Extensions for Non-ASCII-Text", URL: http://www.ietf.org/rfc/rfc2047.txt.

[46] IETF; RFC 2048: "Multipurpose Internet Mail Extensions (MIME) Part Four: Registration Procedures", URL: http://www.ietf.org/rfc/rfc2048.txt.

[47] IETF; RFC 2049: "Multipurpose Internet Mail Extensions (MIME) Part Five: Conformance Criteria and Examples", URL: http://www.ietf.org/rfc/rfc2049.txt.

[48] IETF; RFC 2616: “Hypertext Transfer Protocol, HTTP/1.1”, URL: http://www.ietf.org/rfc/rfc2616.txt.

[49] IETF; STD 13 (RFC 1034, 1035): "Domain Names -- concepts and facilities", "Domain names – implementation and specification", URL: http://www.ietf.org/rfc/rfc1034.txt, http://www.ietf.org/rfc/rfc1035.txt.

[50] IETF; STD 14 (RFC 947): "Multi-network broadcasting within the Internet", URL: http://www.ietf.org/rfc/rfc947.txt.

[51] IETF; RFC 2076: "Common Internet Message Headers", URL: http://www.ietf.org/rfc/rfc2076.txt.

[52] IETF; RFC 1893: "Enhanced Mail System Status Codes", URL: http://www.ietf.org/rfc/rfc1893.txt.

[53] IETF; RFC 1327: "Mapping between X.400(1988)/ISO 10021 and RFC 822", URL: http://www.ietf.org/rfc/rfc1327.txt.

[54] 3GPP TS 29.061: "Interworking between the Public Land Mobile Network (PLMN) supporting Packet Based Services and Packet Data Networks (PDN)"

[55] WAP-183-ProvCont, Provisioning Content, URL: http://www.wapforum.org

[56] Open Mobile Alliance; OMA-MMS-ENC-v1_~~1~~2, Multimedia Messaging Service, Encapsulation Protocol, Version 1.~~1~~2, URL: http://www.openmobilealliance.org/

~~NOTE: Reference [56] is the REL-4 MM1 stage 3 specification. Work on a REL-5 version is in progress in OMA-MAG-MMSG working group. Consequently, reference [56] is to be replaced by the appropriate document identifier once the REL-5 MM1 stage 3 specification is approved within OMA.~~

[57] IETF; RFC 1870: “SMTP Service Extension for Message Size Declaration”, URL: http://www.ietf.org/rfc/rfc1870.txt

[58] IETF; RFC 1652: “SMTP Service Extension for 8bit-MIME transport”, URL: http://www.ietf.org/rfc/rfc1652.txt

[59] 3GPP TS 32.235: "Charging Management; Charging Data Description for Application Services".

[60] IETF, RFC 2915: “The Naming Authority Pointer (NAPTR) DNS Resource Record”, URL: http://www.ietf.org/rfc/rfc2915.txt

[61] IETF, RFC 2916: “E.164 number and DNS”, URL: http://www.ietf.org/rfc/rfc2916.txt

[62] 3GPP TS 29.002: "Mobile Application Part (MAP) specification".

[63] 3GPP TS 22.066: "Support of Mobile Number Portability (MNP); Service description. Stage 1".

[64] 3GPP TS 23.066: "Support of Mobile Number Portability (MNP); Technical realization. Stage 2".

[65] IETF; RFC 2617 "Access Authentication", URL:http://www.ietf.org/rfc/rfc2617.txt

[66] IETF; RFC 2246 "TLS protocol, version 1.0" , URL:http://www.ietf.org/rfc/rfc2246.txt

[67] 3GPP TS 31.102 "Characteristics of the USIM Application".

[68] W3C Note 08 May 2000 "Simple Object Access Protocol (SOAP) 1.1", URL: http://www.w3.org/TR/SOAP

[69] W3C Note 11 December 2000 "SOAP Messages with Attachments", URL: http://www.w3.org/TR/SOAP-attachments

[70] IETF; RFC 2376: "XML Media Type", URL: http://www.ietf.org/rfc/rfc2376.txt.

[71] IETF; RFC 2387: "The MIME Multipart/Related Content Type", URL: http://www.ietf.org/rfc/rfc2387.txt.

[72] IETF; RFC 2111: "Content-ID and Message-ID Uniform Resource Locators", URL: http://www.ietf.org/rfc/rfc2111.txt.

[73] IETF; RFC 2557: "MIME Encapsulation of Aggregate Documents, such as HTML (MHTML)", URL: http://www.ietf.org/rfc/rfc2557.txt.

[74] 3GPP TS 26.140: "Multimedia Messaging Service; Media formats and codecs".

[75] 3GPP TS 51.011 (Rel-4): "Specification of the Subscriber Identity Module – Mobile Equipment (SIM-ME) interface".

3GPP TSG-T2 #25
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19 -23 April 2004

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CR-Form-v7

CHANGE REQUEST

⌘ **23.140** **CR** **161** ⌘ **rev** **-** ⌘ Current version: **6.5.0** ⌘

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

Proposed change affects: UICC apps⌘ ☐ ME ☐ Radio Access Network ☐ Core Network ☒

Title:	⌘	Changing erroneous OMA references from MMS1.1 to MMS1.2
Source:	⌘	T2 (Ericsson)
Work item code:	⌘	MMS6
Date:	⌘	20/04/2004
Category:	⌘	**F**
Release:	⌘	Rel-6

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)*
Rel-6	*(Release 6)*

Reason for change:	⌘	It is more accurate to refer to the v1.2 Encapsulation specification, than to the v1.1
Summary of change:	⌘	Replace OMA-MMS-ENC- v1_1 with v1_2
Consequences if not approved:	⌘	Misleading OMA reference

Clauses affected:	⌘	2

	Y	N		
Other specs affected: ⌘		X	Other core specifications	⌘
		X	Test specifications	
		X	O&M Specifications	

Other comments: ⌘

How to create CRs using this form:
Comprehensive information and tips about how to create CRs can be found at http://www.3gpp.org/specs/CR.htm. Below is a brief summary:

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

[1] 3GPP TS 22.140: "Multimedia Messaging Service; Stage 1".

[2] 3GPP TR 21.905: "Vocabulary for 3GPP Specifications".

[3] WAP Forum: "Wireless Application Environment Specification, Version 1.2", WAP-WAESpec-19991104, . URL: http://www.wapforum.org/.

[4] 3GPP TS 23.057: "Mobile Execution Environment (MExE); Functional description; Stage 2".

[5] IETF; STD 0011 (RFC 2822): "Internet Message Format", URL: http://www.ietf.org/rfc/rfc2822.txt.

[6] IETF; RFC 2046: "Multipurpose Internet Mail extension (MIME) Part Two: Media Types", URL: http://www.ietf.org/rfc/rfc2046.txt.

[7] The Unicode Consortium: "The Unicode Standard", Version 2.0, Addison-Wesley Developers Press, 1996.URL: http://www.unicode.org/.

[8] ANSI X3.4, 1986: "Information Systems; Coded Character Set 7 Bit; American National Standard Code for Information Interchange".

[9] ISO/IEC 8859-1:1998: "Information Processing; 8-bit Single-Byte Coded Graphic Character Sets; Part 1: Latin Alphabet No. 1".

[10] IETF; RFC 2279: "UTF-8, A Transformation format of ISO 10646", URL: http://www.ietf.org/rfc/rfc2279.txt.

[11] 3GPP TS 24.011: "Point-to-Point (PP) Short Message Service (SMS) support on mobile radio interface".

[12] void

[13] void

[14] void

[15] void

[16] void

[17] void

[18] void

[19] void

[20] void

[21] void

[22] IETF; STD 0010 (RFC 2821): "Simple Mail Transfer Protocol", URL: http://www.ietf.org/rfc/rfc2821.txt.

[23] WAP Forum (November 1999): "WAP Wireless Session Protocol", WAP-WSP-19991105- , URL: http://www.wapforum.org/.

[24] WAP Forum (November 1999): "WAP Push Access Protocol", WAP-PAP-19991108, URL: http://www.wapforum.org/.

[25] WAP Forum (November 1999): "WAP User Agent Profile Specification", WAP-UAProf-19991110, URL: http://www.wapforum.org/.

[26] W3C Recommendation 22 February 1999 "Resource Description Framework (RDF) Model and Syntax Specification", URL: http://www.w3.org/TR/REC-rdf-syntax.

[27] WAP Forum (November 1999): "WAP Wireless Markup Language Specification, Version 1.2 ", WAP-WML-19991104, URL: http://www.wapforum.org/.

[28] W3C Recommendation 15-June-1998: "Synchronized Multimedia Integration Language (SMIL) 1.0 Specification" - http://www.w3.org/TR/REC-smil/.

[29] WAP Forum (November 1999): "WAP Wireless Transport Layer Security Specification", WAP-WTLS-19991105, URL: http://www.wapforum.org/.

[30] WAP Forum (November 1999): "WAP Identity Module Specification", WAP-WIM-19991105, URL: http://www.wapforum.org/.

[31] ITU-T Recommendation T.37 (06/98): "Procedures for the transfer of facsimile data via store-and-forward on the Internet".

[32] ITU-T Recommendation T.30 (1996): "Procedures for document facsimile transmission in the general switched telephone network".

[33] IETF; RFC 2421 (Sept. 1998): "Voice Profile for Internet Mail – version 2, VPIM" , URL: http://www.ietf.org/rfc/rfc2421.txt.

[34] IETF; STD 0053 (RFC 1939): "POP 3, Post Office Protocol - Version 3" , URL: http://www.ietf.org/rfc/rfc1939.txt.

[35] IETF; RFC 1730 (December 1994): "IMAP4, Internet Message Access Protocol - Version 4" , URL: http://www.ietf.org/rfc/rfc1730.txt..

[36] Adobe Systems: "Tag Image File Format (TIFF), Version 6", URL:, http://www.adobe.com.

[37] 3GPP TR 23.039: "Interface protocols for the connection of Short Message Service Centres (SMSCs) to Short Message Entities (SMEs)".

[38] void

[39] void

[40] 3GPP TS 26.233: "End-to-end transparent streaming Service (PSS); General Description".

[41] 3GPP TS 26.234: "End-to-end transparent streaming Service (PSS); Protocols and Codecs".

[42] IETF; RFC 3481: "TCP over Second (2.5G) and Third (3G) Generation Wireless Networks"; URL: http://www.ietf.org/rfc/rfc3481.txt

[43] WAP Forum: "Wireless profiled TCP", WAP-225-TCP-20010331-a, URL: http://www.wapforum.org

[44] IETF; RFC 2045: "Multipurpose Internet Mail Extensions (MIME) Part One: Format of Internet Message Bodies", URL: http://www.ietf.org/rfc/rfc2045.txt

[45] IETF; RFC 2047: "Multipurpose Internet Mail Extensions (MIME) Part Three: Message Header Extensions for Non-ASCII-Text", URL: http://www.ietf.org/rfc/rfc2047.txt.

[46] IETF; RFC 2048: "Multipurpose Internet Mail Extensions (MIME) Part Four: Registration Procedures", URL: http://www.ietf.org/rfc/rfc2048.txt.

[47] IETF; RFC 2049: "Multipurpose Internet Mail Extensions (MIME) Part Five: Conformance Criteria and Examples", URL: http://www.ietf.org/rfc/rfc2049.txt.

[48] IETF; RFC 2616: “Hypertext Transfer Protocol, HTTP/1.1”, URL: http://www.ietf.org/rfc/rfc2616.txt.

[49] IETF; STD 13 (RFC 1034, 1035): "Domain Names -- concepts and facilities", "Domain names – implementation and specification", URL: http://www.ietf.org/rfc/rfc1034.txt, http://www.ietf.org/rfc/rfc1035.txt.

[50] IETF; STD 14 (RFC 947): "Multi-network broadcasting within the Internet", URL: http://www.ietf.org/rfc/rfc947.txt.

[51] IETF; RFC 2076: "Common Internet Message Headers", URL: http://www.ietf.org/rfc/rfc2076.txt.

[52] IETF; RFC 1893: "Enhanced Mail System Status Codes", URL: http://www.ietf.org/rfc/rfc1893.txt.

[53] IETF; RFC 1327: "Mapping between X.400(1988)/ISO 10021 and RFC 822", URL: http://www.ietf.org/rfc/rfc1327.txt.

[54] 3GPP TS 29.061: "Interworking between the Public Land Mobile Network (PLMN) supporting Packet Based Services and Packet Data Networks (PDN)"

[55] Open Mobile Alliance; OMA-WAP-ProvCont-v1_1-20021112-C, Provisioning Content Version 1.1, URL: http://www.openmobilealliance.org/

[56] Open Mobile Alliance; OMA-MMS-ENC-~~v1_1~~ v1_2, Multimedia Messaging Service, Encapsulation Protocol, Version 1.~~1~~2, URL: http://www.openmobilealliance.org/

NOTE: Reference [56] is the REL-5~~4~~ MM1 stage 3 specification. OMA is committed to develop a REL-6 version. Consequently, reference [56] is to be replaced by the appropriate document identifier once the REL-6 MM1 stage 3 specification is approved within OMA.

[57] IETF; RFC 1870: “SMTP Service Extension for Message Size Declaration”, URL: http://www.ietf.org/rfc/rfc1870.txt

[58] IETF; RFC 1652: “SMTP Service Extension for 8bit-MIME transport”, URL: http://www.ietf.org/rfc/rfc1652.txt

[59] void

[60] IETF, RFC 2915: “The Naming Authority Pointer (NAPTR) DNS Resource Record”, URL: http://www.ietf.org/rfc/rfc2915.txt

[61] IETF, RFC 2916: “E.164 number and DNS”, URL: http://www.ietf.org/rfc/rfc2916.txt

[62] 3GPP TS 29.002: "Mobile Application Part (MAP) specification".

[63] 3GPP TS 22.066: "Support of Mobile Number Portability (MNP); Service description. Stage 1".

[64] 3GPP TS 23.066: "Support of Mobile Number Portability (MNP); Technical realization. Stage 2".

[65] IETF; RFC 2617 "Access Authentication", URL:http://www.ietf.org/rfc/rfc2617.txt

[66] IETF; RFC 2246 "TLS protocol, version 1.0" , URL:http://www.ietf.org/rfc/rfc2246.txt

[67] 3GPP TS 31.102 "Characteristics of the USIM Application".

[68] W3C Note 08 May 2000 "Simple Object Access Protocol (SOAP) 1.1", URL: http://www.w3.org/TR/SOAP

[69] W3C Note 11 December 2000 "SOAP Messages with Attachments", URL: http://www.w3.org/TR/SOAP-attachments

[70] IETF; RFC 2376: "XML Media Type", URL: http://www.ietf.org/rfc/rfc2376.txt.

[71] IETF; RFC 2387: "The MIME Multipart/Related Content Type", URL: http://www.ietf.org/rfc/rfc2387.txt.

[72] IETF; RFC 2111: "Content-ID and Message-ID Uniform Resource Locators", URL: http://www.ietf.org/rfc/rfc2111.txt.

[73] IETF; RFC 2557: "MIME Encapsulation of Aggregate Documents, such as HTML (MHTML)", URL: http://www.ietf.org/rfc/rfc2557.txt.

[74] 3GPP TS 26.140: "Multimedia Messaging Service; Media formats and codecs".

[75] 3GPP TS 51.011 (Rel-4): "Specification of the Subscriber Identity Module – Mobile Equipment (SIM-ME) interface".

[76] “Digital Rights Management”, Open Mobile AllianceTM, OMA-Download-DRM-v1_0, http://www.openmobilealliance.org/

[77] “DRM Rights Expression Language”, Open Mobile AllianceTM, OMA-Download-DRMREL-v1_0, http://www.openmobilealliance.org/

[78] “DRM Content Format”, Open Mobile AllianceTM, OMA-Download-DRMCF-v1_0, http://www.openmobilealliance.org/

[79] ITU-T Recommendation E.212: " The international identification plan for mobile terminals and mobile users".

[80] 3GPP TS 32.240: "Charging Management; Charging Architecture and Principles ".

[81] 3GPP TS 32.270: "Charging Management; Multimedia Messaging Service (MMS) charging".

3GPP TSG-T2 #25
Edinburgh, UK
19 -23 April 2004

T2-040260

CR-Form-v7

CHANGE REQUEST

⌘ **23.140** **CR** **162** ⌘ **rev** **-** ⌘ Current version: **6.5.0** ⌘

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

Proposed change affects: UICC apps⌘ ☐ ME ☐ Radio Access Network ☐ Core Network **X**

Title:	⌘	MM7 delivery conditions for MMS
Source:	⌘	T2 (T-Mobile International, Orange)
Work item code:	⌘	MMS6
Date:	⌘	22/04/2004
Category:	⌘	**B**
Release:	⌘	Rel-6

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)
Rel-6 (Release 6)

Reason for change:	⌘	Several situations may occur, when VASPs may not want to deliver the MM to the user. This may result out of the fact, that VASPs may have several ways to transfer messages to a mobile subscriber, e.g. MMS, e-mail, voice mail. If several messaging bearers exist, a VASP may want to use only one way for comunication with the subscriber. It should be the path providing best results to the user. If MMS is not the path with the best result, e.g. because of the fact the user has no MMS capable handset, the MM shall not be delivered by the MMS Relay/Server. An other scenario takes the roaming situation of the subscriber into account. The VASP may wish that MMs shall only be submitted if the user is not roaming. Therefore VASPs may explicitly require that the messages shall only be transferred to the mobile user, if this delivery condition is met. For the VAS MM a field “Delivery Condition” needs to be introduced. If the situation of the user does not match the condition, the MMS Relay/Server discard the MM and informs the VASP about this.
Summary of change:	⌘	A VASP may introduce a delivery condition in the MM7_Submit.REQ. If the MMSC detects that the condition is not met the MM will be discarded and a delivery report with the appropriate outcome is returned to the VASP.
Consequences if not approved:	⌘	Messages will be submitted to the user in situations which are not satisfying for the VASP and/or the user.

Clauses affected:	⌘	Sections 8.7.1, 8.7.4, Annex L

Y **N**

Other specs affected:	⌘		**X**	Other core specifications	⌘
			X	Test specifications	
			X	O&M Specifications	
Other comments:	⌘				

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at http://www.3gpp.org/specs/CR.htm. Below is a brief summary:

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

8.7.1 Submitting a VAS MM

This section addresses the operations necessary for a VASP to provide the service by sending a multimedia message to one or more subscribers or to a distribution list. The involved abstract messages are outlined in Table 47 from type and direction points of view.

Table 47: Abstract messages for submitting VAS message

Abstract messages	Type	Direction
MM7_submit.REQ	Request	VASP -> MMS Relay/Server
MM7_submit.RES	Response	MMS Relay/Server -> VASP

8.7.1.1 Normal Operation

The VASP submits a message to the MMS Relay/Server by sending the MM7_submit.REQ supplying the multimedia message (MM) as the payload of the message. The message may be directed to one or more subscribers or to a distribution list. If the MMS Relay/Server accepts the submission, the MMS Relay/Server must send a MM7_submit.RES with a "success" status. This in no way indicates that the MM was actually delivered to the destinations but states that the request has been accepted.

Support for MM7_submit.REQ and MM7_submit.RES is mandatory for all MMS Relay/Servers that support MM7.

8.7.1.2 Abnormal Operation

The MMS Relay/Server should reject the MM7_submit.REQ if the VAS cannot be authorized or if the parameters of the request exceed the service level for the service being employed, or if the Relay/Server does not support third party charging. Similarly, if none of the destinations can be resolved then the response status should indicate an error. If one or several (but not all) addresses can be resolved, the MMS Relay/Server should deliver the message to those addresses and respond to the VAS using the MM7_submit.RES with a partial success to the VASP. Partial success does not indicate that the MM was actually delivered to the destinations but states that the request has been at least partially accepted.

8.7.1.3 Features

Authorisation: The VASP must supply its own identifier or the VAS identifier as part of the request.

Addressing: The VASP may direct the MM to a one or more subscribers or to a distribution list. In the addressing information, it may be indicated whether a recipient address is meant for informational purposes only or to be used for routing. In the addressing information, it may be indicated whether a recipient address has been encrypted or obfuscated. The originator of a submitted MM may be indicated in addressing-relevant information field(s) of the MM7_submit.REQ

Version: The MM7 protocol shall provide unique means to identify the version supported by both the MMS Relay/Server and VASP.

Message Type: The type of message used on reference point MM7 indicating MM7_submit.REQ and MM7_submit.RES as such.

Transaction Identification: The VASP shall provide an unambiguous transaction identification within an MM7_submit.REQ. The MM7_submit.RES shall unambiguously refer to the corresponding MM7_submit.REQ using the same transaction identification.

Linked message identification: The VASP will supply a message identifier when submitting a message, that defines a correspondence to a previous message that was delivered by the MMS Relay/Server to the VASP

Message class, priority, and subject: The VASP may qualify the MM further by adding a message class, a priority and/or subject to the MM7_submit.REQ.

Service code: The VASP may mark the content of the message with a service code that may be transferred by the MMS Relay/Server in the form of charging information for use by the billing system to properly bill the user for the service being supplied.

Time stamping: The VASP may time stamp the MM.

Time constraints: The VASP may request an earliest desired time of delivery of the MM. The VASP may request a time of expiry for the MM

Reply-Charging: The originator VASP may indicate that it wants to pay for a reply-MM and convey the reply-charging limitations (e.g. the latest time of submission and/or the maximum size of a reply-MM) in the MM7_submit.REQ.

Delivery reporting: The VASP may request a delivery report for the MM

Read reporting: The VASP may request a read-reply report when the user has viewed the MM.

Content adaptation restriction: The VASP may request that the content of the MM will not be subjected to content adaptation.

Content type: The MIME type of the multimedia content shall always be identified in the MM7_submit.REQ.

Content: The VASP may add content in the MM7_submit.REQ.

Message identification: The MMS Relay/Server shall always provide a message identification for an MM, which it has accepted for submission in the MM7_submit.RES.

Request status: The MMS Relay/Server shall indicate the status of the MM7_submit.REQ in the associated MM7_submit.RES. The reason code given in the status information element of the MM7_submit.RES may be supported with an explanatory text further qualifying the status.

Charged-Party: The VASP may indicate in the MM7_submit.REQ which party is expected to be charged for an MM submitted by the VASP, e.g. the sending, receiving, both parties or neither.

Charged party ID: The address of the third party which is expected to pay for the MM.

Message Distribution Indication: The VASP may indicate whether the content of the MM is intended for redistribution.

Delivery Condition: The VASP may indicate a condition which needs to be met to allow delivery. If the condition is not met the MM shall be discarded by the MMS Relay/Server.

8.7.1.4 Information Elements

Table 48: Information elements in the MM7_submit.REQ .

Information element	Presence	Description
Transaction ID	Mandatory	The identification of the MM7_submit.REQ/ MM7_submit.RES pair.
Message type	Mandatory	Identifies this message as a MM7_submit request.
MM7 version	Mandatory	Identifies the version of the interface supported by the VASP
VASP ID	Optional	Identifier of the VASP for this MMS Relay/Server.
VAS ID	Optional	Identifier of the originating application.
Sender address	Optional	The address of the MM originator.
Recipient address	Mandatory	The address of the recipient MM. Multiple addresses are possible or the use of the alias that indicates the use of a distribution list. It is possible to mark an address to be used only for informational purposes. It is possible to mark that a recipient address is provided in encrypted or obfuscated format. E.g. the address was originally provided in encrypted or obfuscated form in an associated MM7_deliver.REQ.
Service code	Optional	Information supplied by the VASP which may be included in charging information. The syntax and semantics of the content of this information are out of the scope of this specification.
Linked ID	Optional	This identifies a correspondence to a previous valid message delivered to the VASP.
Message class	Optional	Class of the MM (e.g. advertisement, information service, accounting)
Date and time	Optional	The time and date of the submission of the MM (time stamp).
Time of Expiry	Optional	The desired time of expiry for the MM (time stamp).
Earliest delivery time	Optional	The earliest desired time of delivery of the MM to the recipient (time stamp).
Delivery report	Optional	A request for delivery report.
Read reply	Optional	A request for confirmation via a read report to be delivered as described in section 8.1
Reply-Charging	Optional	A request for reply-charging.
Reply-Deadline	Optional	In case of reply-charging the latest time of submission of replies granted to the recipient(s) (time stamp).
Reply-Charging-Size	Optional	In case of reply-charging the maximum size for reply-MM(s) granted to the recipient(s).
Priority	Optional	The priority (importance) of the message.
Subject	Optional	The title of the whole multimedia message.
Adaptations	Optional	Indicates if VASP allows adaptation of the content (default True)
Charged Party	Optional	An indication which party is expected to be charged for an MM submitted by the VASP, e.g. the sending, receiving, both parties third party or neither.
Content type	Mandatory	The content type of the MM's content.
Content	Optional	The content of the multimedia message
Message Distribution Indicator	Optional	If set to "false" the VASP has indicated that content of the MM is not intended for redistribution. If set to "true" the VASP has indicated that content of the MM can be redistributed.
Charged Party ID	Optional	The address of the third party which is expected to pay for the MM
Delivery Condition	Optional	If the condition is met the MM shall be delivered to the recipient MMS User Agent, otherwise the MM shall be discarded. The initial values are: MMS capable only; HPLMN only; any other values can be added based on bilateral agreements between the MMS Relay/Server operator and the VASP.

8.7.4 Delivery reporting to VASP

This part of MMS service covers the generation of a delivery report from the MMS Relay/Server to the VASP. The involved abstract messages are outlined in Table 58 from type and direction points of view.

Table 58: Abstract messages for delivery reports to VASP

Abstract Message	Type	Direction
MM7_delivery_report.REQ	Request	MMS Relay/Server -> VASP
MM7_delivery_report.RES	Response	VASP -> MMS Relay/Server

8.7.4.1 Normal Operation

The MMS Relay/Server shall create the MM7_delivery_report.REQ and send it to the VASP when the appropriate information is available.

Support for MM7_delivery_report.REQ and MM7_delivery_report.RES is mandatory for a MMS Relay/Server that supports MM7.

8.7.4.2 Abnormal Operation

In case the VASP cannot identify the MMS Relay/Server or the Message ID is not recognized, then the VASP shall respond with a MM7_delivery_report.RES including a status which indicates the reason the delivery report was not accepted.

8.7.4.3 Features

Addressing: Both the address of the VAS (which is the original MM originator) and the address of the recipient of the original MM shall be provided in the addressing-relevant information fields of MM7_delivery_report.REQ.

Version: The MM7 protocol shall provide unique means to identify the version supported by both the MMS Relay/Server and VASP.

Message Type: The type of message used on reference point MM7 indicating MM7_delivery_report.REQ and MM7_delivery_report.RES as such.

Transaction Identification: The VASP shall provide an unambiguous transaction identification within a request. The response shall unambiguously refer to the corresponding request using the same transaction identification.

Time stamping: The MM7_delivery_report.REQ shall carry the time and date of handling of the MM (e.g. retrieval, expiry, rejection)**.**

Message identification: In the MM7_delivery_report.REQ the MMS Relay/Server shall always provide the original message identification of the MM that the delivery report corresponds to as generated in response to the associated MM7_submit.REQ.

MM Status: The MM7_delivery_report.REQ shall carry the status of the MM delivery, e.g. retrieved, rejected, expired or indeterminate. If there is no match between delivery condition and user status, delivery condition not met shall be returned.

Request Status: The VASP shall indicate the status of the MM7_delivery_report.REQ in the associated MM7_delivery_report.RES. The reason code given in the status information element of the response may be supported with an explanatory text further qualifying the status.

8.7.9.1 MM7_submit.REQ mapping

Information Element	Location	ElementName	Comments
Transaction ID	SOAP Header	TransactionID	
Message-Type	SOAP Body	MessageType	Defined as Root element of SOAP Body
MM7 Version	SOAP Body	MM7Version	Value is the number of the specification in which the schema has changed most recently, e.g. 5.2.0
VASP ID	SOAP Body	VASPID	
VAS ID	SOAP Body	VASID	
Sender Address	SOAP Body	SenderAddress	
Recipient Address	SOAP Body	Recipients	Different address format will be specified as part of element value
Service code	SOAP Body	ServiceCode	Information supplied for billing purposes – exact format is implementation dependent
Linked ID	SOAP Body	LinkedID	Message-ID of linked message
Message class	SOAP Body	MessageClass	Enumeration – possible values: Informational, Advertisement, Auto
Date and time	SOAP Body	TimeStamp	
Time of Expiry	SOAP Body	ExpiryDate	
Earliest delivery time	SOAP Body	EarliestDeliveryTime	
Delivery report	SOAP Body	DeliveryReport	Boolean – true or false
Read reply	SOAP Body	ReadReply	Boolean – true or false
Reply-Charging	SOAP Body	ReplyCharging	No value – presence implies true!
Reply-Deadline	SOAP Body	replyDeadline	Attribute of *ReplyCharging* element Date format – absolute or relative
Reply-Charging-Size	SOAP Body	replyChargingSize	Attribute of *ReplyCharging* element
Priority	SOAP Body	Priority	Enumeration – possible values: High, Normal, Low
Subject	SOAP Body	Subject	
Adaptations	SOAP Body	allowAdaptations	Attribute of *Content* element Boolean – true or false
Charged Party	SOAP Body	ChargedParty	Enumeration – possible values: Sender, Recipient, Both, Neither
Message Distribution Indicator	SOAP Body	DistributionIndicator	Boolean – true or false
Delivery Condition	SOAP Body	DeliveryCondition	Possible values include MMS capable only, HPLMN only
Content type	MIME header – Attachment	Content-Type	
Content	SOAP Body	Content	href:cid attribute links to attachment

8.7.9.9 MM7_delivery_report.REQ mapping

Information Element	Location	ElementName	Comments
Transaction ID	SOAP Header	TransactionID	
Message-Type	SOAP Body	MessageType	Defined as Root element of SOAP Body
MM7 Version	SOAP Body	MM7Version	Value is the number of the specification in which the schema has changed most recently, e.g. 5.2.0
MMS Relay/Server ID	SOAP Body	MMSRelayServerID	
Message ID	SOAP Body	MessageID	
Recipient address	SOAP Body	Recipient	
Sender address	SOAP Body	Sender	
Date and time	SOAP Body	TimeStamp	
MM Status	SOAP Body	MMStatus	Enumeration – possible values: Expired, Retrieved, Rejected, Indeterminate, Forwarded, Delivery Condition Not Met
Status text	SOAP Body	StatusText	

8.7.9.10 MM7_delivery_report.RES mapping

Information Element	Location	ElementName	Comments
Transaction ID	SOAP Header	TransactionID	
Message-Type	SOAP Body	MessageType	Defined as Root element of SOAP Body
MM7 Version	SOAP Body	MM7Version	Value is the number of the specification in which the schema has changed most recently, e.g. 5.2.0
Request Status	SOAP Body	StatusCode	See section 8.7.8.3
Request Status text	SOAP Body	StatusText & Details	See section 8.7.8.3

8.7.9.11 MM7_read_reply.REQ mapping

Information Element	Location	ElementName	Comments
Transaction ID	SOAP Header	TransactionID	
Message-Type	SOAP Body	MessageType	Defined as Root element of SOAP Body
MM7 Version	SOAP Body	MM7Version	Value is the number of the specification in which the schema has changed most recently, e.g. 5.2.0
MMS Relay/Server ID	SOAP Body	MMSRelayServerID	
Message ID	SOAP Body	MessageID	
Recipient address	SOAP Body	Recipient	
Sender address	SOAP Body	Sender	
Date and time	SOAP Body	TimeStamp	
Read Status	SOAP Body	MMStatus	Enumeration – possible values: Indeterminate, Read, Deleted without Read
Status text	SOAP Body	StatusText	

Table K.8: MM4_Read_reply_report.REQ -> MM7_read_reply_report.REQ

Information elements in MM4_Read_reply_report.REQ	Information elements in MM7_read_reply.REQ
3GPP MMS Version	-
Message Type	-
Transaction ID	-
Recipient address	Recipient address
Sender address	Sender address
Message-ID	Message-ID
Date and time	Date and time
Acknowledgement Request	-
Read Status	Read Status
Status text	Status text
-	Transaction ID
-	Message Type
-	MM7 Version
-	MMS Relay/Server ID

Annex L (normative): MM7 XML Schema

```
<?xml version="1.0" encoding="UTF-8"?>
<xs:schema targetNamespace="http://www.3gpp.org/ftp/Specs/archive/23_series/23.140/schema/REL-6-MM7-
1-3" xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xs="http://www.w3.org/2001/XMLSchema"
xmlns:tns="http://www.3gpp.org/ftp/Specs/archive/23_series/23.140/schema/REL-6-MM7-1-3"
elementFormDefault="qualified" attributeFormDefault="unqualified">
   <xs:import namespace="http://schemas.xmlsoap.org/soap/envelope/"
schemaLocation="http://schemas.xmlsoap.org/soap/envelope/"/>
   <xs:element name="TransactionID">
      <xs:annotation>
         <xs:documentation>The transaction ID that shall be included in the SOAP
Header</xs:documentation>
      </xs:annotation>
      <xs:complexType>
         <xs:simpleContent>
            <xs:extension base="xs:string">
               <xs:attribute ref="soap:mustUnderstand"/>
               <xs:attribute ref="soap:encodingStyle"/>
               <xs:attribute ref="soap:actor"/>
            </xs:extension>
         </xs:simpleContent>
      </xs:complexType>
   </xs:element>
   <xs:element name="SubmitReq" type="tns:submitReqType">
      <xs:annotation>
         <xs:documentation>VASP to MMS : Sending MM from the VASP to one or more
recipients</xs:documentation>
      </xs:annotation>
   </xs:element>
   <xs:element name="SubmitRsp" type="tns:submitRspType">
      <xs:annotation>
         <xs:documentation>MMS  to VASP: Response to a VASP after MM submission
request</xs:documentation>
      </xs:annotation>
   </xs:element>
   <xs:element name="DeliverReq" type="tns:deliverReqType">
      <xs:annotation>
         <xs:documentation>MMS to VASP : Delivery of MM from the MMS Relay/Server to the VASP
</xs:documentation>
      </xs:annotation>
   </xs:element>
   <xs:element name="DeliverRsp" type="tns:deliverRspType">
      <xs:annotation>
         <xs:documentation>VASP to MMS : Response to a message delivered to the VASP from the MMS
Relay/Server</xs:documentation>
      </xs:annotation>
```

```
   </xs:element>
   <xs:element name="CancelReq" type="tns:cancelReqType">
      <xs:annotation>
         <xs:documentation>VASP  to MMS: Request to cancel a message submission </xs:documentation>
      </xs:annotation>
   </xs:element>
   <xs:element name="CancelRsp" type="tns:genericResponseType">
      <xs:annotation>
         <xs:documentation>MMS  to VASP: Response to a VASP after MM cancellation request
</xs:documentation>
      </xs:annotation>
   </xs:element>
   <xs:element name="ReplaceReq" type="tns:replaceReqType">
      <xs:annotation>
         <xs:documentation>VASP  to MMS: Request to replace a message which was submitted
</xs:documentation>
      </xs:annotation>
   </xs:element>
   <xs:element name="ReplaceRsp" type="tns:genericResponseType">
      <xs:annotation>
         <xs:documentation>MMS  to VASP: Response to a VASP after MM replace request
</xs:documentation>
      </xs:annotation>
   </xs:element>
   <xs:element name="DeliveryReportReq" type="tns:deliveryReportReqType">
      <xs:annotation>
         <xs:documentation>MMS to VASP : Delivery Report from one of the MM
recipients</xs:documentation>
      </xs:annotation>
   </xs:element>
   <xs:element name="DeliveryReportRsp" type="tns:genericResponseType">
      <xs:annotation>
         <xs:documentation>VASP to MMS: Response to a delivery report delivered to the
VASP</xs:documentation>
      </xs:annotation>
   </xs:element>
   <xs:element name="ReadReplyReq" type="tns:readReplyReqType">
      <xs:annotation>
         <xs:documentation>MMS to VASP : Delivery Report from one of the MM
recipients</xs:documentation>
      </xs:annotation>
   </xs:element>
   <xs:element name="ReadReplyRsp" type="tns:genericResponseType">
      <xs:annotation>
         <xs:documentation>VASP to MMS: Response to a read reply delivered to the
VASP</xs:documentation>
      </xs:annotation>
   </xs:element>
   <xs:element name="RSErrorRsp" type="tns:genericResponseType">
      <xs:annotation>
         <xs:documentation>MMS to VASP: Error response to a any bad request sent to the MMS
Relay/Server</xs:documentation>
      </xs:annotation>
   </xs:element>
   <xs:element name="VASPErrorRsp" type="tns:genericResponseType">
      <xs:annotation>
         <xs:documentation>VASP to MMS: Error response to a any bad request sent to the
VASP</xs:documentation>
      </xs:annotation>
   </xs:element>
   <xs:complexType name="senderIDType">
      <xs:sequence>
         <xs:element name="VASPID" type="tns:entityIDType" minOccurs="0"/>
         <xs:element name="VASID" type="tns:entityIDType" minOccurs="0"/>
         <xs:element name="SenderAddress" type="tns:addressType" minOccurs="0"/>
      </xs:sequence>
   </xs:complexType>
   <xs:complexType name="submitReqType">
      <xs:complexContent>
         <xs:extension base="tns:genericVASPRequestType">
            <xs:sequence>
               <xs:element name="Recipients" type="tns:recipientsType"/>
               <xs:element name="ServiceCode" type="tns:serviceCodeType" minOccurs="0"/>
               <xs:element name="LinkedID" type="tns:messageIDType" minOccurs="0"/>
               <xs:element name="MessageClass" type="tns:messageClassType" default="Informational"
minOccurs="0"/>
               <xs:element name="TimeStamp" type="xs:dateTime" minOccurs="0"/>
               <xs:element name="ReplyCharging" minOccurs="0">
```

```
                  <xs:complexType>
                     <xs:attribute name="replyChargingSize" type="xs:positiveInteger"
use="optional"/>
                     <xs:attribute name="replyDeadline" type="tns:relativeOrAbsoluteDateType"
use="optional"/>
                  </xs:complexType>
               </xs:element>
               <xs:element name="EarliestDeliveryTime" type="tns:relativeOrAbsoluteDateType"
minOccurs="0"/>
               <xs:element name="ExpiryDate" type="tns:relativeOrAbsoluteDateType" minOccurs="0"/>
               <xs:element name="DeliveryReport" type="xs:boolean" minOccurs="0"/>
               <xs:element name="ReadReply" type="xs:boolean" minOccurs="0"/>
               <xs:element name="Priority" type="tns:priorityType" minOccurs="0"/>
               <xs:element name="Subject" type="xs:string" minOccurs="0"/>
               <xs:element name="ChargedParty" type="tns:chargedPartyType" minOccurs="0"/>
               <xs:element name="ChargedPartyID" type="tns:chargedPartyIDType" minOccurs="0"/>
               <xs:element name="DistributionIndicator" type="xs:boolean" minOccurs="0"/>
               <xs:element name="DeliveryCondition" type="xs:string" minOccurs="0"/>
               <xs:element name="Content" type="tns:contentReferenceType" minOccurs="0"/>
            </xs:sequence>
         </xs:extension>
      </xs:complexContent>
   </xs:complexType>
   <xs:complexType name="submitRspType">
      <xs:complexContent>
         <xs:extension base="tns:genericResponseType">
            <xs:sequence>
               <xs:element name="MessageID" type="tns:messageIDType"/>
            </xs:sequence>
         </xs:extension>
      </xs:complexContent>
   </xs:complexType>
   <xs:complexType name="deliverReqType">
      <xs:complexContent>
         <xs:extension base="tns:genericRSReqType">
            <xs:sequence>
               <xs:element name="LinkedID" type="tns:messageIDType" minOccurs="0"/>
               <xs:element name="Sender" type="tns:addressType"/>
               <xs:element name="Recipients" type="tns:recipientsType" minOccurs="0"/>
               <xs:element name="Previouslysentby" type="tns:previouslySentByType" minOccurs="0"/>
               <xs:element name="Previouslysentdateandtime" type="tns:previouslySentByDateTime"
minOccurs="0"/>
               <xs:element name="SenderSPI" type="tns:serviceProviderIDType" minOccurs="0"/>
               <xs:element name="RecipientSPI" type="tns:serviceProviderIDType" minOccurs="0"/>
               <xs:element name="TimeStamp" type="xs:dateTime" minOccurs="0"/>
               <xs:element name="ReplyChargingID" type="tns:messageIDType" minOccurs="0"/>
               <xs:element name="Priority" type="tns:priorityType" minOccurs="0"/>
               <xs:element name="Subject" type="xs:string" minOccurs="0"/>
               <xs:element name="Content" type="tns:contentReferenceType" minOccurs="0"/>
            </xs:sequence>
         </xs:extension>
      </xs:complexContent>
   </xs:complexType>
   <xs:complexType name="deliverRspType">
      <xs:complexContent>
         <xs:extension base="tns:genericResponseType">
            <xs:sequence>
               <xs:element name="ServiceCode" type="tns:serviceCodeType" minOccurs="0"/>
            </xs:sequence>
         </xs:extension>
      </xs:complexContent>
   </xs:complexType>
   <xs:complexType name="cancelReqType">
      <xs:complexContent>
         <xs:extension base="tns:genericVASPRequestType">
            <xs:sequence>
               <xs:element name="MessageID" type="tns:messageIDType"/>
            </xs:sequence>
         </xs:extension>
      </xs:complexContent>
   </xs:complexType>
   <xs:complexType name="replaceReqType">
      <xs:complexContent>
         <xs:extension base="tns:genericVASPRequestType">
            <xs:sequence>
               <xs:element name="MessageID" type="tns:messageIDType"/>
               <xs:element name="ServiceCode" type="tns:serviceCodeType" minOccurs="0"/>
               <xs:element name="TimeStamp" type="xs:dateTime" minOccurs="0"/>
```

```
               <xs:element name="ReadReply" type="xs:boolean" minOccurs="0"/>
               <xs:element name="EarliestDeliveryTime" type="tns:relativeOrAbsoluteDateType"
minOccurs="0"/>
               <xs:element name="DistributionIndicator" type="xs:boolean" minOccurs="0"/>
               <xs:element name="Content" type="tns:contentReferenceType" minOccurs="0"/>
            </xs:sequence>
         </xs:extension>
      </xs:complexContent>
   </xs:complexType>
   <xs:complexType name="deliveryReportReqType">
      <xs:complexContent>
         <xs:extension base="tns:genericRSReqType">
            <xs:sequence>
               <xs:element name="MessageID" type="tns:messageIDType"/>
               <xs:element name="Recipient" type="tns:addressType"/>
               <xs:element name="Sender" type="tns:addressType"/>
               <xs:element name="Date" type="xs:dateTime"/>
               <xs:element name="MMStatus" type="tns:mmDeliveryStatusType"/>
               <xs:element name="MMStatusExtension" type="tns:MMStatusExtensionType" minOccurs="0"/>
               <xs:element name="StatusText" type="xs:string" minOccurs="0"/>
            </xs:sequence>
         </xs:extension>
      </xs:complexContent>
   </xs:complexType>
   <xs:complexType name="readReplyReqType">
      <xs:complexContent>
         <xs:extension base="tns:genericRSReqType">
            <xs:sequence>
               <xs:element name="MessageID" type="tns:messageIDType"/>
               <xs:element name="Recipient" type="tns:addressType"/>
               <xs:element name="Sender" type="tns:addressType"/>
               <xs:element name="TimeStamp" type="xs:dateTime"/>
               <xs:element name="MMStatus" type="tns:mmReadStatusType"/>
               <xs:element name="StatusText" type="xs:string" minOccurs="0"/>
            </xs:sequence>
         </xs:extension>
      </xs:complexContent>
   </xs:complexType>
   <xs:complexType name="genericRSReqType">
      <xs:annotation>
         <xs:documentation>base for all request messages from R/S to VASP</xs:documentation>
      </xs:annotation>
      <xs:sequence>
         <xs:element name="MM7Version" type="tns:versionType"/>
         <xs:element name="MMSRelayServerID" type="tns:entityIDType" minOccurs="0"/>
      </xs:sequence>
   </xs:complexType>
   <xs:complexType name="genericVASPRequestType">
      <xs:annotation>
         <xs:documentation>Base type for all requests from VASP to R/S</xs:documentation>
      </xs:annotation>
      <xs:sequence>
         <xs:element name="MM7Version" type="tns:versionType"/>
         <xs:element name="SenderIdentification" type="tns:senderIDType"/>
      </xs:sequence>
   </xs:complexType>
   <xs:complexType name="genericResponseType">
      <xs:annotation>
         <xs:documentation>Any simple response sent </xs:documentation>
      </xs:annotation>
      <xs:sequence>
         <xs:element name="MM7Version" type="tns:versionType"/>
         <xs:element name="Status" type="tns:responseStatusType"/>
      </xs:sequence>
   </xs:complexType>
   <xs:complexType name="responseStatusType">
      <xs:annotation>
         <xs:documentation>Status information conveyed in responses</xs:documentation>
      </xs:annotation>
      <xs:all>
         <xs:element name="StatusCode">
            <xs:simpleType>
               <xs:restriction base="tns:statusCodeType"/>
            </xs:simpleType>
         </xs:element>
         <xs:element name="StatusText" type="tns:statusTextType"/>
         <xs:element name="Details" type="tns:anyDataType" minOccurs="0"/>
      </xs:all>
```

```
   </xs:complexType>
   <xs:simpleType name="mmDeliveryStatusType">
      <xs:annotation>
         <xs:documentation>Statuses for MM7_delivery_report</xs:documentation>
      </xs:annotation>
      <xs:restriction base="xs:string">
         <xs:enumeration value="Expired"/>
         <xs:enumeration value="Retrieved"/>
         <xs:enumeration value="Rejected"/>
         <xs:enumeration value="Indeterminate"/>
         <xs:enumeration value="Forwarded"/>
         <xs:enumeration value="Unrecognised"/>
         <xs:enumeration value="Deferred"/>
         <xs:enumeration value="DeliveryConditionNotMet"/>
      </xs:restriction>
   </xs:simpleType>
   <xs:simpleType name="mmReadStatusType">
      <xs:annotation>
         <xs:documentation>Statuses for MM7_read_reply</xs:documentation>
      </xs:annotation>
      <xs:restriction base="xs:string">
         <xs:enumeration value="Indeterminate"/>
         <xs:enumeration value="Read"/>
         <xs:enumeration value="Deleted"/>
      </xs:restriction>
   </xs:simpleType>
   <xs:simpleType name="messageIDType">
      <xs:annotation>
         <xs:documentation>Message ID</xs:documentation>
      </xs:annotation>
      <xs:restriction base="xs:string"/>
   </xs:simpleType>
   <xs:group name="AddressGroup">
      <xs:choice>
         <xs:element name="RFC2822Address">
            <xs:complexType>
               <xs:simpleContent>
                  <xs:extension base="xs:string">
                     <xs:attribute name="displayOnly" type="xs:boolean" use="optional"
default="false"/>
                     <xs:attributeGroup ref="tns:addressSecurity"/>
                  </xs:extension>
               </xs:simpleContent>
            </xs:complexType>
         </xs:element>
         <xs:element name="Number">
            <xs:complexType>
               <xs:simpleContent>
                  <xs:extension base="xs:string">
                     <xs:attribute name="displayOnly" type="xs:boolean" use="optional"
default="false"/>
                     <xs:attributeGroup ref="tns:addressSecurity"/>
                  </xs:extension>
               </xs:simpleContent>
            </xs:complexType>
         </xs:element>
         <xs:element name="ShortCode">
            <xs:complexType>
               <xs:simpleContent>
                  <xs:extension base="xs:string">
                     <xs:attribute name="displayOnly" type="xs:boolean" use="optional"
default="false"/>
                     <xs:attributeGroup ref="tns:addressSecurity"/>
                  </xs:extension>
               </xs:simpleContent>
            </xs:complexType>
         </xs:element>
      </xs:choice>
   </xs:group>
   <xs:complexType name="multiAddressType">
      <xs:sequence maxOccurs="unbounded">
         <xs:group ref="tns:AddressGroup"/>
      </xs:sequence>
   </xs:complexType>
   <xs:complexType name="addressType">
      <xs:group ref="tns:AddressGroup"/>
   </xs:complexType>
   <xs:attributeGroup name="addressSecurity">
```

```
      <xs:attribute name="addressCoding" type="tns:addressCodingType" use="optional"/>
      <xs:attribute name="id" type="xs:ID" use="optional"/>
   </xs:attributeGroup>
   <xs:simpleType name="addressCodingType">
      <xs:annotation>
         <xs:documentation>obfuscated or encrypted address type</xs:documentation>
      </xs:annotation>
      <xs:restriction base="xs:string">
         <xs:enumeration value="encrypted"/>
         <xs:enumeration value="obfuscated"/>
      </xs:restriction>
   </xs:simpleType>
   <xs:complexType name="previouslySentByType">
      <xs:sequence>
         <xs:element name="UserAgent" type="tns:userAgentInfoType" minOccurs="0"
maxOccurs="unbounded"/>
      </xs:sequence>
   </xs:complexType>
   <xs:complexType name="previouslySentByDateTime">
      <xs:sequence>
         <xs:element name="DateTime" type="tns:userAgentDateTimeType" minOccurs="0"
maxOccurs="unbounded"/>
      </xs:sequence>
   </xs:complexType>
   <xs:complexType name="userAgentInfoType">
      <xs:complexContent>
         <xs:extension base="tns:addressType">
            <xs:attribute name="sequence" type="xs:positiveInteger" use="optional"/>
         </xs:extension>
      </xs:complexContent>
   </xs:complexType>
   <xs:complexType name="userAgentDateTimeType">
      <xs:simpleContent>
         <xs:extension base="tns:relativeOrAbsoluteDateType">
            <xs:attribute name="sequence" type="xs:positiveInteger" use="optional"/>
         </xs:extension>
      </xs:simpleContent>
   </xs:complexType>
   <xs:simpleType name="serviceProviderIDType">
      <xs:annotation>
         <xs:documentation>Service Provider Identification</xs:documentation>
      </xs:annotation>
      <xs:restriction base="xs:string"/>
   </xs:simpleType>
   <xs:simpleType name="chargedPartyIDType">
      <xs:annotation>
         <xs:documentation>The address of the third party which is expected to pay for the
MM</xs:documentation>
      </xs:annotation>
      <xs:restriction base="xs:string"/>
   </xs:simpleType>
   <xs:simpleType name="MMStatusExtensionType">
      <xs:restriction base="xs:string">
         <xs:enumeration value="RejectionByMMSRecipient"/>
         <xs:enumeration value="RejectionByOtherRS"/>
      </xs:restriction>
   </xs:simpleType>
   <xs:complexType name="serviceCodeType">
      <xs:annotation>
         <xs:documentation>Used to identify the specific service given for billing
purposes</xs:documentation>
      </xs:annotation>
      <xs:simpleContent>
         <xs:extension base="xs:string">
            <xs:anyAttribute namespace="##other" processContents="lax"/>
         </xs:extension>
      </xs:simpleContent>
   </xs:complexType>
   <xs:simpleType name="entityIDType">
      <xs:annotation>
         <xs:documentation>String used to identify the VAS, VASP and MMSC</xs:documentation>
      </xs:annotation>
      <xs:restriction base="xs:string"/>
   </xs:simpleType>
   <xs:complexType name="recipientsType">
      <xs:annotation>
         <xs:documentation>At least one of To,CC,Bcc</xs:documentation>
      </xs:annotation>
```

```
      <xs:sequence maxOccurs="unbounded">
         <xs:choice>
            <xs:element name="To" type="tns:multiAddressType"/>
            <xs:element name="Cc" type="tns:multiAddressType"/>
            <xs:element name="Bcc" type="tns:multiAddressType"/>
         </xs:choice>
      </xs:sequence>
   </xs:complexType>
   <xs:simpleType name="messageClassType">
      <xs:annotation>
         <xs:documentation>Message class</xs:documentation>
      </xs:annotation>
      <xs:restriction base="xs:string">
         <xs:enumeration value="Personal"/>
         <xs:enumeration value="Informational"/>
         <xs:enumeration value="Advertisement"/>
         <xs:enumeration value="Auto"/>
      </xs:restriction>
   </xs:simpleType>
   <xs:simpleType name="priorityType">
      <xs:annotation>
         <xs:documentation>Priority of MM</xs:documentation>
      </xs:annotation>
      <xs:restriction base="xs:string">
         <xs:enumeration value="Normal"/>
         <xs:enumeration value="High"/>
         <xs:enumeration value="Low"/>
      </xs:restriction>
   </xs:simpleType>
   <xs:simpleType name="relativeOrAbsoluteDateType">
      <xs:annotation>
         <xs:documentation>Date which can be relative or absolute</xs:documentation>
      </xs:annotation>
      <xs:union memberTypes="xs:dateTime xs:duration"/>
   </xs:simpleType>
   <xs:simpleType name="chargedPartyType">
      <xs:annotation>
         <xs:documentation>Allows specification of which party - Sender or Reciever pays for
transmission</xs:documentation>
      </xs:annotation>
      <xs:restriction base="xs:string">
         <xs:enumeration value="Sender"/>
         <xs:enumeration value="Recipient"/>
         <xs:enumeration value="Both"/>
         <xs:enumeration value="Neither"/>
         <xs:enumeration value="ThirdParty"/>
      </xs:restriction>
   </xs:simpleType>
   <xs:simpleType name="versionType">
      <xs:annotation>
         <xs:documentation>Version number in the format of x.y.z </xs:documentation>
      </xs:annotation>
      <xs:restriction base="xs:string">
         <xs:enumeration value="6.6.0"/>
         <xs:enumeration value="6.5.0"/>
         <xs:enumeration value="6.4.0"/>
         <xs:enumeration value="6.3.0"/>
         <xs:enumeration value="5.10.0"/>
         <xs:enumeration value="5.8.0"/>
         <xs:enumeration value="5.6.0"/>
         <xs:enumeration value="5.5.0"/>
         <xs:enumeration value="5.3.0"/>
      </xs:restriction>
   </xs:simpleType>
   <xs:simpleType name="statusCodeType">
      <xs:annotation>
         <xs:documentation>request status resonse codes in RES </xs:documentation>
      </xs:annotation>
      <xs:restriction base="xs:positiveInteger"/>
   </xs:simpleType>
   <xs:complexType name="contentReferenceType">
      <xs:annotation>
         <xs:documentation>content element including only href</xs:documentation>
      </xs:annotation>
      <xs:attribute name="href" type="xs:anyURI" use="required"/>
      <xs:attribute name="allowAdaptations" type="xs:boolean" use="optional" default="true"/>
   </xs:complexType>
   <xs:complexType name="anyDataType">
```

```
      <xs:annotation>
         <xs:documentation>Any element and attribute </xs:documentation>
      </xs:annotation>
      <xs:complexContent>
         <xs:restriction base="xs:anyType">
            <xs:sequence>
               <xs:any processContents="lax" minOccurs="0" maxOccurs="unbounded"/>
            </xs:sequence>
         </xs:restriction>
      </xs:complexContent>
   </xs:complexType>
   <xs:simpleType name="statusTextType">
      <xs:annotation>
         <xs:documentation>list of standard human-readable status descriptions</xs:documentation>
      </xs:annotation>
      <xs:restriction base="xs:string"/>
   </xs:simpleType>
</xs:schema>
```

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CR-Form-v7

CHANGE REQUEST

⌘ **23.140** **CR** **163** ⌘ **rev** **-** ⌘ Current version: **6.5.0** ⌘

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

Proposed change affects: UICC apps⌘ ☐ ME ☒ Radio Access Network ☐ Core Network ☐

Title:	⌘	Size indication by MMS UA
Source:	⌘	T2 (T-Mobile, Orange, TeliaSonera)
Work item code:	⌘	MMS6
Date:	⌘	21/04/2004
Category:	⌘	**C**
Release:	⌘	Rel-6

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)*
Rel-6	*(Release 6)*

Reason for change:	⌘	The current specification describes, as an optional application layer functionality of the MMS User Agent, the presentation of an approximate MM Size prior to MM submission. Such an only approximate size indication would not increase charging transparency (in case MM size is a charging parameter) but in fact increase charging non-transparency, confuse users and jeopardise the success of MMS.
Summary of change:	⌘	The optional application layer functionality to present an approximate MM Size is replaced by the optional application layer functionality to present the exact MM Size prior to MM submission.
Consequences if not approved:	⌘	An obscure functionality would remain part of the specification

Clauses affected:	⌘	Clause 5.1.1

	Y	N		
Other specs affected: ⌘		X	Other core specifications	⌘
			Test specifications	
			O&M Specifications	

Other comments:	⌘	

How to create CRs using this form:
Comprehensive information and tips about how to create CRs can be found at http://www.3gpp.org/specs/CR.htm.
Below is a brief summary:

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

5.1.1 MMS User Agent operations

The MMS User Agent shall provide the following application layer functionalities:-

- the retrieval of MMs (initiate MM delivery to the MMS User Agent);
- terminal capability negotiation.

The MMS User Agent may provide additional application layer functionalities such as:-

- the MM composition ;
- the presentation of ~~an approximate~~the MM Size (as defined in clause 4.4) prior to MM submission;
- the MM submission;
- the MM presentation;
- the presentation of notifications to the user;
- the signing of an MM on an end-user to end-user basis;
- the decryption and encryption of an MM on an end-user to end-user basis;
- all aspects of storing MMs on the terminal;
- handling of MMS-related information on the (U)SIM;
- management and presentation of MMBox content;
- the handling of external devices;
- the user profile management.

This optional list of additional functionalities of the MMS User Agent is not exhaustive.