Source: **SA5 (Telecom Management)**

Title: **3 Rel-6 CR 32.270 MMS Charging**

Document for: **Approval**

Agenda Item: **7.5.3**

Doc1stevel	Specifica	CR	R	Phase	Subject	Ca	VersCu	Doc2ndLev	WorkitemsID
SP-040780	32.270	001	--	Rel-6	Introduce Application Data in MMS Charging – Align with T2's TS 23.140 (MMS6)	F	6.0.0	S5-044781	CH-SC
SP-040780	32.270	002	--	Rel-6	Introduce Content Adaptation in MMS Charging – Align with T2's 23.140 (MMS6)	F	6.0.0	S5-044782	CH-SC
SP-040780	32.270	003	--	Rel-6	Correction on VASP MMS CDR triggers	F	6.0.0	S5-044783	CH-SC

3GPP

CR-Form-v7

CHANGE REQUEST

⌘	**32.270** CR **001**	⌘**rev**	**-**	⌘	Current version:	**6.0.0**	⌘

*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:	⌘	Introduce Application Data in MMS Charging – Align with T2's TS 23.140 (MMS6)
Source:	⌘	**SA5** (alain.bibas@francetelecom.com)
Work item code:⌘	CH-SC	***Date:*** ⌘ 15/11/2004

Category:	⌘ **F**	***Release:*** ⌘ Rel-6

Use <u>one</u> 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 <u>one</u> 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:	⌘	Alignment of MMS charging with 23.140 CR in T2-040347 (Introducing Application Addressing in MMS).
Summary of change:⌘		Three new optional parameters ('Applic-ID', 'Reply-Applic-ID' and 'Aux-Applic-Info) for application addressing are introduced in the MMS CDRs for offline charging and in the Credit Control Request message for online charging.
Consequences if not approved:	⌘	The MMS subscribers can not be charged for using the MMS to transport data specific to applications.

Clauses affected:	⌘	3.1 and 6.1

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

Other comments:	⌘	Depends on T2 CR T2-040347.

3   Definitions, abbreviations and symbols

3.1   Definitions

For the purposes of the present document, the following terms and definitions given in 3GPP TR 21.905 [50], 3GPP TS 32.240 [1] and 3GPP TS 22.140 [200] and the following apply:

accounting: process of apportioning charges between the Home Environment, Serving Network and Subscriber.

application data: Information / data specific to an application other than the MMS User Agent / VASP which is intended to be transported without alteration by using MMS. Application Data may be of any content type and format.

billing: function whereby CDRs generated by the charging function(s) are transformed into bills requiring payment.

Billing Domain: part of the operator network, which is outside the telecommunications network, that receives and processes CDR files from the network charging functions. It includes functions that can provide billing mediation and billing or other (e.g. statistical) end applications. It is only applicable to offline charging (see "Online Charging System" for equivalent functionality in online charging).

CDR field categories: the CDR fields are defined in the present document. They are divided into the following categories:

- Mandatory (**M**): field that shall always be present in the CDR.

- Conditional (**C**): field that shall be present in a CDR if certain conditions are met.

- Operator Provisionable: Mandatory (O_m): A field that operators have provisioned to always be included in the CDR.

- Operator Provisionable: Conditional (O_c): A field that operators have provisioned to be included in the CDR if certain conditions are met.

chargeable event: activity utilizing telecommunications network resources and related services for:

  ▪ user to user communication (e.g. a single call, a data communication session or a short message); or

  ▪ user to network communication (e.g. service profile administration); or

  ▪ inter-network communication (e.g. transferring calls, signalling, or short messages); or

  ▪ mobility (e.g. roaming or inter-system handover); and

  ▪ that the network operator may want to charge for.

As a minimum, a chargeable event characterises the resource / service usage and indicates the identity of the involved end user(s).

charged party: user involved in a chargeable event who has to pay parts or the whole charges of the chargeable event, or a third party paying the charges caused by one or all users involved in the chargeable event, or a network operator.

charging: a function within the telecommunications network and the associated OCS/BD components whereby information related to a chargeable event is collected, formatted, transferred and evaluated in order to make it possible to determine usage for which the charged party may be billed.

Charging Data Record (CDR): a formatted collection of information about a chargeable event (e.g. time of call set-up, duration of the call, amount of data transferred, etc) for use in billing and accounting. For each party to be charged for parts of or all charges of a chargeable event a separate CDR shall be generated, i.e. more than one CDR may be generated for a single chargeable event, e.g. because of its long duration, or because more than one charged party is to be charged.

charging event: a set of charging information forwarded by the CTF towards the CDF (offline charging) or towards the OCS (online charging). Each charging event matches exactly one chargeable event.

charging function: entity inside the network domain, subsystem or service that is involved in charging for that domain, subsystem or service.

circuit switched domain: domain within GSM / UMTS in which information is transferred in circuit switched mode.

credit control: ffs.

delivery report: feedback information provided to an originator MMS User Agent by an MMS Relay/Server about the status of the delivery of an MM.

domain: part of a communication network that provides network resources using a certain bearer technology.

forwarded MM: MM originally sent from a sender to an intended recipient which is then forwarded to other recipient(s) and to which a delivery report and/or read-reply report may refer and which may be subject to further forwarding.

forwarding MMS user agent: MMS user agent that is the intended recipient of an MM and that requests forwarding of the MM for delivery to other recipient(s) without having to first download the MM.

Fully Qualified Partial CDR (FQPC): partial CDR that contains a complete set of the fields specified in the present document. This includes all the mandatory and conditional fields as well as those fields that the PLMN operator has provisioned to be included in the CDR. The first Partial CDR shall be a Fully qualified Partial CDR.

message ID: unique identifier for an MM.

middle tier (charging) TS: used for the 3GPP charging TSs that specify the domain / subsystem / service specific, online and offline, charging functionality. These are all the TSs in the numbering range from 3GPP TS 32.250 to 3GPP TS 32.279, e.g. 3GPP TS 32.250 [10] for the CS domain, or 3GPP TS 32.270 [30] for the MMS service. Currently, there is only one "tier 1" TS in 3GPP, which is TS 32.240 [1] that specifies the charging architecture and principles. Finally, there are a number of top tier TSs in the 32.29x numbering range ([50] ff) that specify common charging aspects such as parameter definitions, encoding rules, the common billing domain interface or common charging applications.

MMSE: collection of MMS-specific elements under the control of a single administration.

MMS Relay/Server: MMS-specific network entity/application that is under the control of an MMS service provider. An MMS relay/server transfers messages, provides operations of the MMS that are specific to or required by the mobile environment and provides (temporary and/or persistent) storage services to the MMS.

MMS user agent: application residing on a user equipment, a mobile station or an external device that performs MMS-specific operations on a user's behalf and/or on another application's behalf. An MMS user agent is not considered part of an MMSE.

near real-time: near real-time charging and billing information is to be generated, processed, and transported to a desired conclusion in less than 1 minute.

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End of Change in Clause 3.1

6 Definition of charging information

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6.1.1 MMS records for originator MMS relay/server

The following subclauses specify CDRs created in the originator MMS Relay/Server based on messages flowing over the MM1 and MM4 reference points. The CDRs referring to MM4 messages (Originator MM4 *** CDR) are created only if the originator and recipient MMS Relay/Servers communicate over the MM4 interface (i.e. the originator MMS Relay/Server is not also the recipient MMS Relay/Server). The CDRs referring to MM1 messages (Originator MM1 *** CDR) are created regardless of whether the originator MMS Relay/Server is also the recipient MMS Relay/Server or not. Unless otherwise specified, the CDR parameters are copied from the corresponding MM1 or MM4 message parameters as applicable.

6.1.1.1 Originator MM1 Submission CDR (O1S-CDR)

If enabled, an Originator MM1 Submission Charging Data Record (O1S-CDR) shall be produced in the originator MMS Relay/Server for each MM submitted in an MM1_submit.REQ by an originator MMS User Agent to the originator MMS Relay/Server if and when the originator MMS Relay/Server responds with an MM1_submit.RES. The operator can configure whether this CDR, if enabled, shall only be created for MM1_submit.RES indicating acceptance of the submitted MM, or also for the unsuccessful submissions.

NOTE 1: This includes the case where the MM is a reply-MM to an original MM. In this case the MMS User Agent sending the reply-MM is called the originator MMS User Agent of this reply-MM and the MMS Relay/Server receiving the reply-MM in an MM1_submit.REQ is called the originator MMS Relay/Server for this reply-MM.

NOTE 2: The case of an MMS Relay/Server receiving an MM1_forward.REQ is treated in subclause 6.1.3.

Table 6.1: Originator MM1 Submission CDR (O1S-CDR)

Field	Category	Description
Record Type	M	Originator MM1 Submission record
Originator MMS Relay/Server Address	M	.IP address or domain name of originator MMS Relay/Server
Message ID	M	The MM identification provided by the originator MMS Relay/Server
Reply-Charging ID	C	This field is present in the CDR only if the MM is a reply-MM to an original MM. The Reply-Charging ID is the Message ID of the original MM
Originator address	M	The address of the originator MMS User Agent (i.e., of the MMS User Agent that has sent the MM1_submit.REQ)
Recipients address list	M	The address(es) of the recipient MMS User Agent(s) of the MM. Multiple addresses are possible if the MM is not a reply MM
Access Correlation	O_m	A unique identifier delivered by the used access network domain of the originator MMS User Agent
Content type	M	The content type of the MM content
MM component list	O_m	The list of media components with volume size
Message size	M	The total size of the MM content
Message class	O_c	The class selection such as personal, advertisement, information service if specified in the MM1_submit_REQ
Charge Information	O_m	The charged party indication and charge type
Submission Time	O_c	The time at which the MM was submitted from the originator MMS User Agent if specified in the MM1_submit_REQ
Time of Expiry	O_c	The desired date of expiry or duration of time prior to expiry for the MM if specified by the originator MMS User Agent
Earliest Time Of Delivery	C	This field contains either the earliest time to deliver the MM or the number of seconds to wait before delivering the MM as specified by the originator MMS User Agent
Duration Of Transmission	O_m	The time used for transmission of the MM between the User Agent and the MMS Relay/Server
Request Status Code	O_m	The status code of the MM as received in the MM1_submit_REQ

Field	Category	Description
Delivery Report Requested	O$_m$	This field indicates whether a delivery report has been requested by the originator MMS User Agent or not
Reply Charging	O$_c$	A request for reply-charging if specified by the originator MMS User Agent
Reply Deadline	O$_c$	In case of reply-charging the latest time of submission of replies granted to the recipient(s) as specified by the originator MMS User Agent
Reply Charging Size	O$_c$	In case of reply-charging the maximum size for reply-MM(s) granted to the recipient(s) as specified by the originator MMS User Agent
Priority	O$_c$	The priority (importance) of the message if specified by the originator MMS User Agent
Sender visibility	O$_m$	A request to show or hide the sender's identity when the message is delivered to the recipient as specified by the originator MMS User Agent
Read reply requested	O$_m$	A request for read reply report as specified in the MM1_submit.REQ
Status Text	O$_c$	This field includes a more detailed technical status of the message at the point in time when the CDR is generated. This field is only present if the MM submission is rejected
Applic-ID	O$_c$	If present, this field holds the identification of the destination application that the underlying MMS abstract message was addressed to.
Reply-Applic-ID	O$_c$	If present, this parameter indicates a "reply path", i.e. the identifier of the application to which delivery reports, read-reply reports and reply-MMs are addressed.
Aux-Applic-Info	O$_c$	If present, this parameter indicates additional application/implementation specific control information.
Record Time Stamp	O$_m$	Time of generation of the CDR
Local Record Sequence Number	O$_m$	Consecutive record number created by this node. The number is allocated sequentially including all CDR types
MMBox Storage Information	C$_o$	A set of parameters related to the MMBox management. This parameter is only present if the MMBox feature is supported by the MMS Relay/Server and storage of the MM was requested by originator MMS User Agent (i.e., of the MMS User Agent that has sent the MM1_submit.REQ)
Serving network identity	O$_m$	SGSN PLMN Identifier (MCC and MNC) used during this record
Record extensions	C$_o$	A set of network/manufacturer specific extensions to the record. Conditioned upon the existence of an extension

6.1.1.2 Originator MM4 Forward Request CDR (O4FRq-CDR)

If enabled, an Originator MM4 Forward Request Charging Data Record (O4FRq-CDR) shall be produced in the originator MMS Relay/Server if and when the originator MMS Relay Server has sent an MM4_forward.REQ to the recipient MMS Relay/Server, regardless of whether or not an MM4_forward.RES is received from the recipient. That is, the CDR is created upon completion of transmission of the MM4_forward.REQ.

The MM4_forward.REQ may be generated as a reaction to an incoming MM1_forward.REQ. In this case, the *Originator address* field specifies the address of the originator MMS User Agent of the original MM, whereas the address of the forwarding MMS User Agent is contained in the *Forwarding address* field.

Table 6.2: Originator MM4 Forward Request record (O4FRq-CDR)

Field	Category	Description
Record Type	M	Originator MM4 Forward Request record
Originator MMS Relay/Server Address	M	IP address or domain name of the originator MMS Relay/Server
Recipient MMS Relay/Server Address	M	IP address or domain name of the recipient MMS Relay/Server
Message ID	M	The MM identification provided by the originator MMS Relay/Server
3GPP MMS Version	O_m	The MMS version of the originator MMS Relay/Server
Originator address	M	The address of the originator MMS User Agent of the MM. (If the MM4_forward.REQ is generated as a reaction to an incoming MM1_forward.REQ, this is the address of the originator MMS User agent of the original MM
Recipients address list	M	The address(es) of the recipient MMS User Agent(s) of the MM as specified in the MM4_forward.REQ that triggered the CDR
Recipient address for routing	M	The address(es) of the recipient MMS User Agent(s) of the MM for that routing is requested as specified in the MM4_forward.REQ that triggered the CDR
Content type	M	The content type of the MM content
MM component list	O_m	The list of media components with volume size
Message size	M	The total size of the MM content
Message class	C	The class of the MM (e.g., personal, advertisement, information service) if specified by the originator MMS User Agent
Submission Time	M	The time at which the MM was submitted or forwarded as specified in the corresponding MM1_submit.REQ or MM1_forwarding.REQ
Time of Expiry	C	The desired date of expiry or duration of time prior to expiry for the MM if specified by the originator MMS User Agent
Delivery Report Requested	M	This field indicates whether a delivery report has been requested by the originator MMS User Agent or not
Priority	C	The priority (importance) of the message if specified by the originator MMS User Agent
Sender visibility	M	A request to show or hide the sender's identity when the message is delivered to the MM recipient if the originator MMS User Agent has requested her address to be hidden from the recipient
Read reply requested	M	A request for read reply report if the originator MMS User Agent has requested a read-reply report for the MM
Acknowledgement Request	M	Request for MM4_forward.RES
Forward counter	C	A counter indicating the number of times the particular MM was forwarded
Forwarding address	C	The address(es) of the forwarding MMS User Agent(s). Multiple addresses are possible. In the multiple address case this is a sequential list of the address(es) of the forwarding MMS User Agents who forwarded the same MM
Applic-ID	O_c	If present, this field holds the identification of the destination application that the underlying MMS abstract message was addressed to.
Reply-Applic-ID	O_c	If present, this parameter indicates a "reply path", i.e. the identifier of the application to which delivery reports, read-reply reports and reply-MMs are addressed.
Aux-Applic-Info	O_c	If present, this parameter indicates additional application/implementation specific control information.
Record Time Stamp	M	Time of generation of the CDR
Local Record Sequence Number	O_m	Consecutive record number created by this node. The number is allocated sequentially including all CDR types
Serving network identity	O_m	SGSN PLMN Identifier (MCC and MNC) used during this record
Record extensions	O_c	A set of network/manufacturer specific extensions to the record. Conditioned upon the existence of an extension

6.1.1.3 Originator MM4 Forward Response CDR (O4FRs-CDR)

If enabled, an Originator MM4 Forward Response Charging Data Record (O4FRs-CDR) shall be produced in the originator MMS Relay/Server if and when, after an MM has been forwarded with an MM4_forward.REQ to the recipient MMS Relay/Server, the originator MMS Relay/Server receives a corresponding MM4_forward.RES from the recipient MMS Relay/Server.

Table 6.3: Originator MM4 Forward Response record (O4FRs-CDR)

Field	Category	Description
Record Type	M	Originator MM4 Forward Response record
Originator MMS Relay/Server Address	O$_m$	IP address or domain name of the originator MMS Relay/Server
Recipient MMS Relay/Server Address	M	IP address or domain name of the recipient MMS Relay/Server
Message ID	M	The MM identification provided by the originator MMS Relay/Server
3GPP MMS Version	O$_m$	The MMS version of the recipient MMS Relay/Server
Request Status Code	O$_m$	The status code of the request to route forward the MM as received in the MM4_forward.RES
Status Text	O$_c$	This field includes the status text as received in the MM4_forward.RES corresponding to the Request Status Code. Present only if provided in the MM4_forward.RES
Record Time Stamp	O$_m$	Time of generation of the CDR
Local Record Sequence Number	O$_m$	Consecutive record number created by this node. The number is allocated sequentially including all CDR types
Record extensions	O$_c$	A set of network/manufacturer specific extensions to the record. Conditioned upon the existence of an extension

6.1.1.4 Originator MM4 Delivery report CDR (O4D-CDR)

If enabled, an Originator MM4 Delivery report Charging Data Record (O4D-CDR) shall be produced in the originator MMS Relay/Server if and when the originator MMS Relay/Server receives an MM4_delivery_report.REQ from the recipient MMS Relay/Server.

Table 6.4: Originator MM4 Delivery report record (O4D-CDR)

Field	Category	Description
Record Type	M	Originator MM4 Delivery report record
Recipient MMS Relay/Server Address	O$_m$	IP address or domain name of the recipient MMS Relay/Server
Originator MMS Relay/Server Address	O$_m$	IP address or domain name of the originator MMS Relay/Server
Message ID	M	The MM identification provided by the originator MMS Relay/Server
3GPP MMS Version	O$_m$	The MMS version of the recipient MMS Relay/Server
Originator address	O$_m$	The address of the originator MMS User Agent of the MM
Recipient address	M	The address of the MM recipient of the MM
MM Date and time	M	Date and time the MM was handled (retrieved, expired, rejected, etc.) as specified in the MM4_delivery_report
Acknowledgement Request	M	Request for MM4_delivery_report.RES
MM Status Code	M	The status code of the delivered MM as received in the MM4_delivery_report.REQ
Status Text	O$_c$	This field includes the status text as received in the MM4_delivery_report.REQ corresponding to the MM Status Code. Present only if provided in the MM4_delivery_report.REQ
Applic-ID	O$_c$	If present, this field holds the identification of the destination application that the underlying MMS abstract message was addressed to.
Reply-Applic-ID	O$_c$	If present, this parameter indicates a "reply path", i.e. the identifier of the application to which delivery reports, read-reply reports and reply-MMs are addressed.
Aux-Applic-Info	O$_c$	If present, this parameter indicates additional application/implementation specific control information.
Record Time Stamp	O$_m$	Time of generation of the CDR
Local Record Sequence Number	O$_m$	Consecutive record number created by this node. The number is allocated sequentially including all CDR types
Record extensions	O$_c$	A set of network/manufacturer specific extensions to the record. Conditioned upon the existence of an extension

6.1.1.5 Originator MM1 Delivery report CDR (O1D-CDR)

If enabled, an Originator MM1 Delivery report Charging Data Record (O1D-CDR) shall be produced in the originator MMS Relay/Server if and when the originator MMS Relay/Server sends an MM1_delivery_report.REQ to the originator MMS User Agent.

Table 6.5: Originator MM1 Delivery report record (O1D-CDR)

Field	Category	Description
Record Type	M	Originator MM1 Delivery report record
Recipient MMS Relay/Server Address	O_m	IP address or domain name of the recipient MMS Relay/Server
Originator MMS Relay/Server Address	O_m	IP address or domain name of the originator MMS Relay/Server
Access Correlation	O_m	A unique identifier delivered by the used access network domain of the originator MMS User Agent
Message ID	M	The MM identification provided by the originator MMS Relay/Server
3GPP MMS Version	O_m	The MMS version of the originator MMS Relay/Server
Originator address	O_m	The address of the originator MMS User Agent of the MM
Recipient address	M	The address of the MM recipient of the MM
MM Status Code	O_m	The status code of the MM as sent in the MM Status information element in the MM1_delivery_report.REQ
Applic-ID	O_c	If present, this field holds the identification of the destination application that the underlying MMS abstract message was addressed to.
Reply-Applic-ID	O_c	If present, this parameter indicates a "reply path", i.e. the identifier of the application to which delivery reports, read-reply reports and reply-MMs are addressed.
Aux-Applic-Info	O_c	If present, this parameter indicates additional application/implementation specific control information.
Record Time Stamp	O_m	Time of generation of the CDR
Local Record Sequence Number	O_m	Consecutive record number created by this node. The number is allocated sequentially including all CDR types
Serving network identity	O_m	SGSN PLMN Identifier (MCC and MNC) used during this record
Record extensions	O_c	A set of network/manufacturer specific extensions to the record. Conditioned upon the existence of an extension

6.1.1.6   Originator MM4 Read reply report CDR (O4R-CDR)

If enabled, an Originator MM4 Read reply report Charging Data Record (O4R-CDR) shall be produced in the originator MMS Relay/Server if and when the originator MMS Relay/Server receives an MM4_read_reply_report.REQ from the recipient MMS Relay/Server.

Table 6.6: Originator MM4 Read reply report record (O4R-CDR)

Field	Category	Description
Record Type	M	Originator MM4 Read reply report record
Recipient MMS Relay/Server Address	O_m	IP address or domain name of the recipient MMS Relay/Server
Originator MMS Relay/Server Address	O_m	IP address or domain name of the originator MMS Relay/Server
Message ID	M	The MM identification provided by the originator MMS Relay/Server
3GPP MMS Version	O_m	The MMS version of the recipient MMS Relay/Server
Originator address	O_m	The address of the originator MMS User Agent of the MM
Recipient address	O_m	The address of the MM recipient of the MM
MM Date and time	O_m	Date and time the MM was handled (retrieved, expired, rejected, etc.)
Acknowledgement Request	M	Request for MM4_read_reply_report.RES
Read Status	O_m	The status of the MM as received in the MM4_read_reply_report.REQ
Status Text	O_c	This field includes the status text if received in the MM4_read_reply_report.REQ corresponding to the Read Status. Present only if provided in the MM4_read_reply_report.REQ
Applic-ID	O_c	If present, this field holds the identification of the destination application that the underlying MMS abstract message was addressed to.
Reply-Applic-ID	O_c	If present, this parameter indicates a "reply path", i.e. the identifier of the application to which delivery reports, read-reply reports and reply-MMs are addressed.
Aux-Applic-Info	O_c	If present, this parameter indicates additional application/implementation specific control information.
Record Time Stamp	O_m	Time of generation of the CDR
Local Record Sequence Number	O_m	Consecutive record number created by this node. The number is allocated sequentially including all CDR types
Record extensions	O_c	A set of network/manufacturer specific extensions to the record. Conditioned upon the existence of an extension

6.1.1.7   Originator MM1 Read reply originator CDR (O1R-CDR)

If enabled, an Originator MM1 Read reply originator Charging Data Record (O1R-CDR) shall be produced in the originator MMS Relay/Server if and when the originator MMS Relay/Server sends an MM1_read_reply_originator.REQ to the originator MMS User Agent.

Table 6.7: Originator MM1 Read reply originator record (O1D-CDR)

Field	Category	Description
Record Type	M	Originator MM1 Read reply originator record
Recipient MMS Relay/Server Address	O$_m$	IP address or domain name of the recipient MMS Relay/Server
Originator MMS Relay/Server Address	O$_m$	IP address or domain name of the originator MMS Relay/Server
Access Correlation	O$_m$	A unique identifier delivered by the used access network domain of the originator MMS User Agent.
Message ID	M	The MM identification provided by the originator MMS Relay/Server
3GPP MMS Version	O$_m$	The MMS version of the originator MMS Relay/Server
Originator address	O$_m$	The address of the originator MMS User Agent of the MM
Recipient address	O$_m$	The address of the MM recipient of the MM
Read Status	O$_m$	The status of the MM as sent in the MM1_read_reply originator.REQ
Applic-ID	O$_c$	If present, this field holds the identification of the destination application that the underlying MMS abstract message was addressed to.
Reply-Applic-ID	O$_c$	If present, this parameter indicates a "reply path", i.e. the identifier of the application to which delivery reports, read-reply reports and reply-MMs are addressed.
Aux-Applic-Info	O$_c$	If present, this parameter indicates additional application/implementation specific control information.
Record Time Stamp	O$_m$	Time of generation of the CDR
Local Record Sequence Number	O$_m$	Consecutive record number created by this node. The number is allocated sequentially including all CDR types
Serving network identity	O$_m$	SGSN PLMN Identifier (MCC and MNC) used during this record
Record extensions	O$_c$	A set of network/manufacturer specific extensions to the record. Conditioned upon the existence of an extension

6.1.1.8 Originator MM Deletion CDR (OMD-CDR)

If enabled, an Originator MM Deletion Charging Data Record (OMD-CDR) shall be produced in the originator MMS Relay/Server, after sending an MM1_submit.RES to the originator MMS User Agent, if and when:

a) the originator MMS Relay/Server decides to abandon processing of the MM at any point after receiving the corresponding MM1_submit.REQ; or

b) the originator MMS Relay/Server decides to delete the MM because of expiry of storage time, which may either be indicated in the submit request or governed by operator procedure (e.g. after successful MM delivery).

Abandoning the processing of the MM, or deleting the MM, implies that there remains no knowledge of the MM in the originator MMS Relay/Server.

The status code indicates the precise reason for abandoning or deleting the MM with respect to the MMS transactions specified in 3GPP TS 23.140 [201].

This CDR is created regardless of whether the originator MMS Relay/Server is also the recipient MMS Relay/Server or not.

Table 6.8: Originator MM Deletion record (OMD-CDR)

Field	Category	Description
Record Type	M	Originator MM Deletion record
Originator MMS Relay/Server Address	O$_m$	IP address or domain name of the originator MMS Relay/Server
Recipient MMS Relay/Server Address	C	IP address or domain name of the recipient MMS Relay/Server. This field is present, if such an address is known
Message ID	M	The MM identification provided by the originator MMS Relay/Server
Message size	O$_m$	The total size of the MM content
MM Status Code	O$_m$	The status code of the MM at the time when the CDR is generated
Status Text	O$_m$	This field includes a more detailed technical status of the message at the point in time when the CDR is generated
Record Time Stamp	O$_m$	Time of generation of the CDR
Local Record Sequence Number	O$_m$	Consecutive record number created by this node. The number is allocated sequentially including all CDR types
Record extensions	O$_m$	A set of network/manufacturer specific extensions to the record. Conditioned upon the existence of an extension

6.1.2 MMS records for recipient MMS Relay/server

The following subcaluses specify CDRs created in the recipient MMS Relay/Server based on messages flowing over the MM1 and MM4 interfaces. The CDRs referring to MM4 messages (Recipient MM4 *** CDR) are created only if the originator and recipient MMS Relay Servers communicate over the MM4 interface (i.e. the recipient MMS Relay/Server is not also the originator MMS Relay/Server). The CDRs referring to MM1 messages (Recipient MM1 *** CDR) are created regardless of whether the recipient MMS Relay/Server is also the originator MMS Relay/Server or not. Unless otherwise specified the CDR parameters are copied from the corresponding MM1 or MM4 message parameters as applicable.

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6.1.2.2 Recipient MM1 Notification Request CDR (R1NRq-CDR)

If enabled, a Recipient MM1 Notification Request Charging Data Record (R1NRq-CDR) shall be produced in the recipient MMS Relay/Server if and when the recipient MMS Relay/Server sends an MM1_notification.REQ to the recipient MMS User Agent.

Table 6.10: Recipient MM1 Notification Request record (R1NRq -CDR)

Field	Category	Description
Record Type	M	Recipient MM1 Notification Request record
Recipient MMS Relay/Server Address	M	IP address or domain name of the recipient MMS Relay/Server
Message ID	M	The MM identification provided by the originator MMS Relay/Server
Reply Charging ID	C	This field is present in the CDR only if the MM is a reply-MM to an original MM. The Reply-Charging ID is the Message ID of the original MM
Sender address	M	The address of the MMS User Agent as used in the MM1_notification_REQ. This parameter is present in the CDR regardless of address hiding
Recipient address	M	The address of the MM recipient of the MM
Access Correlation	O_m	A unique identifier delivered by the used access network domain of the recipient MMS User Agent
Message class	M	The class selection such as personal, advertisement, information service; default = personal
MM component list	O_m	The list of media components with volume size
Message size	O_m	The total size of the MM content
Time of Expiry	O_m	The date of expiry or duration of time prior to expiry for the MM
Message Reference	M	A reference, e.g., URI, for the MM
Delivery Report Requested	O_m	This field indicates whether a delivery report is requested or not as specified in the MM1_notification.REQ
Reply Charging	O_c	Information that a reply to this particular original MM is free of charge as specified in the MM1_notification.REQ
Reply Deadline	O_c	In case of reply-charging the latest time of submission of a reply granted to the recipient as specified in the MM1_notification.REQ
Reply Charging-Size	O_c	In case of reply-charging the maximum size of a reply-MM granted to the recipient as specified in the MM1_notification.REQ
MM Status Code	O_m	The status code of the MM at the time when the CDR is generated
Status Text	O_m	This field includes a more detailed technical status of the message at the point in time when the CDR is generated.
Applic-ID	O_c	If present, this field holds the identification of the destination application that the underlying MMS abstract message was addressed to.
Reply-Applic-ID	O_c	If present, this parameter indicates a "reply path", i.e. the identifier of the application to which delivery reports, read-reply reports and reply-MMs are addressed.
Aux-Applic-Info	O_c	If present, this parameter indicates additional application/implementation specific control information.
Record Time Stamp	O_m	Time of generation of the CDR
Local Record Sequence Number	O_m	Consecutive record number created by this node. The number is allocated sequentially including all CDR types
Serving network identity	O_m	SGSN PLMN Identifier (MCC and MNC) used during this record
Record extensions	O_c	A set of network/manufacturer specific extensions to the record. Conditioned upon the existence of an extension

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6.1.2.4   Recipient MM1 Retrieve CDR (R1Rt-CDR)

If enabled, a Recipient MM1 Retrieve Charging Data Record (R1Rt-CDR) shall be produced in the recipient MMS Relay/Server if and when the recipient MMS Relay/Server has sent an MM1_retrieve.RES to the recipient MMS User Agent. That is, the CDR is created upon completion of transmission of the MM1_retrieve.RES.

Table 6.12: Recipient MM1 Retrieve record (R1Rt-CDR)

Field	Category	Description
Record Type	M	Recipient MM1 Retrieve record
Recipient MMS Relay/Server Address	M	IP address or domain name of the recipient MMS Relay/Server
Message ID	M	The MM identification provided by the originator MMS Relay/Server
Reply Charging ID	C	This field is present in the CDR only if the MM is a reply-MM to an original MM. The Reply-Charging ID is the Message ID of the original MM
Sender address	C	The address of the MMS User Agent as used in the MM1_retrieve.RES. This parameter is present in the CDR regardless of address hiding
Recipient address	M	The address of the recipient MM User Agent of the MM
Access Correlation	O_m	A unique identifier delivered by the used access network domain of the originator MMS User Agent.
Message Reference	M	Location of the content of the MM to be retrieved as specified in the MM1_retrieve.REQ
Original MM Content	M	This parameter contains a set of information elements related to the original MM.
	M	The content type of the MM content.
Content type	O_m	The total size of the original MM content.
Message size	O_m	The list of media components with volume size.
MM component list		
Adapted MM Content	C	If the MM content is adapted prior to its retrieval, this parameter is present and contains the resulting set of information elements related to the adapted MM.
Content type	C	The content type of the adapted MM content.
Message size	O_c	The total size of the adapted MM content.
MM component list	O_c	The list of media components with volume size of the adapted MM.
Message class	O_c	The class of the message (e.g., personal, advertisement, information service) if specified in the MM1_retrieve.RES
Submission Time	M	The time at which the MM was submitted or forwarded as specified in the MM1_retrieve.RES
Delivery report Requested	O_m	A request for delivery report as specified in the Delivery Report information element in the MM1_retrieve.RES
Priority	O_c	The priority (importance) of the message if specified in the MM1_retrieve.RES
Read reply Requested	O_c	A request for read-reply report if specified in the Read Reply information element in the MM1_retrieve.RES
MM Status Code	O_m	The status code of the MM at the time when the CDR is generated
Status Text	O_m	This field includes a more detailed technical status of the message at the point in time when the CDR is generated
Applic-ID	O_c	If present, this field holds the identification of the destination application that the underlying MMS abstract message was addressed to.
Reply-Applic-ID	O_c	If present, this parameter indicates a "reply path", i.e. the identifier of the application to which delivery reports, read-reply reports and reply-MMs are addressed.
Aux-Applic-Info	O_c	If present, this parameter indicates additional application/implementation specific control information.
Reply Deadline	O_c	In case of reply-charging the latest time of submission of a reply granted to the recipient as specified in the MM1_retrieve.RES
Reply Charging-Size	O_c	In case of reply-charging the maximum size of a reply-MM granted to the recipient as specified in the MM1_retrieve.RES
Duration Of Transmission	O_m	The time used for transmission of the MM between the User Agent and the MMS Relay/Server
Record Time Stamp	O_m	Time of generation of the CDR
Local Record Sequence Number	O_m	Consecutive record number created by this node. The number is allocated sequentially including all CDR types
Serving network identity	O_m	SGSN PLMN Identifier (MCC and MNC) used during this record
Record extensions	O_c	A set of network/manufacturer specific extensions to the record. Conditioned upon the existence of an extension

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6.1.2.8 Recipient MM1 Read reply Recipient CDR (R1RR-CDR)

If enabled, a Recipient MM1 Read reply Recipient Charging Data Record (R1RR-CDR) shall be produced in the recipient MMS Relay/Server if and when the recipient MMS Relay/Server receives an MM1_read_reply_recipient.REQ from the recipient MMS User Agent.

Table 6.16: Recipient MM1 Read reply Recipient record (R1RR-CDR)

Field	Category	Description
Record Type	M	Recipient MM1 Read reply Recipient record
Recipient MMS Relay/Server Address	M	IP address or domain name of the recipient MMS Relay/Server
Message ID	M	The MM identification provided by the originator MMS Relay/Server
Recipient address	M	The address of the recipient MM User Agent of the MM
Originator address	M	The address of the MM originator of the original MM, i.e., the recipient of the read-reply report
Access Correlation	O_m	A unique identifier delivered by the used access network domain of the originator MMS User Agent
MM Status Code	O_m	The status code of the MM at the time when the CDR is generated
Status Text	O_m	This field includes a more detailed technical status of the message at the point in time when the CDR is generated
Applic-ID	O_c	If present, this field holds the identification of the destination application that the underlying MMS abstract message was addressed to.
Reply-Applic-ID	O_c	If present, this parameter indicates a "reply path", i.e. the identifier of the application to which delivery reports, read-reply reports and reply-MMs are addressed.
Aux-Applic-Info	O_c	If present, this parameter indicates additional application/implementation specific control information.
Record Time Stamp	O_m	Time of generation of the CDR
Local Record Sequence Number	O_m	Consecutive record number created by this node. The number is allocated sequentially including all CDR types
Serving network identity	O_m	SGSN PLMN Identifier (MCC and MNC) used during this record
Record extensions	O_c	A set of network/manufacturer specific extensions to the record. Conditioned upon the existence of an extension

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6.1.5 MMS records for MMS VAS applications

The following subclauses specify CDRs created in the originator MMS Relay/Server based on messages flowing over the MM7 reference point. Unless otherwise specified, the CDR parameters are copied from the corresponding MM7 message parameters as applicable.

6.1.5.1 MM7 Submission CDR (MM7S-CDR)

If enabled, an MM7 Submission Charging Data Record (MM7S-CDR) shall be produced in the originator MMS Relay/Server for each MM submitted in an MM7_submit.REQ by a VASP to the originator MMS Relay/Server if and when the originator MMS Relay/Server responds with an MM7_submit.RES. The operator can configure whether this CDR, if enabled, shall only be created for MM7_submit.RES indicating acceptance of the submitted MM, or also for the unsuccessful submissions.

Table 6.25: MM7 Submission CDR (MM7S-CDR)

Field	Category	Description
Record Type	M	MM7 Submission record.
Originator MMS Relay/Server Address	M	.IP address or domain name of originator MMS Relay/Server.
Linked ID	C	This field is present in the CDR only if the MM defines a correspondence to a previous message that was delivered by the MMS Relay/Server. The MM identification provided by the originator MMS Relay/Server.
VASP ID	M	Identifier of the VASP for this MMS Relay/Server
VAS ID	M	Identifier of the originating application.
Message ID	M	The MM identification provided by the originator MMS Relay/Server.
Originator Address	M	The address of the MM originator.
Recipients address list	M	The address(es) of the recipient MMS User Agent(s) of the MM. Multiple addresses are possible if the MM is not a reply MM.
Service code	O_c	Charging related information that is used directly for billing purposes
Content type	M	The content type of the MM content.
MM component list	O_m	The list of media components with volume size.
Message size	M	The total size of the MM content.
Message class	O_c	The class selection such as personal, advertisement, information service if specified in the MM7_submit_REQ.
Charge Information	O_m	The charged party indication and charge type e.g. the sending, receiving, both parties, third party or neither.
Submission Time	O_c	The time at which the MM was submitted from the VASP if specified in the MM7_submit_REQ.
Time of Expiry	O_c	The desired date of expiry or duration of time prior to expiry for the MM if specified by the VASP
Earliest Time Of Delivery	C	This field contains either the earliest time to deliver the MM or the number of seconds to wait before delivering the MM if specified by the VASP
Delivery Report Requested	O_m	This field indicates whether a delivery report has been requested by the VASP or not.
Reply Charging	O_c	A request for reply-charging if specified by the VASP
Read reply requested	O_m	A request for read reply report as specified in the MM7_submit.REQ.
Reply Deadline	O_c	In case of reply-charging the latest time of submission of replies granted to the recipient(s) as specified by the VASP
Reply Charging Size	O_c	In case of reply-charging the maximum size for reply-MM(s) granted to the recipient(s) as specified by the VASP
Priority	O_c	The priority (importance) of the message if specified by the VASP
Charged Party ID	O_c	The address of the third party which is expected to pay for the MM.
Message Distribution Indicator	O_c	This field is present if specified in the MM7_submit.REQ 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.
Request Status Code	O_m	The status code of the associated MM7_submit_REQ
Status Text	O_c	This field includes a more detailed technical status of the message at the point in time when the CDR is generated. This field is only present if the MM submission is rejected.
Applic-ID	O_c	If present, this field holds the identification of the destination application that the underlying MMS abstract message was addressed to.
Reply-Applic-ID	O_c	If present, this parameter indicates a "reply path", i.e. the identifier of the application to which delivery reports, read-reply reports and reply-MMs are addressed.

Field	Category	Description
Aux-Applic-Info	O_c	If present, this parameter indicates additional application/implementation specific control information.
Record Time Stamp	O_m	Time of generation of the CDR.
Local Record Sequence Number	O_m	Consecutive record number created by this node. The number is allocated sequentially including all CDR types.
Record extensions	O_c	A set of network/manufacturer specific extensions to the record. Conditioned upon the existence of an extension.

6.1.5.2   MM7 Deliver Request CDR (MM7DRq-CDR)

If enabled, a MM7 Deliver Request Charging Data Record (MM7DRq-CDR) shall be produced in the recipient MMS Relay/Server if and when the recipient MMS Relay/Server sends an MM7_deliver.REQ to the recipient MMS VASP.

Table 6.26: MM7 Deliver Request record (MM7DRq -CDR)

Field	Category	Description
Record Type	M	MM7 Deliver Request record.
Recipient MMS Relay/Server Address	M	IP address or domain name of the recipient MMS Relay/Server.
Linked ID	C	This field is present in the CDR only if the MM defines a correspondence to a previous message that was delivered by the MMS Relay/Server. The MM identification provided by the originator MMS Relay/Server.
Reply Charging ID	C	This field is present in the CDR only if the MM is a reply-MM to an original MM. The Reply-Charging ID is the Message ID of the original MM.
Originator address	M	The address of the MMS User Agent as used in the MM7_deliver_REQ.
Recipient address	M	The address of the MM recipient of the MM.
MM component list	O_m	The list of media components with volume size.
Message size	O_m	The total size of the MM content.
Content type	M	The content type of the MM content.
Priority	O_c	The priority (importance) of the message if specified by the VASP
Applic-ID	O_c	If present, this field holds the identification of the destination application that the underlying MMS abstract message was addressed to.
Reply-Applic-ID	O_c	If present, this parameter indicates a "reply path", i.e. the identifier of the application to which delivery reports, read-reply reports and reply-MMs are addressed.
Aux-Applic-Info	O_c	If present, this parameter indicates additional application/implementation specific control information.
Record Time Stamp	O_m	Time of generation of the CDR
Local Record Sequence Number	O_m	Consecutive record number created by this node. The number is allocated sequentially including all CDR types.
Record extensions	O_c	A set of network/manufacturer specific extensions to the record. Conditioned upon the existence of an extension.

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6.1.5.4 MM7 Cancel CDR (MM7C-CDR)

If enabled, an MM7 Cancel Charging Data Record (MM7C-CDR) shall be produced in the MMS Relay/Server if and when the MMS Relay/Server has sent an MM7_cancel.RES to the MMS VASP.

Table 6.28: MM7 Cancel record (MM7C-CDR)

Field	Category	Description
Record Type	M	MM7 Cancel record
Originator MMS Relay/Server Address	M	.IP address or domain name of originator MMS Relay/Server.
VASP ID	M	Identifier of the VASP for this MMS Relay/Server
VAS ID	M	Identifier of the originating application.
Message ID	M	The MM identification provided by the originator MMS Relay/Server.
Originator Address	M	The address of the MM originator.
Request Status Code	O$_m$	The status code of the associated MM7_cancel.REQ.
Status Text	O$_c$	This field includes the status text as received in the MM7_cancel.RES corresponding to the Request Status Code. Present only if provided in the MM7_cancel.RES.
Applic-ID	O$_c$	If present, this field holds the identification of the destination application that the underlying MMS abstract message was addressed to.
Reply-Applic-ID	O$_c$	If present, this parameter indicates a "reply path", i.e. the identifier of the application to which delivery reports, read-reply reports and reply-MMs are addressed.
Aux-Applic-Info	O$_c$	If present, this parameter indicates additional application/implementation specific control information.
Sequence Number	O$_m$	Record number.
Time Stamp	O$_m$	Time of generation of the CDR.
Record extensions	O$_c$	A set of network/manufacturer specific extensions to the record.

6.1.5.5 MM7 Replace CDR (MM7R-CDR)

If enabled, an MM7 Replace Charging Data Record (MM7R-CDR) shall be produced in the MMS Relay/Server if and when the MMS Relay/Server has sent an MM7_replace.RES to the MMS VASP.

Table 6.29: MM7 Replace record (MM7R-CDR)

Field	Category	Description
Record Type	M	MM7 Replace record
Originator MMS Relay/Server Address	M	.IP address or domain name of originator MMS Relay/Server.
VASP ID	M	Identifier of the VASP for this MMS Relay/Server
VAS ID	M	Identifier of the originating application.
Message ID	M	The MM identification provided by the originator MMS Relay/Server.
Originator Address	M	The address of the MM originator.
Service code	O$_c$	Charging related information that is used directly for billing purposes
Content type	M	The content type of the MM content.
Submission time	O$_c$	The time at which the MM was submitted from the VASP if specified in the MM7_replace_REQ.
Time of Expiry	O$_c$	The desired date of expiry or duration of time prior to expiry for the MM if specified by the VASP
Earliest Time Of Delivery	O$_c$	This field contains either the earliest time to deliver the MM or the number of seconds to wait before delivering the MM if specified by the VASP
Request Status Code	O$_m$	The status code of associated MM7_replace.REQ.
Status Text	O$_c$	This field includes the status text as received in the MM7_replace.RES corresponding to the Request Status Code. Present only if provided in the MM7_replace.RES.
Applic-ID	O$_c$	If present, this field holds the identification of the destination application that the underlying MMS abstract message was addressed to.
Reply-Applic-ID	O$_c$	If present, this parameter indicates a "reply path", i.e. the identifier of the application to which delivery reports, read-reply reports and reply-MMs are addressed.
Aux-Applic-Info	O$_c$	If present, this parameter indicates additional application/implementation specific control information.
Sequence Number	O$_m$	Record number
Time Stamp	O$_m$	Time of generation of the CDR.
Record extensions	O$_c$	A set of network/manufacturer specific extensions to the record.

6.1.5.6   MM7 Delivery Report Request CDR (MM7DRRq-CDR)

If enabled, a MM7 Delivery Report Request Charging Data Record (MM7DRRq-CDR) shall be produced in the recipient MMS Relay/Server if and when the recipient MMS Relay/Server sends an MM7_delivery_report.REQ to the MMS VASP.

Table 6.30: MM7 Delivery Report Request record (MM7DRRq-CDR)

Field	Category	Description
Record Type	M	MM7 Delivery Report Requestrecord.
Recipient MMS Relay/Server Address	O_m	IP address or domain name of the recipient MMS Relay/Server.
Message ID	M	The MM identification provided by the originator MMS Relay/Server.
Originator address	O_m	The address of the VAS that submitted the original MM.
Recipient address	M	The address of the MM recipient of the MM.
MM Date and time	M	Date and time the MM was handled (retrieved, expired, rejected, etc.) as specified in the MM7_delivery_report.REQ.
MM Status Code	M	The status code of the delivered MM as received in the MM7_delivery_report.RES.
MM Status Text	O_c	This field includes the status text as received in the MM7_delivery_report.RES corresponding to the MM Status Code. Present only if provided in the MM7_delivery_report.RES.
Applic-ID	O_c	If present, this field holds the identification of the destination application that the underlying MMS abstract message was addressed to.
Reply-Applic-ID	O_c	If present, this parameter indicates a "reply path", i.e. the identifier of the application to which delivery reports, read-reply reports and reply-MMs are addressed.
Aux-Applic-Info	O_c	If present, this parameter indicates additional application/implementation specific control information.
Record Time Stamp	O_m	Time of generation of the CDR
Local Record Sequence Number	O_m	Consecutive record number created by this node. The number is allocated sequentially including all CDR types.
Record extensions	O_c	A set of network/manufacturer specific extensions to the record. Conditioned upon the existence of an extension.

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6.1.5.8 MM7 Read reply report Request CDR (MM7RRq-CDR)

If enabled, a MM7 Read reply report Request Charging Data Record (MM7RRq-CDR) shall be produced in the originator MMS Relay/Server if and when the recipient MMS Relay/Server sends an MM7_read reply_report.REQ to the originator MMS VASP.

Table 6.32: MM7 Read reply report Request record (MM7RRq-CDR)

Field	Category	Description
Record Type	M	MM7 Read reply report Requestrecord.
Recipient MMS Relay/Server Address	O_m	IP address or domain name of the recipient MMS Relay/Server.
Message ID	M	The MM identification provided by the originator MMS Relay/Server.
Originator address	O_m	The address of the VAS that submitted the original MM.
Recipient address	M	The address of the MM recipient of the MM.
MM Date and time	M	Date and time the MM was handled (retrieved, expired, rejected, etc.) as specified in the MM7_Read reply_report.REQ.
Read Status	M	The status of the MM (e.g. Read, deleted without being read, etc.) as sent in the MM7_read_reply_report.REQ.
MM Status Text	O_c	This field includes the status text as received in the MM7_read reply_report.RES corresponding to the Read Status. Present only if provided in the MM7_read reply_report.REQ.
Applic-ID	O_c	If present, this field holds the identification of the destination application that the underlying MMS abstract message was addressed to.
Reply-Applic-ID	O_c	If present, this parameter indicates a "reply path", i.e. the identifier of the application to which delivery reports, read-reply reports and reply-MMs are addressed.
Aux-Applic-Info	O_c	If present, this parameter indicates additional application/implementation specific control information.
Record Time Stamp	O_m	Time of generation of the CDR
Local Record Sequence Number	O_m	Consecutive record number created by this node. The number is allocated sequentially including all CDR types.
Record extensions	O_c	A set of network/manufacturer specific extensions to the record. Conditioned upon the existence of an extension.

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6.2 Data description for MMS online charging

6.2.1 Ro message contents

Table 6.34 describes the use of these messages for online charging.

Table 6.34: Online Charging Messages Reference Table

Command-Name	Source	Destination	Abbreviation
Credit-Control-Request	MMS Relay/Server	OCS	CCR
Credit-Control-Answer	OCS	MMS Relay/Server	CCA

The specific parameters for MMS Charging are defined MMS specific Service-Information AVP which is defined of type grouped as follows:

[MMS-Information] :: = < AVP Header: TBD >

    [Originator-Address]

    * [Recipient-Address]

    [Submission Time]

    [Content Type]

    [Priority]

    [Message ID]

    [Message-Type]

    [Message-Size]

    [Message-Class]

    [Delivery Report Requested]

    [Read Reply Report Requested]

    [MMBox Storage Information]

    [Applic-ID]

    [Reply-Applic-ID]

    [Aux-Applic-Info]

6.2.1.1 MMS Credit-Control-Request Message

Table 6.35 illustrates the basic structure of a Diameter credit control request message from MMS Relay/Server as used for MMS online charging.

Table 6.35: Credit-Control-Request (CCR) Message Contents for MMS

AVP	Category	Description
Session-Id	M	Described in RFC 3588, diameter base protocol [401]
Origin-Host	M	Described in RFC 3588, diameter base protocol [401]
Origin-Realm	M	Described in RFC 3588, diameter base protocol [401]
Destination-Realm	M	Described in RFC 3588, diameter base protocol [401]
Auth-Application-Id	M	Described in RFC 3588, diameter base protocol [401]
Destination-Host	O_c	Described in RFC 3588, diameter base protocol [401]
User-Name	O_c	Described in RFC 3588, diameter base protocol [401]
Origin-State-Id	O_c	Described in RFC 3588, diameter base protocol [401]
Event-Timestamp	O_c	Described in RFC 3588, diameter base protocol [401]
CC-Request-Type	M	Described in Internet-Draft, Diameter Credit Control Application [402]
CC-Request-Number	M	Described in Internet-Draft, Diameter Credit Control Application [402]
CC-Sub-Session-Id	M	Described in Internet-Draft, Diameter Credit Control Application [402]
Acct-Multi-Session-Id	?	Described in Internet-Draft, Diameter Credit Control Application [402]
Subscription-Id	O_c	Described in Internet-Draft, Diameter Credit Control Application [402]
Service-Identifier	?	Described in Internet-Draft, Diameter Credit Control Application [402]
Termination-Cause	?	Described in Internet-Draft, Diameter Credit Control Application [402]
Requested-Service-Unit	O_c	Described in Internet-Draft, Diameter Credit Control Application [402]
Requested-Action	O_c	Described in Internet-Draft, Diameter Credit Control Application [402]
Used-Service-Unit	O_c	Described in Internet-Draft, Diameter Credit Control Application [402]
Multiple-Services-Indicator	?	Described in Internet-Draft, Diameter Credit Control Application [402]
Multiple-Services-Credit Control	?	Described in Internet-Draft, Diameter Credit Control Application [402]
Service-Parameter-Info	O_c	Described in Internet-Draft, Diameter Credit Control Application [402]
CC-Correlation-Id	?	Described in Internet-Draft, Diameter Credit Control Application [402]
User-Equipment-Info	?	Described in Internet-Draft, Diameter Credit Control Application [402]
3GPP Diameter credit control AvPs		
MMS-Information		Grouped MMS specific Service-Information
Originator-Address	O_c	This AVP holds the address (Public User ID: SIP URL, E.164, etc.) of the party generating the MMS.
Recipient-Address	O_c	This AVP holds the address (Public User ID: SIP URL, E.164, etc.) of the party to whom the MMS is sent.
Correlation-Information	O_m	Bearer correlation information
Submission Time	O_c	
Content Type	O_c	
Priority	O_c	
Message ID	O_c	This AVP holds the MM identification provided by the originator MMS Relay/Server.
Message-Type	O_c	This AVP holds the type of the message according to the MMS transactions e.g. submission, delivery
Message-Size	O_c	This AVP holds the total size of the MMS.
Message Class	O_c	
Delivery Report Requested	O_c	
Read Reply Report Requested	O_c	
MMBox Storage Information	O_c	
Applic-ID	O_c	This AVP holds the identification of the destination application that the underlying MMS abstract message was addressed to.
Reply-Applic-ID	O_c	This AVP holds the identifier of a "reply path", i.e. the identifier of the application to which delivery reports, read-reply reports and reply-MMs are addressed.
Aux-Applic-Info	O_c	This AVP holds additional application/implementation specific control information.

A full description and the detailed use of the AVPs for MMS Relay/Server and for each CCR request type (initial/update/termination/event) is specified in TS 32.299 [50].

<div style="border:1px solid black; text-align:center; font-weight:bold;">
End of Change in Clause 6
End of Document
</div>

CR-Form-v7

CHANGE REQUEST

| ⌘ | **32.270** CR **002** | ⌘**rev** | **-** | ⌘ | Current version: | **6.0.0** | ⌘ |

*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:	⌘	Introduce Content Adaptation in MMS Charging – Align with T2's 23.140 (MMS6)
Source:	⌘	**SA5** (alain.bibas@francetelecom.com)
Work item code:⌘	CH-SC	**Date:** ⌘ 19/11/2004

Category:	⌘	**F**	**Release:** ⌘ Rel-6

Use <u>one</u> 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 <u>one</u> 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:	⌘	Alignement for MMS Charging with CR T2-040356 (Indication about Content Adaptation).
Summary of change:⌘		Content restriction information parameters ('Adaptations' and 'DRM Content') and content type information ('Content Class') are added in the following CDRs: - MM1 Submission CDR - Originator MM4 Forward Request CDR - MM7 Submission CDR - MM7 Cancel CDR and in the Credit Control Request message
Consequences if not approved:	⌘	Charging implications of content adaptation for MMS are not covered

Clauses affected:	⌘	6.1.1.1, 6.1.1.2, 6.1.5.1, 6.1.5.4 and 6.2.1

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

Other comments:	⌘	

Change in Clause 6.1.1.1

6.1.1.1   Originator MM1 Submission CDR (O1S-CDR)

If enabled, an Originator MM1 Submission Charging Data Record (O1S-CDR) shall be produced in the originator MMS Relay/Server for each MM submitted in an MM1_submit.REQ by an originator MMS User Agent to the originator MMS Relay/Server if and when the originator MMS Relay/Server responds with an MM1_submit.RES. The operator can configure whether this CDR, if enabled, shall only be created for MM1_submit.RES indicating acceptance of the submitted MM, or also for the unsuccessful submissions.

NOTE 1: This includes the case where the MM is a reply-MM to an original MM. In this case the MMS User Agent sending the reply-MM is called the originator MMS User Agent of this reply-MM and the MMS Relay/Server receiving the reply-MM in an MM1_submit.REQ is called the originator MMS Relay/Server for this reply-MM.

NOTE 2: The case of an MMS Relay/Server receiving an MM1_forward.REQ is treated in subclause 6.1.3.

Table 6.1: Originator MM1 Submission CDR (O1S-CDR)

Field	Category	Description
Record Type	M	Originator MM1 Submission record
Originator MMS Relay/Server Address	M	.IP address or domain name of originator MMS Relay/Server
Message ID	M	The MM identification provided by the originator MMS Relay/Server
Reply-Charging ID	C	This field is present in the CDR only if the MM is a reply-MM to an original MM. The Reply-Charging ID is the Message ID of the original MM
Originator address	M	The address of the originator MMS User Agent (i.e., of the MMS User Agent that has sent the MM1_submit.REQ)
Recipients address list	M	The address(es) of the recipient MMS User Agent(s) of the MM. Multiple addresses are possible if the MM is not a reply MM
Access Correlation	O_m	A unique identifier delivered by the used access network domain of the originator MMS User Agent
Content type	M	The content type of the MM content
Content Class	O_c	This field classifies the content of the MM to the smallest content class to which the MM belongs, if specified in the MM1_submit_REQ
DRM Content	O_c	This field indicates if the MM contains DRM-protected content, if specified in the MM1_submit_REQ
Adaptations	O_c	This field indicates if the originator allows adaptation of the content (default True), if specified in the MM1_submit_REQ
MM component list	O_m	The list of media components with volume size
Message size	M	The total size of the MM content
Message class	O_c	The class selection such as personal, advertisement, information service if specified in the MM1_submit_REQ
Charge Information	O_m	The charged party indication and charge type
Submission Time	O_c	The time at which the MM was submitted from the originator MMS User Agent if specified in the MM1_submit_REQ
Time of Expiry	O_c	The desired date of expiry or duration of time prior to expiry for the MM if specified by the originator MMS User Agent
Earliest Time Of Delivery	C	This field contains either the earliest time to deliver the MM or the number of seconds to wait before delivering the MM as specified by the originator MMS User Agent
Duration Of Transmission	O_m	The time used for transmission of the MM between the User Agent and the MMS Relay/Server
Request Status Code	O_m	The status code of the MM as received in the MM1_submit_REQ
Delivery Report Requested	O_m	This field indicates whether a delivery report has been requested by the originator MMS User Agent or not
Reply Charging	O_c	A request for reply-charging if specified by the originator MMS User Agent
Reply Deadline	O_c	In case of reply-charging the latest time of submission of replies granted to the recipient(s) as specified by the originator MMS User Agent
Reply Charging Size	O_c	In case of reply-charging the maximum size for reply-MM(s) granted to the recipient(s) as specified by the originator MMS User Agent
Priority	O_c	The priority (importance) of the message if specified by the originator MMS User Agent
Sender visibility	O_m	A request to show or hide the sender's identity when the message is delivered to the recipient as specified by the originator MMS User Agent
Read reply requested	O_m	A request for read reply report as specified in the MM1_submit.REQ

Field	Category	Description
Status Text	O_c	This field includes a more detailed technical status of the message at the point in time when the CDR is generated. This field is only present if the MM submission is rejected
Record Time Stamp	O_m	Time of generation of the CDR
Local Record Sequence Number	O_m	Consecutive record number created by this node. The number is allocated sequentially including all CDR types
MMBox Storage Information	C_o	A set of parameters related to the MMBox management. This parameter is only present if the MMBox feature is supported by the MMS Relay/Server and storage of the MM was requested by originator MMS User Agent (i.e., of the MMS User Agent that has sent the MM1_submit.REQ)
Serving network identity	O_m	SGSN PLMN Identifier (MCC and MNC) used during this record
Record extensions	C_o	A set of network/manufacturer specific extensions to the record. Conditioned upon the existence of an extension

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End of Change in Clause 6.1.1.1

Change in Clause 6.1.1.2

6.1.1.2 Originator MM4 Forward Request CDR (O4FRq-CDR)

If enabled, an Originator MM4 Forward Request Charging Data Record (O4FRq-CDR) shall be produced in the originator MMS Relay/Server if and when the originator MMS Relay Server has sent an MM4_forward.REQ to the recipient MMS Relay/Server, regardless of whether or not an MM4_forward.RES is received from the recipient. That is, the CDR is created upon completion of transmission of the MM4_forward.REQ.

The MM4_forward.REQ may be generated as a reaction to an incoming MM1_forward.REQ. In this case, the *Originator address* field specifies the address of the originator MMS User Agent of the original MM, whereas the address of the forwarding MMS User Agent is contained in the *Forwarding address* field.

Table 6.2: Originator MM4 Forward Request record (O4FRq-CDR)

Field	Category	Description
Record Type	M	Originator MM4 Forward Request record
Originator MMS Relay/Server Address	M	IP address or domain name of the originator MMS Relay/Server
Recipient MMS Relay/Server Address	M	IP address or domain name of the recipient MMS Relay/Server
Message ID	M	The MM identification provided by the originator MMS Relay/Server
3GPP MMS Version	O_m	The MMS version of the originator MMS Relay/Server
Originator address	M	The address of the originator MMS User Agent of the MM. (If the MM4_forward.REQ is generated as a reaction to an incoming MM1_forward.REQ, this is the address of the originator MMS User agent of the original MM
Recipients address list	M	The address(es) of the recipient MMS User Agent(s) of the MM as specified in the MM4_forward.REQ that triggered the CDR
Recipient address for routing	M	The address(es) of the recipient MMS User Agent(s) of the MM for that routing is requested as specified in the MM4_forward.REQ that triggered the CDR
Content type	M	The content type of the MM content
Content Class	O_c	This field classifies the content of the MM to the smallest content class to which the MM belongs, if specified in the MM4_forward_REQ
DRM Content	O_c	This field indicates if the MM contains DRM-protected content, if specified in the MM4_forward_REQ
Adaptations	O_c	This field indicates if the originator allows adaptation of the content (default True), if specified in the MM4_forward_REQ
MM component list	O_m	The list of media components with volume size
Message size	M	The total size of the MM content
Message class	C	The class of the MM (e.g., personal, advertisement, information service) if specified by the originator MMS User Agent
Submission Time	M	The time at which the MM was submitted or forwarded as specified in the corresponding MM1_submit.REQ or MM1_forwarding.REQ
Time of Expiry	C	The desired date of expiry or duration of time prior to expiry for the MM if specified by the originator MMS User Agent
Delivery Report Requested	M	This field indicates whether a delivery report has been requested by the originator MMS User Agent or not
Priority	C	The priority (importance) of the message if specified by the originator MMS User Agent
Sender visibility	M	A request to show or hide the sender's identity when the message is delivered to the MM recipient if the originator MMS User Agent has requested her address to be hidden from the recipient
Read reply requested	M	A request for read reply report if the originator MMS User Agent has requested a read-reply report for the MM
Acknowledgement Request	M	Request for MM4_forward.RES
Forward counter	C	A counter indicating the number of times the particular MM was forwarded
Forwarding address	C	The address(es) of the forwarding MMS User Agent(s). Multiple addresses are possible. In the multiple address case this is a sequential list of the address(es) of the forwarding MMS User Agents who forwarded the same MM
Record Time Stamp	M	Time of generation of the CDR
Local Record Sequence Number	O_m	Consecutive record number created by this node. The number is allocated sequentially including all CDR types
Serving network identity	O_m	SGSN PLMN Identifier (MCC and MNC) used during this record
Record extensions	O_c	A set of network/manufacturer specific extensions to the record. Conditioned upon the existence of an extension

End of Change in Clause 6.1.1.2

Change in Clause 6.1.5.1

6.1.5.1 MM7 Submission CDR (MM7S-CDR)

If enabled, an MM7 Submission Charging Data Record (MM7S-CDR) shall be produced in the originator MMS Relay/Server for each MM submitted in an MM7_submit.REQ by a VASP to the originator MMS Relay/Server if and when the originator MMS Relay/Server responds with an MM7_submit.RES. The operator can configure whether this CDR, if enabled, shall only be created for MM7_submit.RES indicating acceptance of the submitted MM, or also for the unsuccessful submissions.

Table 6.25: MM7 Submission CDR (MM7S-CDR)

Field	Category	Description
Record Type	M	MM7 Submission record.
Originator MMS Relay/Server Address	M	.IP address or domain name of originator MMS Relay/Server.
Linked ID	C	This field is present in the CDR only if the MM defines a correspondence to a previous message that was delivered by the MMS Relay/Server. The MM identification provided by the originator MMS Relay/Server.
VASP ID	M	Identifier of the VASP for this MMS Relay/Server
VAS ID	M	Identifier of the originating application.
Message ID	M	The MM identification provided by the originator MMS Relay/Server.
Originator Address	M	The address of the MM originator.
Recipients address list	M	The address(es) of the recipient MMS User Agent(s) of the MM. Multiple addresses are possible if the MM is not a reply MM.
Service code	O$_c$	Charging related information that is used directly for billing purposes
Content type	M	The content type of the MM content.
Content Class	O$_c$	This field classifies the content of the MM to the smallest content class to which the MM belongs, if specified in the MM7_submit_REQ
DRM Content	O$_c$	This field indicates if the MM contains DRM-protected content, if specified in the MM7_submit_REQ
Adaptations	O$_c$	This field indicates if the originator allows adaptation of the content (default True), if specified in the MM7_submit_REQ
MM component list	O$_m$	The list of media components with volume size.
Message size	M	The total size of the MM content.
Message class	O$_c$	The class selection such as personal, advertisement, information service if specified in the MM7_submit_REQ.
Charge Information	O$_m$	The charged party indication and charge type e.g. the sending, receiving, both parties, third party or neither.
Submission Time	O$_c$	The time at which the MM was submitted from the VASP if specified in the MM7_submit_REQ.
Time of Expiry	O$_c$	The desired date of expiry or duration of time prior to expiry for the MM if specified by the VASP
Earliest Time Of Delivery	C	This field contains either the earliest time to deliver the MM or the number of seconds to wait before delivering the MM if specified by the VASP
Delivery Report Requested	O$_m$	This field indicates whether a delivery report has been requested by the VASP or not.
Reply Charging	O$_c$	A request for reply-charging if specified by the VASP
Read reply requested	O$_m$	A request for read reply report as specified in the MM7_submit.REQ.
Reply Deadline	O$_c$	In case of reply-charging the latest time of submission of replies granted to the recipient(s) as specified by the VASP
Reply Charging Size	O$_c$	In case of reply-charging the maximum size for reply-MM(s) granted to the recipient(s) as specified by the VASP
Priority	O$_c$	The priority (importance) of the message if specified by the VASP
Charged Party ID	O$_c$	The address of the third party which is expected to pay for the MM.
Message Distribution Indicator	O$_c$	This field is present if specified in the MM7_submit.REQ 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.
Request Status Code	O$_m$	The status code of the associated MM7_submit_REQ
Status Text	O$_c$	This field includes a more detailed technical status of the message at the point in time when the CDR is generated. This field is only present if the MM submission is rejected.
Record Time Stamp	O$_m$	Time of generation of the CDR.
Local Record Sequence Number	O$_m$	Consecutive record number created by this node. The number is allocated sequentially including all CDR types.
Record extensions	O$_c$	A set of network/manufacturer specific extensions to the record. Conditioned upon the existence of an extension.

6.1.5.4   MM7 Cancel CDR (MM7C-CDR)

If enabled, an MM7 Cancel Charging Data Record (MM7C-CDR) shall be produced in the MMS Relay/Server if and when the MMS Relay/Server has sent an MM7_cancel.RES to the MMS VASP.

Table 6.28: MM7 Cancel record (MM7C-CDR)

Field	Category	Description
Record Type	M	MM7 Cancel record
Originator MMS Relay/Server Address	M	.IP address or domain name of originator MMS Relay/Server.
VASP ID	M	Identifier of the VASP for this MMS Relay/Server
VAS ID	M	Identifier of the originating application.
Message ID	M	The MM identification provided by the originator MMS Relay/Server.
Originator Address	M	The address of the MM originator.
Content Class	O_c	This field classifies the content of the MM to the smallest content class to which the MM belongs, if specified in the MM7_cancel_REQ
DRM Content	O_c	This field indicates if the MM contains DRM-protected content, if specified in the MM7_cancel_REQ
Adaptations	O_c	This field indicates if the originator allows adaptation of the content (default True), if specified in the MM7_ cancel_REQ
Request Status Code	O_m	The status code of the associated MM7_cancel.REQ.
Status Text	O_c	This field includes the status text as received in the MM7_cancel.RES corresponding to the Request Status Code. Present only if provided in the MM7_cancel.RES.
Sequence Number	O_m	Record number.
Time Stamp	O_m	Time of generation of the CDR.
Record extensions	O_c	A set of network/manufacturer specific extensions to the record.

6.2.1   Ro message contents

Table 6.34 describes the use of these messages for online charging.

Table 6.34: Online Charging Messages Reference Table

Command-Name	Source	Destination	Abbreviation
Credit-Control-Request	MMS Relay/Server	OCS	CCR
Credit-Control-Answer	OCS	MMS Relay/Server	CCA

The specific parameters for MMS Charging are defined MMS specific Service-Information AVP which is defined of type grouped as follows:

[MMS-Information] :: = < AVP Header: TBD >

[Originator-Address]

* [Recipient-Address]

[Submission Time]

[Content Type]

[Priority]

[Message ID]

[Message-Type]

[Message-Size]

[Message-Class]

[Delivery Report Requested]

[Read Reply Report Requested]

[MMBox Storage Information]

[Content Class]

[DRM Content]

[Adaptations]

6.2.1.1   MMS Credit-Control-Request Message

Table 6.35 illustrates the basic structure of a Diameter credit control request message from MMS Relay/Server as used for MMS online charging.

Table 6.35: Credit-Control-Request (CCR) Message Contents for MMS

AVP	Category	Description
Session-Id	M	Described in RFC 3588, diameter base protocol [401]
Origin-Host	M	Described in RFC 3588, diameter base protocol [401]
Origin-Realm	M	Described in RFC 3588, diameter base protocol [401]
Destination-Realm	M	Described in RFC 3588, diameter base protocol [401]
Auth-Application-Id	M	Described in RFC 3588, diameter base protocol [401]
Destination-Host	O_c	Described in RFC 3588, diameter base protocol [401]
User-Name	O_c	Described in RFC 3588, diameter base protocol [401]
Origin-State-Id	O_c	Described in RFC 3588, diameter base protocol [401]
Event-Timestamp	O_c	Described in RFC 3588, diameter base protocol [401]
CC-Request-Type	M	Described in Internet-Draft, Diameter Credit Control Application [402]
CC-Request-Number	M	Described in Internet-Draft, Diameter Credit Control Application [402]
CC-Sub-Session-Id	M	Described in Internet-Draft, Diameter Credit Control Application [402]
Acct-Multi-Session-Id	?	Described in Internet-Draft, Diameter Credit Control Application [402]
Subscription-Id	O_c	Described in Internet-Draft, Diameter Credit Control Application [402]
Service-Identifier	?	Described in Internet-Draft, Diameter Credit Control Application [402]
Termination-Cause	?	Described in Internet-Draft, Diameter Credit Control Application [402]
Requested-Service-Unit	O_c	Described in Internet-Draft, Diameter Credit Control Application [402]
Requested-Action	O_c	Described in Internet-Draft, Diameter Credit Control Application [402]
Used-Service-Unit	O_c	Described in Internet-Draft, Diameter Credit Control Application [402]
Multiple-Services-Indicator	?	Described in Internet-Draft, Diameter Credit Control Application [402]
Multiple-Services-Credit Control	?	Described in Internet-Draft, Diameter Credit Control Application [402]
Service-Parameter-Info	O_c	Described in Internet-Draft, Diameter Credit Control Application [402]
CC-Correlation-Id	?	Described in Internet-Draft, Diameter Credit Control Application [402]
User-Equipment-Info	?	Described in Internet-Draft, Diameter Credit Control Application [402]
3GPP Diameter credit control AvPs		
MMS-Information		Grouped MMS specific Service-Information
Originator-Address	O_c	This AVP holds the address (Public User ID: SIP URL, E.164, etc.) of the party generating the MMS.
Recipient-Address	O_c	This AVP holds the address (Public User ID: SIP URL, E.164, etc.) of the party to whom the MMS is sent.
Correlation-Information	O_m	Bearer correlation information
Submission Time	O_c	
Content Type	O_c	
Priority	O_c	
Message ID	O_c	This AVP holds the MM identification provided by the originator MMS Relay/Server.
Message-Type	O_c	This AVP holds the type of the message according to the MMS transactions e.g. submission, delivery
Message-Size	O_c	This AVP holds the total size of the MMS.
Message Class	O_c	
Delivery Report Requested	O_c	
Read Reply Report Requested	O_c	
MMBox Storage Information	O_c	
Content Class	O_c	This AVP classifies the content of the MM to the smallest content class to which the MM belongs
DRM Content	O_c	This AVP indicates if the MM contains DRM-protected content
Adaptations	O_c	This AVP indicates if the originator allows adaptation of the content (default True)

A full description and the detailed use of the AVPs for MMS Relay/Server and for each CCR request type (initial/update/termination/event) is specified in TS 32.299 [50].

End of Change in Clause 6.2.1
End of document

CR-Form-v7

CHANGE REQUEST

| ⌘ | **32.270** CR | **003** | ⌘**rev** | **-** | ⌘ | Current version: | **6.0.0** | ⌘ |

*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:	⌘	Correction on VASP MMS CDR triggers
Source:	⌘	**SA5** (alain.bibas@francetelecom.com)

Work item code:⌘	CH-SC			***Date:*** ⌘	19/11/2004

Category:	⌘ **F**	***Release:*** ⌘	Rel-6

Use <u>one</u> of the following categories:	*Use <u>one</u> of the following releases:*
F *(correction)*	*2 (GSM Phase 2)*
A *(corresponds to a correction in an earlier release)*	*R96 (Release 1996)*
B *(addition of feature),*	*R97 (Release 1997)*
C *(functional modification of feature)*	*R98 (Release 1998)*
D *(editorial modification)*	*R99 (Release 1999)*
Detailed explanations of the above categories can	*Rel-4 (Release 4)*
be found in 3GPP <u>TR 21.900</u>.	*Rel-5 (Release 5)*
	Rel-6 (Release 6)

Reason for change:	⌘	The trigger types of VASP transactions are not consistent with the VASP transactions message flow.
Summary of change:⌘		The proper message flow that reflects the VASP chargeable events is included. The references to Originator and Recipient MMS R/S are replaces by MMS R/S.
Consequences if not approved:	⌘	Mismatch between VASP triggers and chargeable events could cause charging errors.

Clauses affected:	⌘	5.1.4 and 6.1.5

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

|		
Other comments:	⌘	

5.1.4 VASP transactions

MMS VAS Application offers value added services to the MMS Users. The MMS VASP are able to interact with the MMS R/S via the MM7 reference point using transactions similar to those of the MM1 interface i.e. submission, reception, delivery-report, read-reply report, etc.

The VASP may provide service codes that contain billing information which may be transferred to the MMS Relay/Server and passed directly to the billing system without intervention. In addition, the VASP may provide an indication to the MMS Relay/Server which party is expected to be charged for an MM submitted by the VASP, e.g. the sending, receiving, both parties or neither.

This scenario, as depicted in figure 5.4, covers the VASP related MM transactions and the associated chargeable events in the affected MMS R/S.

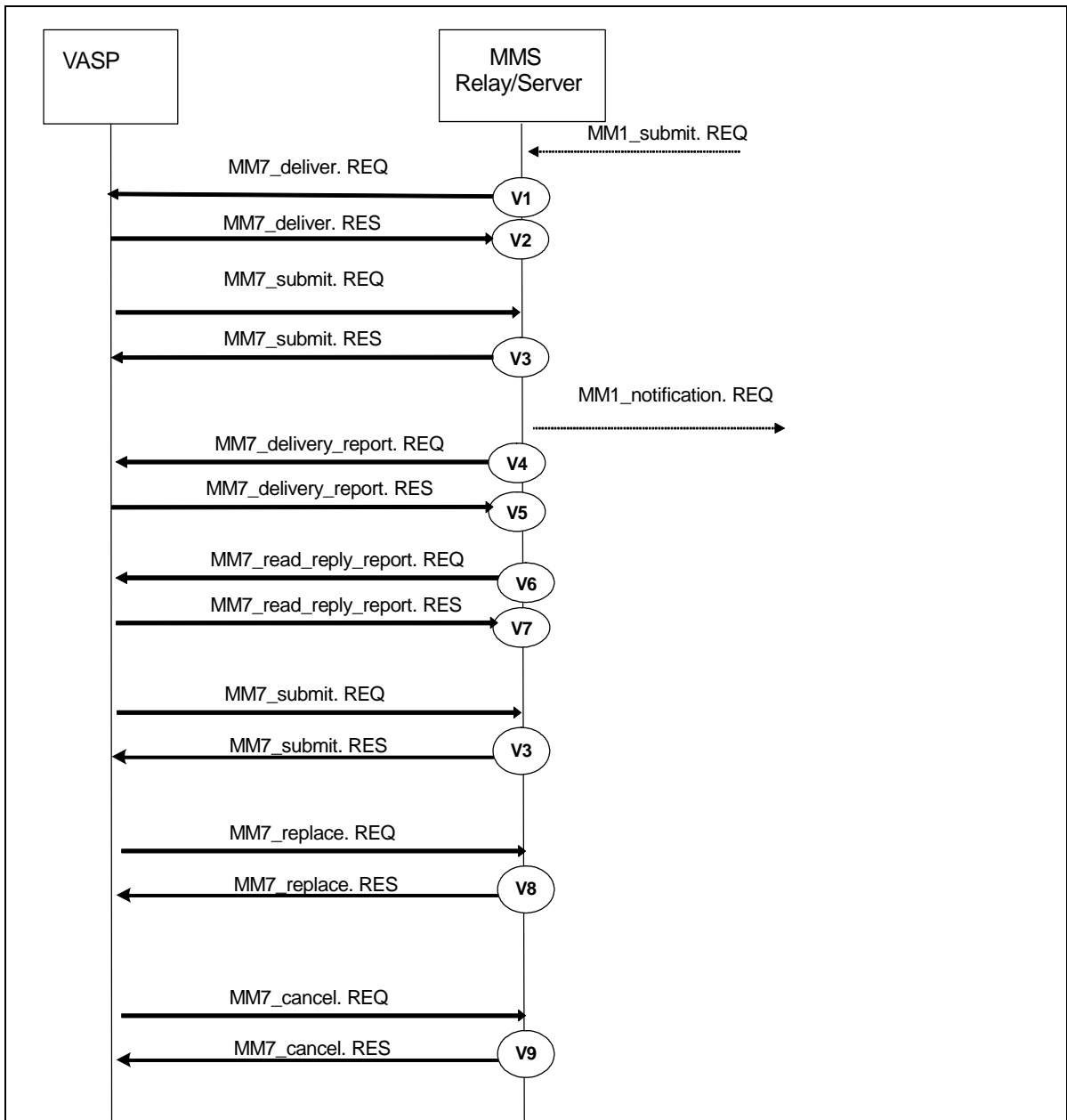~~Details on trigger contitions for VASP are ffs.~~
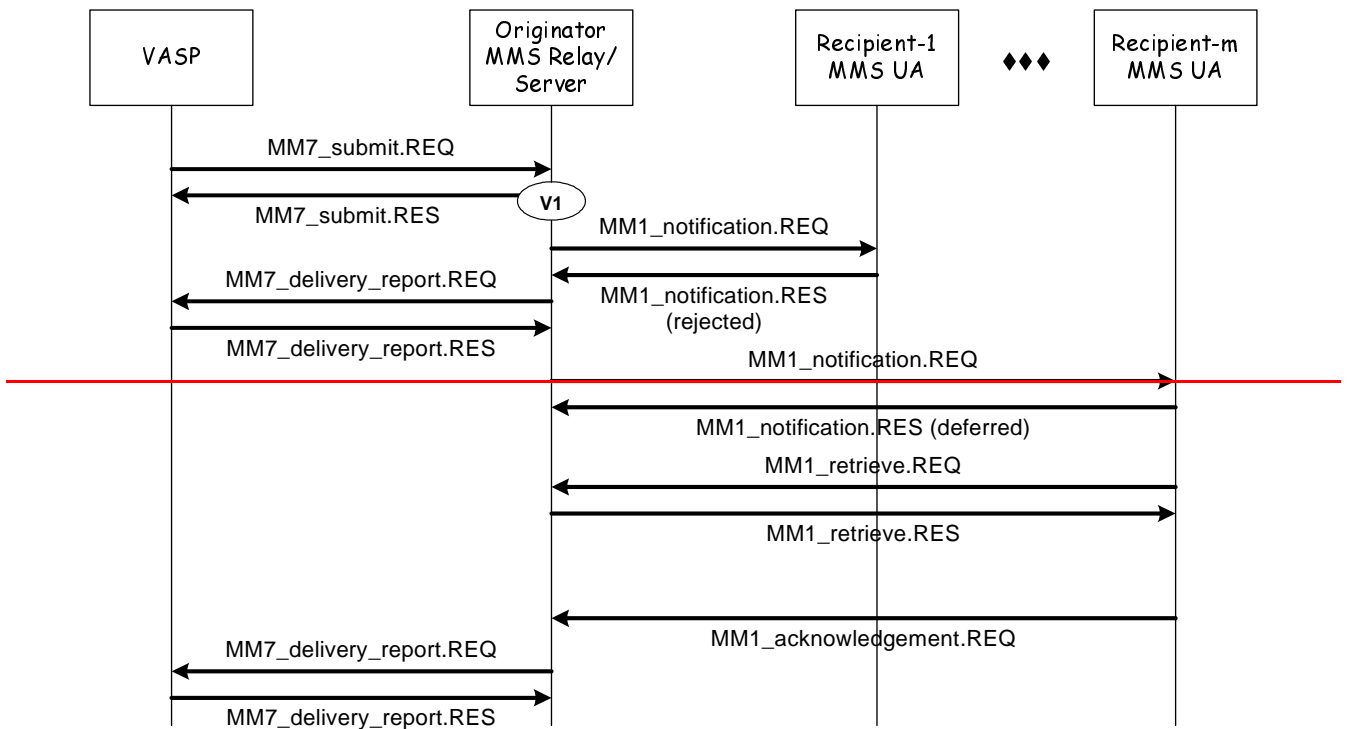
Figure 5.4: Chargeable event overview for VASP transactions

Table 5.4: Trigger type overview for VASP transactions

Trigger point	Trigger name
V1	VASP Originator MM7 Submission
V2	VASP Recipient MM7 Deliver report Request
V3	VASP Recipient MM7 Deliver report Response
V4	VASP MM7 Cancellation
V5	VASP MM7 Replacement
V6	VASP Recipient MM7 Delivery report Request
V7	VASP Recipient MM7 Delivery report Response
V8	VASP Recipient MM7 Read reply report Request
V9	VASP Recipient MM7 Read reply report Response
NOTE: Chargeable events for VASP xxx are triggered by the MMS R/S responding to these requests, rather than upon receiving them.	

Trigger point	Trigger name
V1	MM7 Deliver report Request
V2	MM7 Deliver report Response
V3	MM7 Submission
V4	MM7 Delivery report Request
V5	MM7 Delivery report Response
V6	MM7 Read reply report Request
V7	MM7 Read reply report Response
V8	MM7 Replacement
V9	MM7 Cancellation
NOTE: Chargeable events for MM7 submission, replacement and cancelleation are triggered by the MMS R/S responding to these requests, rather than upon receiving them.	

Editor's note: Correction on the VASP CDR description is needed, in point especially of subclause 6.1.5.8 (for V8 above).

End of Change in Clause 5.1.4

Change in Clause 6.1.5

6.1.5   MMS records for MMS VAS applications

The following subclauses specify CDRs created in the originator MMS Relay/Server based on messages flowing over the MM7 reference point. Unless otherwise specified, the CDR parameters are copied from the corresponding MM7 message parameters as applicable.

6.1.5.1 MM7 Submission CDR (MM7S-CDR)

If enabled, an MM7 Submission Charging Data Record (MM7S-CDR) shall be produced in the ~~originator~~ MMS Relay/Server for each MM submitted in an MM7_submit.REQ by a VASP to the ~~originator~~ MMS Relay/Server if and when the ~~originator~~ MMS Relay/Server responds with an MM7_submit.RES. The operator can configure whether this CDR, if enabled, shall only be created for MM7_submit.RES indicating acceptance of the submitted MM, or also for the unsuccessful submissions.

Table 6.25: MM7 Submission CDR (MM7S-CDR)

Field	Category	Description
Record Type	M	MM7 Submission record.
Originator MMS Relay/Server Address	M	.IP address or domain name of originator MMS Relay/Server.
Linked ID	C	This field is present in the CDR only if the MM defines a correspondence to a previous message that was delivered by the MMS Relay/Server. The MM identification provided by the originator MMS Relay/Server.
VASP ID	M	Identifier of the VASP for this MMS Relay/Server
VAS ID	M	Identifier of the originating application.
Message ID	M	The MM identification provided by the originator MMS Relay/Server.
Originator Address	M	The address of the MM originator.
Recipients address list	M	The address(es) of the recipient MMS User Agent(s) of the MM. Multiple addresses are possible if the MM is not a reply MM.
Service code	O_c	Charging related information that is used directly for billing purposes
Content type	M	The content type of the MM content.
MM component list	O_m	The list of media components with volume size.
Message size	M	The total size of the MM content.
Message class	O_c	The class selection such as personal, advertisement, information service if specified in the MM7_submit_REQ.
Charge Information	O_m	The charged party indication and charge type e.g. the sending, receiving, both parties, third party or neither.
Submission Time	O_c	The time at which the MM was submitted from the VASP if specified in the MM7_submit_REQ.
Time of Expiry	O_c	The desired date of expiry or duration of time prior to expiry for the MM if specified by the VASP
Earliest Time Of Delivery	C	This field contains either the earliest time to deliver the MM or the number of seconds to wait before delivering the MM if specified by the VASP
Delivery Report Requested	O_m	This field indicates whether a delivery report has been requested by the VASP or not.
Reply Charging	O_c	A request for reply-charging if specified by the VASP
Read reply requested	O_m	A request for read reply report as specified in the MM7_submit.REQ.
Reply Deadline	O_c	In case of reply-charging the latest time of submission of replies granted to the recipient(s) as specified by the VASP
Reply Charging Size	O_c	In case of reply-charging the maximum size for reply-MM(s) granted to the recipient(s) as specified by the VASP
Priority	O_c	The priority (importance) of the message if specified by the VASP
Charged Party ID	O_c	The address of the third party which is expected to pay for the MM.
Message Distribution Indicator	O_c	This field is present if specified in the MM7_submit.REQ 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.
Request Status Code	O_m	The status code of the associated MM7_submit_REQ
Status Text	O_c	This field includes a more detailed technical status of the message at the point in time when the CDR is generated. This field is only present if the MM submission is rejected.
Record Time Stamp	O_m	Time of generation of the CDR.
Local Record Sequence Number	O_m	Consecutive record number created by this node. The number is allocated sequentially including all CDR types.
Record extensions	O_c	A set of network/manufacturer specific extensions to the record. Conditioned upon the existence of an extension.

6.1.5.2   MM7 Deliver Request CDR (MM7DRq-CDR)

If enabled, a MM7 Deliver Request Charging Data Record (MM7DRq-CDR) shall be produced in the ~~recipient~~ MMS Relay/Server if and when the ~~recipient~~ MMS Relay/Server sends an MM7_deliver.REQ to the recipient MMS VASP.

Table 6.26: MM7 Deliver Request record (MM7DRq -CDR)

Field	Category	Description
Record Type	M	MM7 Deliver Request record.
Recipient MMS Relay/Server Address	M	IP address or domain name of the recipient MMS Relay/Server.
Linked ID	C	This field is present in the CDR only if the MM defines a correspondence to a previous message that was delivered by the MMS Relay/Server. The MM identification provided by the originator MMS Relay/Server.
Reply Charging ID	C	This field is present in the CDR only if the MM is a reply-MM to an original MM. The Reply-Charging ID is the Message ID of the original MM.
Originator address	M	The address of the MMS User Agent as used in the MM7_deliver_REQ.
Recipient address	M	The address of the MM recipient of the MM.
MM component list	O_m	The list of media components with volume size.
Message size	O_m	The total size of the MM content.
Content type	M	The content type of the MM content.
Priority	O_c	The priority (importance) of the message if specified by the VASP
Record Time Stamp	O_m	Time of generation of the CDR
Local Record Sequence Number	O_m	Consecutive record number created by this node. The number is allocated sequentially including all CDR types.
Record extensions	O_c	A set of network/manufacturer specific extensions to the record. Conditioned upon the existence of an extension.

6.1.5.3   MM7 Deliver Response CDR (MM7DRs-CDR)

If enabled, a MM7 Deliver Response Charging Data Record (MM7DRs-CDR) shall be produced in the ~~recipient~~ MMS Relay/Server if and when the ~~recipient~~ MMS Relay/Server receives an MM7_deliver.RES from the recipient MMS VASP.

Table 6.27: MM7 Deliver Response record (MM7DRs-CDR)

Field	Category	Description
Record Type	M	MM7 Deliver Response record.
Recipient MMS Relay/Server Address	M	IP address or domain name of the recipient MMS Relay/Server.
Message ID	M	The MM identification provided by the originator MMS Relay/Server.
Recipient address	M	The address of the MM recipient of the MM.
Service code	O_c	Charging related information that is used directly for billing purposes
Request Status Code	O_m	The status code of the associated MM7_deliver_REQ
Status Text	O_m	This field includes a more detailed technical status of the message at the point in time when the CDR is generated.
Record Time Stamp	O_m	Time of generation of the CDR
Local Record Sequence Number	O_m	Consecutive record number created by this node. The number is allocated sequentially including all CDR types.
Record extensions	O_c	A set of network/manufacturer specific extensions to the record. Conditioned upon the existence of an extension.

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6.1.5.6 MM7 Delivery Report Request CDR (MM7DRRq-CDR)

If enabled, a MM7 Delivery Report Request Charging Data Record (MM7DRRq-CDR) shall be produced in the ~~recipient~~ MMS Relay/Server if and when the ~~recipient~~ MMS Relay/Server sends an MM7_delivery_report.REQ to the MMS VASP.

Table 6.30: MM7 Delivery Report Request record (MM7DRRq-CDR)

Field	Category	Description
Record Type	M	MM7 Delivery Report Requestrecord.
Recipient MMS Relay/Server Address	O_m	IP address or domain name of the recipient MMS Relay/Server.
Message ID	M	The MM identification provided by the originator MMS Relay/Server.
Originator address	O_m	The address of the VAS that submitted the original MM.
Recipient address	M	The address of the MM recipient of the MM.
MM Date and time	M	Date and time the MM was handled (retrieved, expired, rejected, etc.) as specified in the MM7_delivery_report.REQ.
MM Status Code	M	The status code of the delivered MM as received in the MM7_delivery_report.RES.
MM Status Text	O_c	This field includes the status text as received in the MM7_delivery_report.RES corresponding to the MM Status Code. Present only if provided in the MM7_delivery_report.RES.
Record Time Stamp	O_m	Time of generation of the CDR
Local Record Sequence Number	O_m	Consecutive record number created by this node. The number is allocated sequentially including all CDR types.
Record extensions	O_c	A set of network/manufacturer specific extensions to the record. Conditioned upon the existence of an extension.

6.1.5.7 MM7 Delivery Report Response CDR (MM7DRRs-CDR)

If enabled, an MM7 Delivery Report Response Charging Data Record (MM7DRRs-CDR) shall be produced in the ~~recipient~~ MMS Relay/Server if and when the ~~recipient~~ MMS Relay/Server receives an MM7_delivery_report.RES from the MMS VASP.

Table 6.31: MM7 Delivery Report Response record (MM7DRRs-CDR)

Field	Category	Description
Record Type	M	MM7 Delivery Report Response record.
Recipient MMS Relay/Server Address	O_m	IP address or domain name of the recipient MMS Relay/Server.
Message ID	M	The MM identification provided by the originator MMS Relay/Server.
Originator address	O_m	The address of the VAS that submitted the original MM.
Recipient address	M	The address of the MM recipient of the MM.
Request Status Code	O_m	The status code of the associated MM7_delivery_report.REQ.
Status Text	O_c	This field includes the status text as received in the MM7_delivery_report.RES corresponding to the Request Status Code. Present only if provided in the MM7_delivery_report.RES.
Record Time Stamp	O_m	Time of generation of the CDR
Local Record Sequence Number	O_m	Consecutive record number created by this node. The number is allocated sequentially including all CDR types.
Record extensions	O_c	A set of network/manufacturer specific extensions to the record. Conditioned upon the existence of an extension.

6.1.5.8 MM7 Read reply report Request CDR (MM7RRq-CDR)

If enabled, a MM7 Read reply report Request Charging Data Record (MM7RRq-CDR) shall be produced in the ~~originator~~ MMS Relay/Server if and when the recipient MMS Relay/Server sends an MM7_read reply_report.REQ to the ~~originator~~ MMS VASP.

Table 6.32: MM7 Read reply report Request record (MM7RRq-CDR)

Field	Category	Description
Record Type	M	MM7 Read reply report Requestrecord.
Recipient MMS Relay/Server Address	O_m	IP address or domain name of the recipient MMS Relay/Server.
Message ID	M	The MM identification provided by the originator MMS Relay/Server.
Originator address	O_m	The address of the VAS that submitted the original MM.
Recipient address	M	The address of the MM recipient of the MM.
MM Date and time	M	Date and time the MM was handled (retrieved, expired, rejected, etc.) as specified in the MM7_Read reply_report.REQ.
Read Status	M	The status of the MM (e.g. Read, deleted without being read, etc.) as sent in the MM7_read_reply_report.REQ.
MM Status Text	O_c	This field includes the status text as received in the MM7_read reply_report.RES corresponding to the Read Status. Present only if provided in the MM7_read reply_report.REQ.
Record Time Stamp	O_m	Time of generation of the CDR
Local Record Sequence Number	O_m	Consecutive record number created by this node. The number is allocated sequentially including all CDR types.
Record extensions	O_c	A set of network/manufacturer specific extensions to the record. Conditioned upon the existence of an extension.

6.1.5.9 MM7 Read reply report Response CDR (MM7RRs-CDR)

If enabled, an MM7 Read reply report Response Charging Data Record (MM7RRs-CDR) shall be produced in the ~~recipient~~ MMS Relay/Server if and when the ~~recipient~~ MMS Relay/Server receives an MM7_Read reply_report.RES from the originator MMS VASP.

Table 6.33: MM7 Read reply report Response record (MM7RRs-CDR)

Field	Category	Description
Record Type	M	MM7 Read reply report Response record.
Recipient MMS Relay/Server Address	O_m	IP address or domain name of the recipient MMS Relay/Server.
Message ID	M	The MM identification provided by the originator MMS Relay/Server.
Originator address	O_m	The address of the VAS that submitted the original MM.
Recipient address	M	The address of the MM recipient of the MM.
Request Status Code	O_m	The status code of the associated MM7_read reply_report.REQ.
Status Text	O_c	This field includes the status text as received in the MM7_read reply_report.RES corresponding to the Request Status Code. Present only if provided in the MM7_read reply_report.RES.
Record Time Stamp	O_m	Time of generation of the CDR
Local Record Sequence Number	O_m	Consecutive record number created by this node. The number is allocated sequentially including all CDR types.
Record extensions	O_c	A set of network/manufacturer specific extensions to the record. Conditioned upon the existence of an extension.

End of Change in Clause 6.1.5
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