Technical Specification Group Services and System Aspects
Meeting #17, Biarritz, France, 9-12 September 2002

TSGS#17(02)0454

Source: **SA5 (Telecom Management)**

Title: **Rel-4 CRs 32.235 (Charging data description for application services)**

Document for: **Approval**

Agenda Item: **7.5.3**

Doc-1st-	Spec	CR	Rev	Phase	Subject	Cat	Version-	Doc-2nd-	Workitem
SP-020454	32.235	003	-	Rel-4	**Corrections based on synchronisation of MMS ASN.1 and CDR definition tables**	F	4.2.0	S5-024232	OAM-CH
SP-020454	32.235	004	-	Rel-4	**Combine the Recipient MM1 Retrieve Request and Recipient MM1 Retrieve Response CDRs**	F	4.2.0	S5-024318	OAM-CH
SP-020454	32.235	005	-	Rel-4	**Alignment of the Message size definition with TS 23.140**	F	4.2.0	S5-024334	OAM-CH

3GPP TSG-SA5 (Telecom Management) **S5-024232**
Meeting #29, Beijing, CHINA, 24 - 28 June 2002

CR-Form-v5

CHANGE REQUEST

⌘ **32.235** **CR** **003** ⌘ **rev** **-** ⌘ Current version: **4.2.0** ⌘

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

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

Title:	⌘	Corrections based on synchronisation of MMS ASN.1 and CDR definition tables
Source:	⌘	SA5
Work item code:	⌘	OAM-CH
Date:	⌘	28/06/2002
Category:	⌘	**F**
Release:	⌘	*REL-4*

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

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

Reason for change:	⌘	The ASN.1 module is incomplete and contains some errors.
Summary of change:	⌘	Some corrections are made to the ASN.1 definitions. For example, the Message Type is removed as it is no longer used, the Read status values are added, a message class value is added
Consequences if not approved:	⌘	Without these corrections, proper encoding of the MMS CDRs would not be possible.

Clauses affected:	⌘	6.1		
Other specs affected:	⌘	☐ Other core specifications ☐ Test specifications ☐ O&M Specifications	⌘	
Other comments:	⌘			

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

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

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

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

6 Charging Data Record Structure

6.1 ASN.1 definitions for CDR information

The ASN.1 definitions are based on the charging specific data types within the current 3GPP 32-series, the TS 32.205 for CS domain[8] and TS 32.215 for PS domain[9].

```
TS32235-DataTypes {itu-t (0) identified-organization (4) etsi(0) mobileDomain (0) umts-Operation-Maintenance (3) ts-32-235 (235)
informationModel (0) asn1Module (2) version1 (1)}

DEFINITIONS IMPLICIT TAGS ::=

BEGIN

-- EXPORTS everything

IMPORTS

CallEventRecord, CallEventRecordType, ChargeIndicator, CallDuration, TimeStamp, MSISDN, CallReference, MscNo, ManagementExtensions
FROM TS32205-DataTypes {itu-t (0) identified-organization (4) etsi(0) mobileDomain (0) umts-Operation-Maintenance (3) ts-32-205 (205)
informationModel (0) asn1Module (2) version1 (1)}
--
-- see TS 32.205[8]
--

ChargingID, IPAddress, GSNAddress, LocalSequenceNumber
FROM TS32215-DataTypes {itu-t (0) identified-organization (4) etsi (0) mobileDomain (0) umts-Operation-Maintenance (3) ts-32-215 (215)
informationModel (0) asn1Module (2) version1 (1)}
--
-- see TS 32.215[9]
--

-------------------------------------------------------------------------------
--
--  CALL AND EVENT RECORDS
--
-------------------------------------------------------------------------------

MMO1SRecord ::= SET
{
        recordType                      [0] CallEventRecordType,
        originatorMmsRSAddress          [1] MMSRSAddress,
        messageID                       [2] OCTET STRING,
        replyChargingID                 [3] OCTET STRING OPTIONAL,
        originatorAddress               [4] MMSAgentAddress,
        recipientAddresses              [5] MMSAgentAddresses,
        accessCorrelation               [6] AccessCorrelation OPTIONAL,
        contentType                     [7] ContentType,
        mmComponentType                 [8] MMComponentType OPTIONAL,
        messageSize                     [9] DataVolume,
        messageClass                    [10] MessageClass OPTIONAL,
        chargeInformation               [11] ChargeInformation OPTIONAL,
        submissionTime                  [12] TimeStamp OPTIONAL,
        timeOfExpiry                    [13] WaitTime OPTIONAL,
        earliestTimeOfDelivery          [14] WaitTime OPTIONAL,
        durationOfTransmission          [15] INTEGER OPTIONAL,
        requestStatusCode               [16] RequestStatusCodeType OPTIONAL,
        deliveryReportRequested         [17] BOOLEAN OPTIONAL,
        replyCharging                   [18] BOOLEAN OPTIONAL,
        replyDeadline                   [19] WaitTime OPTIONAL,
        replyChargingSize               [20] DataVolume OPTIONAL,
        priority                        [21] PriorityType OPTIONAL,
        senderVisibility                [22] BOOLEAN OPTIONAL,
        readReplyRequested              [23] BOOLEAN OPTIONAL,
```

```
    statusText                  [24] StatusTextType,
    recordTimeStamp             [25] TimeStamp,
    localSequenceNumber         [26] LocalSequenceNumber OPTIONAL,
    recordExtensions            [27] ManagementExtensions OPTIONAL
}
MMO4FRqRecord          ::= SET
{
    recordType                  [0]  CallEventRecordType,
    originatorMmsRSAddress      [1]  MMSRSAddress,
    recipientMmsRSAddress       [2]  MMSRSAddress,
    messageID                   [3]  OCTET STRING,
    3GPPVersion                 [4]  OCTET STRING OPTIONAL,
    originatorAddress           [5]  MMSAgentAddress,
    recipientAddresses          [6]  MMSAgentAddresses,
    contentType                 [7]  ContentType,
    mmComponentType             [8]  MMComponentType OPTIONAL,
    messageSize                 [9]  DataVolume,
    messageClass                [10] MessageClass OPTIONAL,
    submissionTime              [11] TimeStamp,
    timeOfExpiry                [12] WaitTime OPTIONAL,
    deliveryReportRequested     [13] BOOLEAN,
    priority                    [14] PriorityType OPTIONAL,
    senderVisibility            [15] BOOLEAN,
    readReplyRequested          [16] BOOLEAN,
    acknowledgementRequest      [17] BOOLEAN,
    forwardCounter              [18] INTEGER OPTIONAL,
    forwardingAddress           [19] MMSAgentAddresses OPTIONAL,
    recordTimeStamp             [20] TimeStamp,
    localSequenceNumber         [21] LocalSequenceNumber OPTIONAL,
    recordExtensions            [22] ManagementExtensions OPTIONAL
}

MMO4FRsRecord          ::= SET
{
    recordType                  [0]  CallEventRecordType,
    originatorMmsRSAddress      [1]  MMSRSAddress OPTIONAL,
    recipientMmsRSAddress       [2]  MMSRSAddress,
    messageID                   [3]  OCTET STRING,
    3GPPVersion                 [4]  OCTET STRING OPTIONAL,
    requestStatusCode           [5] RequestStatusCodeType OPTIONAL,
    statusText                  [6] StatusTextType OPTIONAL,
    recordTimeStamp             [7] TimeStamp OPTIONAL,
    localSequenceNumber         [8] LocalSequenceNumber OPTIONAL,
    recordExtensions            [9] ManagementExtensions OPTIONAL
}

MMO4DRecord        ::= SET
{
    recordType                  [0]  CallEventRecordType,
    recipientMmsRSAddress       [1]  MMSRSAddress OPTIONAL,
    originatorMmsRSAddress      [2]  MMSRSAddress OPTIONAL,
    messageID                   [3]  OCTET STRING,
    3GPPVersion                 [4]  OCTET STRING OPTIONAL,
    originatorAddress           [5]  MMSAgentAddress OPTIONAL,
    recipientAddress            [6]  MMSAgentAddress,
    mmDateAndTime               [7] TimeStamp,
    acknowledgementRequest      [8] BOOLEAN,
    mmStatusCode                [98] MMStatusCodeType,
    statusText                  [109] StatusTextType OPTIONAL,
    recordTimeStamp             [110] TimeStamp OPTIONAL,
    localSequenceNumber         [121] LocalSequenceNumber OPTIONAL,
    recordExtensions            [132] ManagementExtensions OPTIONAL
}

MMO1DRecord        ::= SET
{
    recordType                  [0]  CallEventRecordType,
    recipientMmsRSAddress       [1]  MMSRSAddress OPTIONAL,
    originatorMmsRSAddress      [2]  MMSRSAddress OPTIONAL,
    accessCorrelation           [3] AccessCorrelation OPTIONAL,
    messageID                   [4]  OCTET STRING,
    3GPPVersion                 [5]  OCTET STRING OPTIONAL,
    originatorAddress           [6]  MMSAgentAddress OPTIONAL,
    recipientAddress            [7]  MMSAgentAddress,
    mmStatusCode                [8] MMStatusCodeType OPTIONAL,
    statusText                  [9] StatusTextType OPTIONAL,
    recordTimeStamp             [910] TimeStamp OPTIONAL,
```

```
    localSequenceNumber             [11] LocalSequenceNumber OPTIONAL,
    recordExtensions                [12] ManagementExtensions OPTIONAL
}

MMO4RRecord       ::= SET
{
    recordType                      [0]  CallEventRecordType,
    recipientMmsRSAddress           [1]  MMSRSAddress OPTIONAL,
    originatorMmsRSAddress          [2]  MMSRSAddress OPTIONAL,
    messageID                       [3]  OCTET STRING,
    3GPPVersion                     [4]  OCTET STRING OPTIONAL,
    originatorAddress               [5]  MMSAgentAddress OPTIONAL,
    recipientAddresses              [6]  MMSAgentAddresses OPTIONAL,
    mmDateAndTime                   [7] TimeStamp OPTIONAL,
    acknowledgementRequest          [8] BOOLEAN,
    readStatus                      [9] MMStatusCodeType OPTIONAL,
    statusText                      [10] StatusTextType OPTIONAL,
    recordTimeStamp                 [11] TimeStamp OPTIONAL,
    localSequenceNumber             [12] LocalSequenceNumber OPTIONAL,
    recordExtensions                [13] ManagementExtensions OPTIONAL
}

MMO1Rrecord       ::= SET
{
    recordType                      [0]  CallEventRecordType,
    recipientMmsRSAddress           [1]  MMSRSAddress OPTIONAL,
    originatorMmsRSAddress          [2]  MMSRSAddress OPTIONAL,
    accessCorrelation               [3] AccessCorrelation OPTIONAL,
    messageID                       [4]  OCTET STRING,
    3GPPVersion                     [5]  OCTET STRING OPTIONAL,
    originatorAddress               [6]  MMSAgentAddress OPTIONAL,
    recipientAddress                [7]  MMSAgentAddress OPTIONAL,
    readStatus                      [8] MMStatusCodeType OPTIONAL,
    recordTimeStamp                 [9] TimeStamp OPTIONAL,
    localSequenceNumber             [10] LocalSequenceNumber OPTIONAL,
    recordExtensions                [11] ManagementExtensions OPTIONAL
}

MMOMDRecord       ::= SET
{
    recordType                      [0]  CallEventRecordType,
    originatorMmsRSAddress          [1]  MMSRSAddress OPTIONAL,
    recipientMmsRSAddress           [2]  MMSRSAddress OPTIONAL,
    messageID                       [3]  OCTET STRING,
    messageSize                     [4] DataVolume OPTIONAL,
    mmStatusCode                    [5] MMStatusCodeType OPTIONAL,
    statusText                      [6] StatusTextType OPTIONAL,
    recordTimeStamp                 [7] TimeStamp OPTIONAL,
    localSequenceNumber             [8] LocalSequenceNumber OPTIONAL,
    recordExtensions                [9] ManagementExtensions OPTIONAL
}


MMR4FRecord       ::= SET
{
    recordType                      [0]  CallEventRecordType,
    recipientMmsRSAddress           [1]  MMSRSAddress,
    originatorMmsRSAddress          [2]  MMSRSAddress,
    messageID                       [3]  OCTET STRING,
    3GPPVersion                     [4]  OCTET STRING OPTIONAL
    originatorAddress               [5]  MMSAgentAddress,
    recipientAddresses              [6]  MMSAgentAddresses,
    contentType                     [7]  ContentType,
    mmComponentType                 [8]  MMComponentType OPTIONAL,
    messageSize                     [9]  DataVolume,
    messageClass                    [10] MessageClass OPTIONAL,
    submissionTime                  [11] TimeStamp,
    timeOfExpiry                    [12] WaitTime OPTIONAL,
    deliveryReportRequested         [13] BOOLEAN
    priority                        [14] PriorityType OPTIONAL,
    senderVisibility                [15] BOOLEAN,
    readReplyRequested              [16] BOOLEAN,
    requestStatusCode               [17] RequestStatusCodeType,
    statusText                      [18] StatusTextType,
    acknowledgementRequest          [19] BOOLEAN
    forwardCounter                  [20] INTEGER OPTIONAL
    forwardingAddress               [21] MMSAgentAddresses OPTIONAL,
```

```
    recordTimeStamp             [22] TimeStamp,
    localSequenceNumber         [23] LocalSequenceNumber OPTIONAL,
    recordExtensions            [24] ManagementExtensions OPTIONAL
}

MMR1NrqRecord       ::= SET
{
    recordType                  [0] CallEventRecordType,
    recipientMmsRSAddress       [1] MMSRSAddress,
    messageID                   [2] OCTET STRING,
    replyChargingID             [3] OCTET STRING OPTIONAL,
    senderAddress               [4] MMSAgentAddress,
    recipientAddress            [5] MMSAgentAddress,
    accessCorrelation           [6] AccessCorrelation OPTIONAL,
    messageClass                [7] MessageClass OPTIONAL,
    mmComponentType             [8] MMComponentType OPTIONAL,
    messageSize                 [9] DataVolume,
    timeOfExpiry                [10] WaitTime OPTIONAL,
    messageReference            [11] OCTET STRING,
    deliveryReportRequested     [12] BOOLEAN OPTIONAL,
    replyCharging               [13] BOOLEAN OPTIONAL,
    replyDeadline               [14] WaitTime OPTIONAL,
    replyChargingSize           [15] DataVolume OPTIONAL,
    mmStatusCode                [16] MMStatusCodeType OPTIONAL,
    statusText                  [17] StatusTextType OPTIONAL,
    recordTimeStamp             [18] TimeStamp OPTIONAL
,   localSequenceNumber         [19] LocalSequenceNumber OPTIONAL,
    recordExtensions            [20] ManagementExtensions OPTIONAL
}

MMR1NRsRecord       ::= SET
{
    recordType                  [0]  CallEventRecordType,
    recipientMmsRSAddress       [1]  MMSRSAddress,
    messageID                   [2]  OCTET STRING,
    recipientAddress            [3] MMSAgentAddress,
    accessCorrelation           [4] AccessCorrelation OPTIONAL,
    reportAllowed               [5] BOOLEAN OPTIONAL,
    mmStatusCode                [6] MMStatusCodeType OPTIONAL,
    statusText                  [7] StatusTextType OPTIONAL,
    recordTimeStamp             [8] TimeStamp OPTIONAL,
    localSequenceNumber         [9] LocalSequenceNumber OPTIONAL,
    recordExtensions            [10] ManagementExtensions OPTIONAL
}

MMR1RtRqRecord      ::= SET
{
    recordType                  [0]  CallEventRecordType,
    recipientMmsRSAddress       [1]  MMSRSAddress,
    messageID                   [2]  OCTET STRING,
    originatorAddress           [3] MMSAgentAddress,
    recipientAddress            [4] MMSAgentAddress,
    accessCorrelation           [5] AccessCorrelation OPTIONAL,
    messageReference            [6] OCTET STRING,
    mmStatusCode                [7] MMStatusCodeType OPTIONAL,
    statusText                  [8] StatusTextType OPTIONAL,
    recordTimeStamp             [9] TimeStamp OPTIONAL,
    localSequenceNumber         [10] LocalSequenceNumber OPTIONAL,
    recordExtensions            [11] ManagementExtensions OPTIONAL
}

MMR1RtRsRecord      ::= SET
{
    recordType                  [0] CallEventRecordType,
    recipientMmsRSAddress       [1] MMSRSAddress,
    messageID                   [2] OCTET STRING,
    replyChargingID             [3] OCTET STRING OPTIONAL,
    senderAddress               [4] MMSAgentAddress OPTIONAL,
    recipientAddress            [5] MMSAgentAddress,
    accessCorrelation           [6] AccessCorrelation OPTIONAL,
    contentType                 [7] ContentType,
    mmComponentType             [8] MMComponentType OPTIONAL,
    messageClass                [9] MessageClass OPTIONAL,
    submissionTime              [10] TimeStamp,
    messageSize                 [11] DataVolume OPTIONAL,
    deliveryReportRequested     [12] BOOLEAN OPTIONAL,
    priority                    [13] PriorityType OPTIONAL,
```

```
    readReplyRequested          [14] BOOLEAN OPTIONAL,
    mmStatusCode                [15] MMStatusCodeType OPTIONAL,
    statusText                  [16] StatusTextType OPTIONAL,
    replyDeadline               [17] WaitTime OPTIONAL,
    replyChargingSize           [18] DataVolume OPTIONAL,
    durationOfTransmission      [19] INTEGER OPTIONAL,
    timeOfExpiry                [20] WaitTime OPTIONAL,
    recordTimeStamp             [21] TimeStamp OPTIONAL,
,   localSequenceNumber         [22] LocalSequenceNumber OPTIONAL,
    recordExtensions            [23] ManagementExtensions OPTIONAL
}

MMR1ARecord       ::= SET
{
    recordType                  [0]  CallEventRecordType,
    recipientMmsRSAddress       [1]  MMSRSAddress,
    messageID                   [2]  OCTET STRING,
    recipientAddress            [3] MMSAgentAddress,
    accessCorrelation           [4] AccessCorrelation OPTIONAL,
    reportAllowed               [5] BOOLEAN OPTIONAL,
    mmStatusCode                [6] MMStatusCodeType OPTIONAL,
    statusText                  [7] StatusTextType OPTIONAL,
    recordTimeStamp             [8] TimeStamp OPTIONAL,
    localSequenceNumber         [9] LocalSequenceNumber OPTIONAL,
    recordExtensions            [10] ManagementExtensions OPTIONAL
}

MMR4DRqRecord          ::= SET
{
    recordType                  [0]  CallEventRecordType,
    recipientMmsRSAddress       [1]  MMSRSAddress,
    originatorMmsRSAddress      [2]  MMSRSAddress,
    messageID                   [3]  OCTET STRING,
    3GPPVersion                 [4]  OCTET STRING OPTIONAL,
    originatorAddress           [5] MMSAgentAddress,
    recipientAddress            [6] MMSAgentAddress,
    mmDateAndTime               [7] TimeStamp OPTIONAL,
    acknowledgementRequest      [8] BOOLEAN,
    mmStatusCode                [9] MMStatusCodeType OPTIONAL,
    statusText                  [10] StatusTextType OPTIONAL,
    recordTimeStamp             [11] TimeStamp OPTIONAL,
    localSequenceNumber         [12] LocalSequenceNumber OPTIONAL,
    recordExtensions            [13] ManagementExtensions OPTIONAL
}

MMR4DRsRecord          ::= SET
{
    recordType                  [0]  CallEventRecordType,
    recipientMmsRSAddress       [1]  MMSRSAddress,
    originatorMmsRSAddress      [3]  MMSRSAddress,
    messageID                   [4]  OCTET STRING,
    3GPPVersion                 [5]  OCTET STRING OPTIONAL,
    requestStatusCode           [6] RequestStatusCodeType OPTIONAL,
    statusText                  [7] StatusTextType OPTIONAL,
    recordTimeStamp             [8] TimeStamp OPTIONAL,
    localSequenceNumber         [9] LocalSequenceNumber OPTIONAL,
    recordExtensions            [10] ManagementExtensions OPTIONAL
}

MMR1RRecord            ::= SET
{
    recordType                  [0]  CallEventRecordType,
    recipientMmsRSAddress       [1]  MMSRSAddress,
    messageID                   [23] OCTET STRING,
    recipientAddress            [34] MMSAgentAddress,
    originatorAddress           [45] MMSAgentAddress,
    accessCorrelation           [56] AccessCorrelation OPTIONAL,
    mmStatusCode                [67] MMStatusCodeType OPTIONAL,
    statusText                  [78] StatusTextType OPTIONAL,
    recordTimeStamp             [89] TimeStamp OPTIONAL,
    localSequenceNumber         [910] LocalSequenceNumber OPTIONAL,
    recordExtensions            [101] ManagementExtensions OPTIONAL
}

MMR4RRqRecord          ::= SET
{
    recordType                  [0]  CallEventRecordType,
```

```
        recipientMmsRSAddress           [1]  MMSRSAddress,
        originatorMmsRSAddress          [2]  MMSRSAddress,
        messageID                       [3]  OCTET STRING,
        3GPPVersion                     [4]  OCTET STRING OPTIONAL,
        originatorAddress               [5] MMSAgentAddress,
        recipientAddress                [6] MMSAgentAddress,
        mmDateAndTime                   [7] TimeStamp OPTIONAL,
        acknowledgementRequest          [8] BOOLEAN,
        mmStatusCode                    [9] MMStatusCodeType OPTIONAL,
        statusText                      [10] StatusTextType OPTIONAL,
        recordTimeStamp                 [11] TimeStamp OPTIONAL,
        localSequenceNumber             [12] LocalSequenceNumber OPTIONAL,
        recordExtensions                [13] ManagementExtensions OPTIONAL
}

MMR4RRsRecord           ::= SET
{
        recordType                      [0]  CallEventRecordType,
        recipientMmsRSAddress           [1]  MMSRSAddress,
        originatorMmsRSAddress          [2]  MMSRSAddress,
        messageID                       [3]  OCTET STRING,
        3GPPVersion                     [4]  OCTET STRING OPTIONAL,
        requestStatusCode               [5] RequestStatusCodeType OPTIONAL,
        statusText                      [6] StatusTextType OPTIONAL,
        recordTimeStamp                 [7] TimeStamp OPTIONAL,
        localSequenceNumber             [8] LocalSequenceNumber OPTIONAL,
        recordExtensions                [9] ManagementExtensions OPTIONAL
}

MMRMDRecord         ::= SET
{
        recordType                      [0]  CallEventRecordType,
        originatorMmsRSAddress          [1]  MMSRSAddress,
        recipientMmsRSAddress           [2]  MMSRSAddress OPTIONAL,
        messageID                       [3]  OCTET STRING,
        messageSize                     [4] DataVolume,
        mmStatusCode                    [5] MMStatusCodeType OPTIONAL,
        statusText                      [6] StatusTextType OPTIONAL,
        recordTimeStamp                 [7] TimeStamp OPTIONAL,
        localSequenceNumber             [8] LocalSequenceNumber OPTIONAL,
        recordExtensions                [9] ManagementExtensions OPTIONAL
}

MMFRecord           ::= SET
{
        recordType                      [0] CallEventRecordType,
        forwardingMmsRSAddress          [1] MMSRSAddress,
        messageID                       [2] OCTET STRING,
        forwardingAddress               [3] MMSAgentAddress,
        recipientAddresses              [4] MMSAgentAddresses,
        chargeInformation               [5] ChargeInformation OPTIONAL,
        timeOfExpiry                    [6] WaitTime OPTIONAL,
        earliestTimeOfDelivery          [7] WaitTime OPTIONAL,
        deliveryReportRequested         [8] BOOLEAN OPTIONAL,
        readReplyRequested              [9] BOOLEAN OPTIONAL,
        messageReference                [10] OCTET STRING,
        mmStatusCode                    [11] MMStatusCodeType OPTIONAL,
        statusText                      [12] StatusTextType OPTIONAL,
        recordTimeStamp                 [13] TimeStamp OPTIONAL,
        localSequenceNumber             [14] LocalSequenceNumber OPTIONAL,
        recordExtensions                [15] ManagementExtensions OPTIONAL
}

-------------------------------------------------------------------------------
--
--  COMMON DATA TYPES
--
-------------------------------------------------------------------------------

AccessCorrelation ::= CHOICE
{
        circuitSwitched         [0]   CircuitSwitchedAccess,
        packetSwitched          [1]   PacketSwitchedAccess
}

ChargeInformation       ::= SEQUENCE
{
```

```
        chargeindication        [0] ChargeIndicator,
        chargetype              [1] ChargeType
}

ChargeType                      ::= ENUMERATED
{
        normal                          (0),
        pre-paid                        (1),
        reply                           (2)
}

CircuitSwitchedAccess ::= SEQUENCE
{
        mSCIdentifier           [0] MscNo,
        callReferenceNumber     [1] CallReference
}

ContentType                     ::= OCTET STRING

MMComponentType         ::= SEQUENCE
{       subject     [0] SubjectComponent,
        media       [1] MediaComponents
}

DataVolume                      ::= INTEGER
        --
        -- The volume of data transfered in octets.
        --

MMStatusCodeType        ::= ENUMERATED
{
        retrieved       (0),
        forwarded       (1),
        expired         (2),
        rejected        (3),
        deferred        (4),
        unrecognised    (5),
        read            (6),
        deletedWithoutBeingRead (7)
}

DeltaSeconds            ::= OCTET STRING[8]

MediaComponent   = SEQUENCE
{
        mediaType       [0] OCTET STRING,
        mediaSize       [1] DataVolume
}

MediaComponents         = Set of MediaComponent

MessageType             ::= ENUMERATED
{
        notification            (0),
        message-MM              (1),
        delivery-report         (2),
        read-reply              (3)
}

MessageClass            ::= ENUMERATED
{
        personal                (0),
        advertisement           (1),
        information-service (2),
        auto            (3)

}

MMSAgentAddress         ::= SEQUENCE-- usage of SEQUENCE instead of CHOICE allows several address types to be present at the same time
{
        eMail-address   [0] OCTET STRING,
        mSISDN          [1] MSISDN OPTIONAL,
        iPAddress       [2] IPAddress OPTIONAL
}

MMSAgentAddresses   ::= SET OF MMSAgentAddress
```

```
MMSRSAddress        ::= SEQUENCE  -- usage of SEQUENCE instead of CHOICE allows both address types to be present at the same time
{
      domainName     [0] OCTET STRING OPTIONAL,
      iPAddress      [2] IPAddress OPTIONAL
}

PacketSwitchedAccess ::= SEQUENCE
{
      gSNAddress     [0] GSNAddress,
      chargingID     [1] ChargingID
}

PriorityType       ::= ENUMERATED
{
      low                  (0),
      normal               (1),
      high                 (2)
}

~~RequestStatusCodeType      ::= OCTET STRING~~

RequestStatusCodeType       ::= INTEGER
{
      --
      -- cause codes 0 to 15 are defined in TS 32.205[8] as 'CauseForTerm'
      -- (cause for termination) and cause code 16 to 20 are defined
      -- in TS 32.215 [9] as ‘CauseForRecClosing’
      --
      normalRelease              (0),   -- ok
      abnormalRelease            (4),   -- error unspecified
      serviceDenied              (30),
      messageFormatCorrupt       (31),
      sendingAddressUnresolved   (32),
      messageNotFound            (33),
      networkProblem             (34),
      contentNotAccepted         (35),
      unsupportedMessage         (36)
}

StatusTextType         ::= OCTET STRING

SubjectComponent       ::= SEQUENCE
{
      subjectType  [0] OCTET STRING,
      subjectSize  [1] DataVolume
}

WaitTime           ::= CHOICE
{
      http-date          [0]   TimeStamp,
      delta-seconds      [1]   DeltaSeconds
}

END
```

3GPP TSG-SA5 Meeting #30
Tampere, Finland, 19-23 August 2002

Tdoc ⌘S5-024318

CR-Form-v7

CHANGE REQUEST

⌘ **32.235** **CR** **004** ⌘ **rev** **-** ⌘ Current version: **4.2.0** ⌘

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

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

Title: ⌘	Combine the Recipient MM1 Retrieve Request and Recipient MM1 Retrieve Response CDRs	
Source: ⌘	S5	
Work item code: ⌘	OAM-CH	***Date:*** ⌘ 23/08/2002
Category: ⌘	**F**	***Release:*** ⌘ REL-4

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

Use one of the following releases:

2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*

Reason for change: ⌘	There is no need to capture CDRs for both request and response in case of MMS UA initiated transactions since the response to such request is mandatory. In addition, the other existing case (submission) has CDRs only triggered by the MMS R/S response.
Summary of change: ⌘	The "Recipient Retrieve MM1 Request" and "Recipient MM1 Retrieve Response" CDRs are combined into a single "Recipient MM1 Retrieve" CDR generated upon completion of transmission of the MM1_retrieve.RES.
Consequences if not approved: ⌘	The generation process of the "Recipient MM1 retrieve" CDR would not be consistent with the "Originator MM1 submission" one.

Clauses affected: ⌘	4.1, 4.2 and 6.1

Other specs affected: ⌘

Y	N	
	X	Other core specifications
	X	Test specifications
	X	O&M Specifications

⌘

Other comments: ⌘	

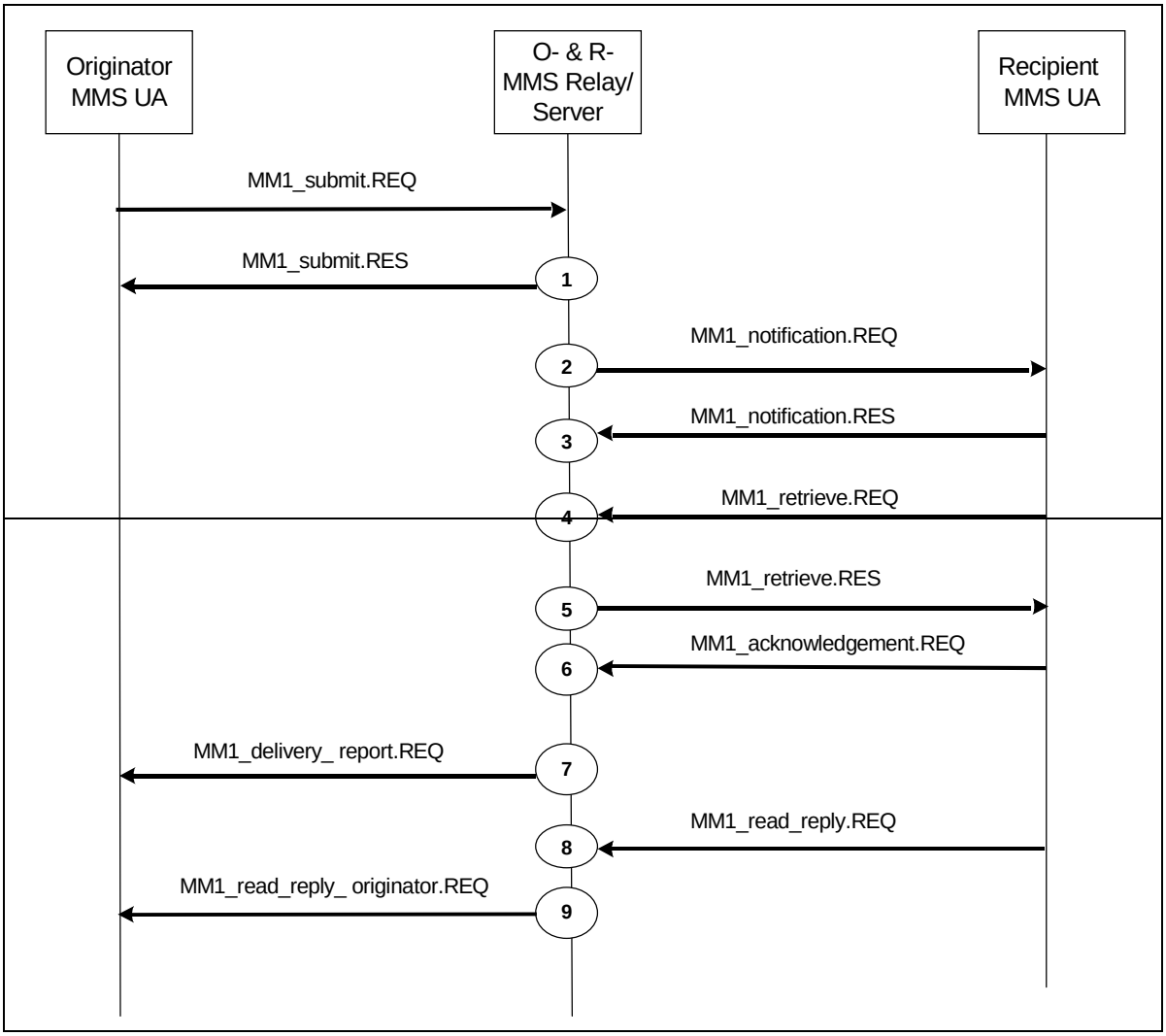
4 Message Flow and CDR Definitions

4.1 Basic MMS Message Flow

The MMS Relay/Servers generate CDRs when receiving MMs from or when delivering MMs to the User Agent or another MMS Relay/Server. The label in the message flows identifies the CDR generation trigger.

The events triggering the generation of CDRs are events at the MM1 reference point and/or events at the MM4 reference point.

4.1.1 Originator and Recipient MMS Relay Server are the same


Originator MMS UA
O- & R- MMS Relay/ Server
Recipient MMS UA
MM1_submit.REQ
MM1_submit.RES
1
MM1_notification.REQ
2
MM1_notification.RES
3
MM1_retrieve.REQ
4
MM1_retrieve.RES
5
MM1_acknowledgement.REQ
6
MM1_delivery_ report.REQ
7
MM1_read_reply.REQ
8
MM1_read_reply_ originator.REQ
9

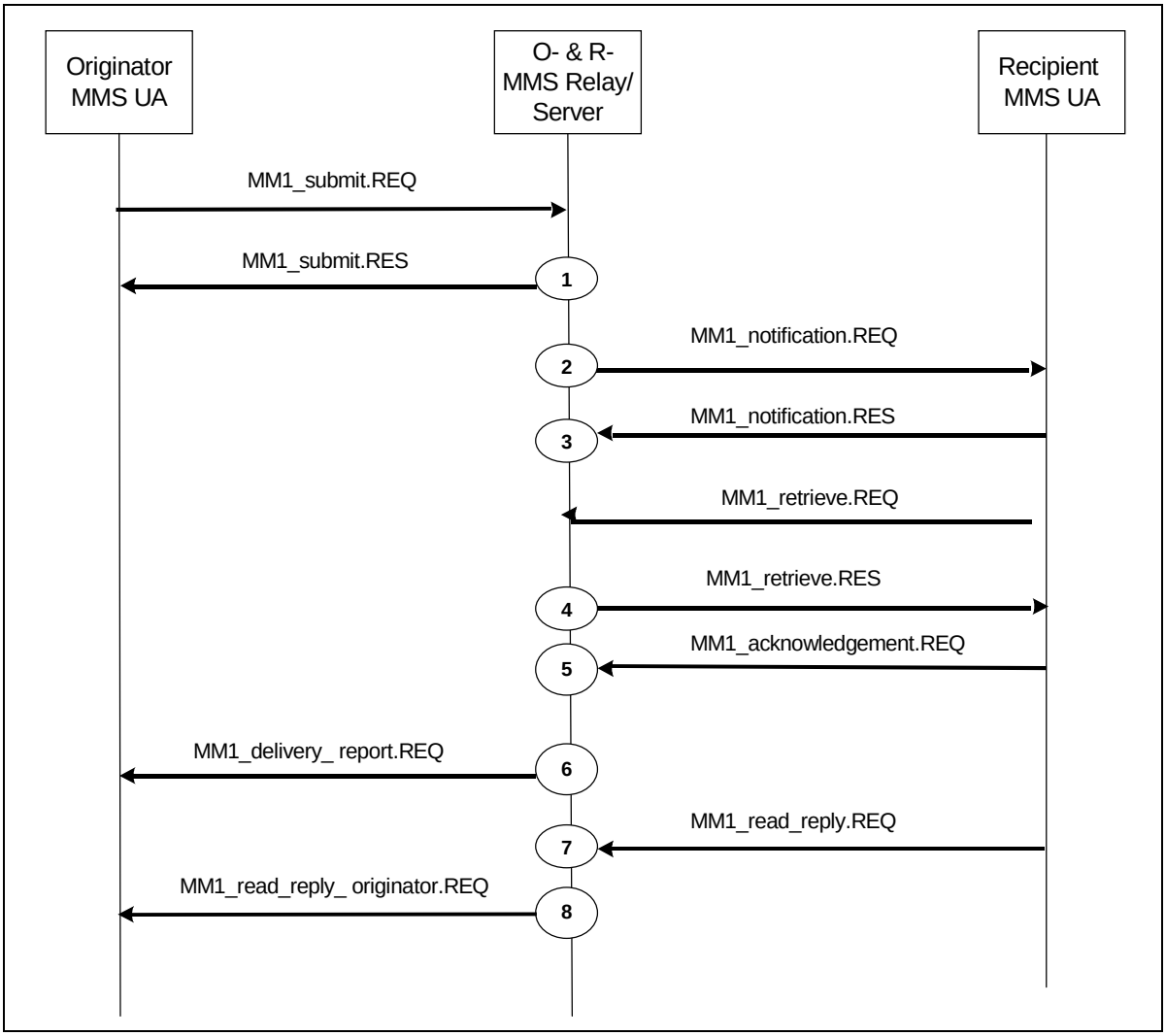


Figure 4.1: Record trigger overview for combined case

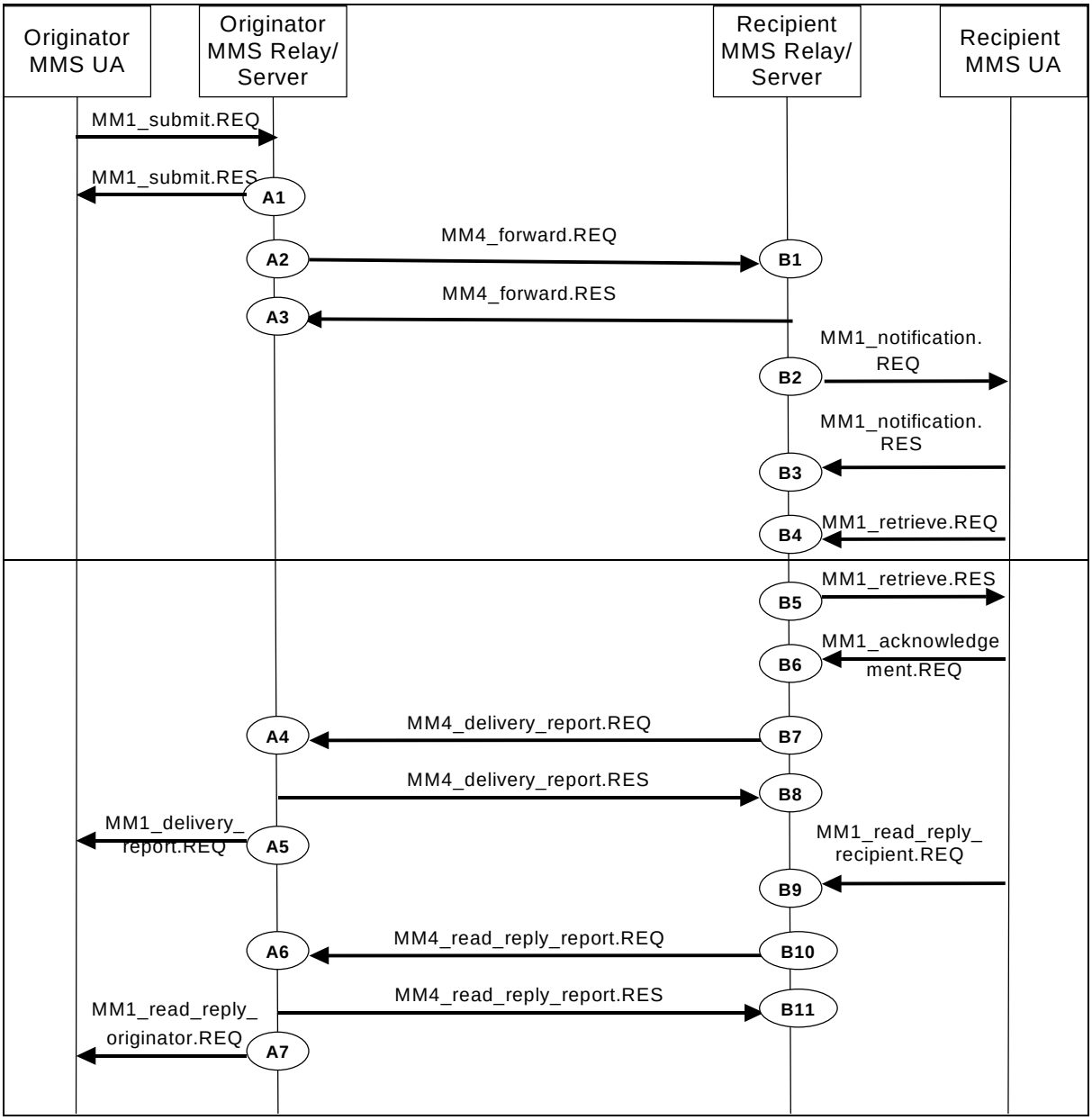
Table 4.1: Record type overview for combined MMS Relay/Server

~~Record trigger~~	~~1~~	~~2~~	~~3~~	~~4~~	~~5~~	~~6~~	~~7~~	~~8~~	~~9~~	~~Any time between 1 .. 9*~~
~~Record type~~	~~O1S~~	~~R1NRq~~	~~R1NRs~~	~~R1RtRq~~	~~R1RtRs~~	~~R1A~~	~~O1D~~	~~R1RR~~	~~O1R~~	~~OMD~~

Record trigger	1	2	3	4	5	6	7	8	Any time between 1 .. 9*
Record type	O1S	R1NRq	R1NRs	R1Rt	R1A	O1D	R1RR	O1R	OMD

NOTE: No CDR will be generated by receiving of the MM1_submit.REQ

4.1.2 Originator and Recipient MMS Relay Server are not the same


Originator MMS UA
Originator MMS Relay/ Server
Recipient MMS Relay/ Server
Recipient MMS UA
MM1_submit.REQ
MM1_submit.RES
A1
MM4_forward.REQ
A2
B1
MM4_forward.RES
A3
MM1_notification. REQ
B2
MM1_notification. RES
B3
MM1_retrieve.REQ
B4
MM1_retrieve.RES
B5
MM1_acknowledge ment.REQ
B6
MM4_delivery_report.REQ
A4
B7
MM4_delivery_report.RES
B8
MM1_delivery_ report.REQ
A5
MM1_read_reply_ recipient.REQ
B9
MM4_read_reply_report.REQ
A6
B10
MM4_read_reply_report.RES
B11
MM1_read_reply_ originator.REQ
A7

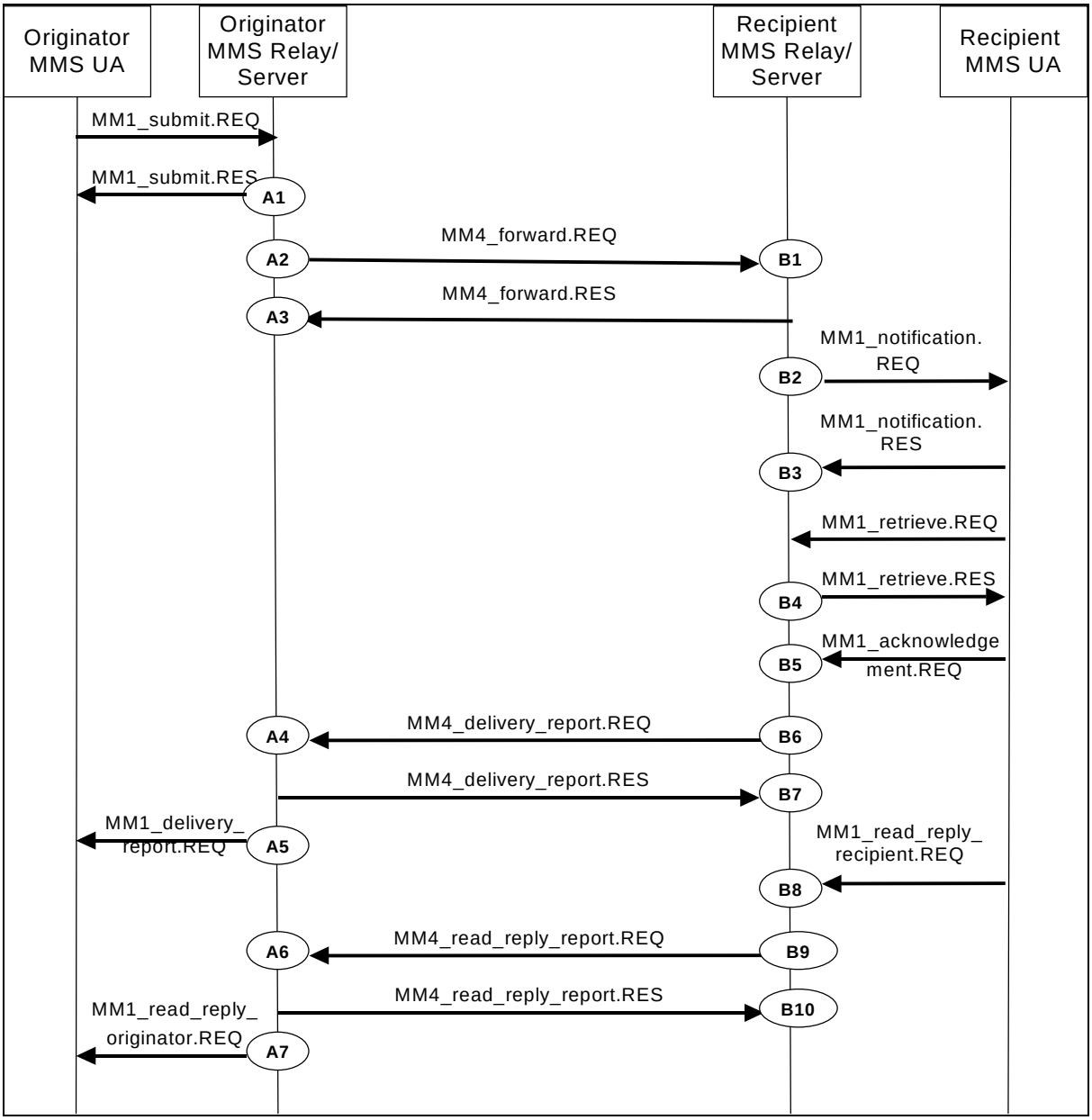


Figure 4.2: Record trigger overview for distributed case

Table 4.2: Record type overview for the Originator MMS Relay/Server

Record trigger	A1	A2	A3	A4	A5	A6	A7	Any time between A1.. A7
Record type	O1S	O4FRq	O4FRs	O4D	O1D	O4R	O1R	OMD

Table 4.3a: Record type overview for the Recipient MMS Relay/Server

~~Record trigger~~	~~B1~~	~~B2~~	~~B3~~	~~B4~~	~~B5~~	~~B6~~
~~Record type~~	~~R4F~~	~~R1NRq~~	~~R1NRs~~	~~R1RtRq~~	~~R1RtRs~~	~~R1A~~

Record trigger	B1	B2	B3	B4	B5
Record type	R4F	R1NRq	R1NRs	R1Rt	R1A

Table 4.3b: Record type overview for the Recipient MMS Relay/Server

Record trigger	B6~~7~~	B7~~8~~	B8~~9~~	B9~~10~~	B10~~1~~	Anytime after B1
Record type	R4DRq	R4DRs	R1RR	R4RRq	R4RRs	RMD

…

<unmodified text>

…

4.2.2 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.

…

<unmodified text>

…

~~4.2.2.4 Recipient MM1 Retrieve Request CDR (R1RtRq-CDR)~~

~~If enabled, a Recipient MM1 Retrieve Request Charging Data Record (R1RtRq-CDR) shall be produced in the recipient MMS Relay/Server if and when the recipient MMS Relay/Server receives an MM1_retrieve.REQ from the recipient MMS User Agent.~~

Table 4.15: Recipient MM1 Retrieve Request record (R1RtRq-CDR)

Field	Category	Description
Record Type	M	Recipient MM1 Retrieve 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.
Originator address	M	The address of the originator MMS User Agent of the MM.
Recipient address	M	The address of the MM recipient of the MM.
Access Correlation	M_o	A unique identifier delivered by the used access network domain of the recipient MMS User Agent.
Message reference	M	Location of the content of the MM to be retrieved as specified in the MM1_retrieve.REQ.
MM Status Code	M_o	The status code of the MM at the time when the CDR is generated.
Status Text	M_o	This field includes a more detailed technical status of the message at the point in time when the CDR is generated.
Record Time Stamp	M_o	Time of generation of the CDR
Local Record Sequence Number	M_o	Consecutive record number created by this node. The number is allocated sequentially including all CDR types.
Record extensions	C_o	A set of network/manufacturer specific extensions to the record. Conditioned upon the existence of an extension.

4.2.2.45 Recipient MM1 Retrieve ~~Response~~ CDR (R1Rt~~Rs~~-CDR)

If enabled, a Recipient MM1 Retrieve Response Charging Data Record (R1Rt~~Rs~~-CDR) shall be produced in the recipient MMS Relay/Server if and when the recipient MMS Relay/Server has sent a 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 4.15~~6~~: Recipient MM1 Retrieve Response record (R1Rt~~Rs~~-CDR)

Field	Category	Description
Record Type	M	Recipient MM1 Retrieve ~~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.
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	M_o	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.
Content type	M	The content type of the MM content.
MM component list	M_o	The list of media components with volume size.
Message class	C_o	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.
Message size	M_o	The total size of the MM content.
Delivery report Requested	M_o	A request for delivery report as specified in the Delivery Report information element in the MM1_retrieve.RES.
Priority	C_o	The priority (importance) of the message if specified in the MM1_retrieve.RES.
Read reply Requested	C_o	A request for read-reply report if specified in the Read Reply information element in the MM1_retrieve.RES.
MM Status Code	M_o	The status code of the MM at the time when the CDR is generated.
Status Text	M_o	This field includes a more detailed technical status of the message at the point in time when the CDR is generated.
Reply Deadline	C_o	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	C_o	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	M_o	The time used for transmission of the MM between the User Agent and the MMS Relay/Server.
Record Time Stamp	M_o	Time of generation of the CDR
Local Record Sequence Number	M_o	Consecutive record number created by this node. The number is allocated sequentially including all CDR types.
Record extensions	C_o	A set of network/manufacturer specific extensions to the record. Conditioned upon the existence of an extension.

4.2.2.5~~6~~ Acknowledgement CDR (R1A-CDR)

If enabled, a Recipient MM1 Acknowledgement Charging Data Record (R1RtRs-CDR) shall be produced in the recipient MMS Relay/Server if and when the recipient MMS Relay/Server receives an MM1_acknowledgement.REQ from the recipient MMS User Agent.

Table 4.1~~6~~7: Recipient MM1 Acknowledgement record (R1A-CDR)

Field	Category	Description
Record Type	M	Recipient MM1 Acknowledgement 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.
Access Correlation	M_o	A unique identifier delivered by the used access network domain of the originator MMS User Agent.
Report allowed	C	Request to allow or disallow the sending of a delivery report to the MM originator if specified in the MM1_acknowledgement.RES.
MM Status Code	M_o	The status code of the MM at the time when the CDR is generated.
Status Text	M_o	This field includes a more detailed technical status of the message at the point in time when the CDR is generated.
Record Time Stamp	M_o	Time of generation of the CDR
Local Record Sequence Number	M_o	Consecutive record number created by this node. The number is allocated sequentially including all CDR types.
Record extensions	C_o	A set of network/manufacturer specific extensions to the record. Conditioned upon the existence of an extension.

4.2.2.6~~7~~ Recipient MM4 Delivery report Request CDR (R4DRq-CDR)

If enabled, a Recipient MM4 Delivery report Request Charging Data Record (R4DRq-CDR) shall be produced in the recipient MMS Relay/Server if and when the recipient MMS Relay/Server sends an MM4_delivery_report.REQ to the originator MMS Relay/Server.

Table 4.1~~7~~8: Recipient MM4 Delivery report Request record (R4DRq-CDR)

Field	Category	Description
Record Type	M	Recipient MM4 Delivery report Request record.
Recipient MMS Relay/Server Address	M	IP address or domain name of the recipient MMS Relay/Server.
Originator MMS Relay/Server Address	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	M_o	The MMS version of the recipient MMS Relay/Server.
Originator address	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_o	Date and time the MM was handled (retrieved, expired, rejected, etc.).
Acknowledgement Request	M	Request for MM4_delivery_report.RES
MM Status Code	M_o	The status code of the MM as sent in the MM4_delivery_report.REQ.
Status Text	C_o	This field includes the status text as sent in the MM4_delivery_report.REQ corresponding to the MM Status Code.
Record Time Stamp	M_o	Time of generation of the CDR
Local Record Sequence Number	M_o	Consecutive record number created by this node. The number is allocated sequentially including all CDR types.
Record extensions	C_o	A set of network/manufacturer specific extensions to the record. Conditioned upon the existence of an extension.

4.2.2.7~~8~~ Recipient MM4 Delivery report Response CDR (R4DRs-CDR)

If enabled, an Recipient MM4 Delivery report Response Charging Data Record (R4DRs-CDR) shall be produced in the recipient MMS Relay/Server if and when the recipient MMS Relay/Server receives an MM4_delivery_report.RES from the originator MMS Relay/Server.

Table 4.189: Recipient MM4 Delivery report Response record (R4DRs-CDR)

Field	Category	Description
Record Type	M	Recipient MM4 Delivery report Response record.
Recipient MMS Relay/Server Address	M	IP address or domain name of the recipient MMS Relay/Server.
Originator MMS Relay/Server Address	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	M_o	The MMS version of the originator MMS Relay/Server.
Request Status Code	M_o	The status code of the MM as received in the MM4_delivery_report.RES.
Status Text	C_o	This field includes the status text as received in the MM4_delivery_report.RES corresponding to the Request Status Code.
Record Time Stamp	M_o	Time of generation of the CDR
Local Record Sequence Number	M_o	Consecutive record number created by this node. The number is allocated sequentially including all CDR types.
Record extensions	C_o	A set of network/manufacturer specific extensions to the record. Conditioned upon the existence of an extension.

4.2.2.89 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 4.1920: 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	M_o	A unique identifier delivered by the used access network domain of the originator MMS User Agent.
MM Status Code	M_o	The status code of the MM at the time when the CDR is generated.
Status Text	M_o	This field includes a more detailed technical status of the message at the point in time when the CDR is generated.
Record Time Stamp	M_o	Time of generation of the CDR
Local Record Sequence Number	M_o	Consecutive record number created by this node. The number is allocated sequentially including all CDR types.
Record extensions	C_o	A set of network/manufacturer specific extensions to the record. Conditioned upon the existence of an extension.

4.2.2.910 Recipient MM4 Read reply report Request CDR (R4RRq-CDR)

If enabled, a Recipient MM4 Read reply report Request Charging Data Record (R4RRq-CDR) shall be produced in the recipient MMS Relay/Server if and when the recipient MMS Relay/Server sends an MM4_read_reply_report.REQ to the originator MMS Relay/Server.

Table 4.2~~0~~1: Recipient MM4 Read reply report Request (R4RRq-CDR)

Field	Category	Description
Record Type	M	Recipient MM4 read reply report Request record.
Recipient MMS Relay/Server Address	M	IP address or domain name of the recipient MMS Relay/Server.
Originator MMS Relay/Server Address	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	M_o	The MMS version of the recipient MMS Relay/Server.
Originator address	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_o	Date and time the MM was handled (retrieved, expired, rejected, etc.).
Acknowledgement Request	M	Request for MM4_read_reply_report.RES
MM Status Code	M_o	The status code of the MM at the time when the CDR is generated.
Status Text	M_o	This field includes a more detailed technical status of the message at the point in time when the CDR is generated.
Record Time Stamp	M_o	Time of generation of the CDR
Local Record Sequence Number	M_o	Consecutive record number created by this node. The number is allocated sequentially including all CDR types.
Record extensions	C_o	A set of network/manufacturer specific extensions to the record. Conditioned upon the existence of an extension.

4.2.2.1~~0~~1 Recipient MM4 Read reply report Response CDR (R4RRs-CDR)

If enabled, an Recipient MM4 Read reply report Response Charging Data Record (R4RRs-CDR) shall be produced in the recipient MMS Relay/Server if and when the recipient MMS Relay/Server receives an MM4_read_reply_report.RES from the originator MMS Relay/Server.

Table 4.2~~1~~2: Recipient MM4 DeliveryRead reply report Response record (R4DRRs-CDR)

Field	Category	Description
Record Type	M	Recipient MM4 Read reply report Response record.
Recipient MMS Relay/Server Address	M	IP address or domain name of the recipient MMS Relay/Server.
Originator MMS Relay/Server Address	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	M_o	The MMS version of the originator MMS Relay/Server.
Request Status Code	M_o	The status code of the MM as received in the MM4_read_reply_report.RES.
Status Text	C_o	This field includes a more detailed technical status if received in the MM4_read_reply_report.RES corresponding to the Request Status Code.
Record Time Stamp	M_o	Time of generation of the CDR
Local Record Sequence Number	M_o	Consecutive record number created by this node. The number is allocated sequentially including all CDR types.
Record extensions	C_o	A set of network/manufacturer specific extensions to the record. Conditioned upon the existence of an extension.

4.2.2.1~~1~~2 Recipient MM Deletion CDR (RMD-CDR)

If enabled, a Recipient MM Deletion Charging Data Record (RMD-CDR) shall be produced in the recipient MMS Relay/Server if and when:

a) the recipient MMS Relay/Server decides to abandon processing of the MM at any point after receiving the corresponding MM4_forward.REQ; or,

b) the recipient 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 implies that there remains no knowledge of the MM in the recipient 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 [4].

A special case is where the recipient MMS Relay/Server is also the forwarding MMS Relay/Server. In this case only the Originator MM Deletion CDR specified in subclause 4.2.8 is required.

Table 4.223: Recipient MM Deletion record (RMD-CDR)

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

…

<unmodified text>

…

6 Charging Data Record Structure

6.1 ASN.1 definitions for CDR information

The ASN.1 definitions are based on the charging specific data types within the current 3GPP 32-series, the TS 32.205 [8] for CS domain and TS 32.215 [9] for PS domain.

```
TS32235-DataTypes {itu-t (0) identified-organization (4) etsi(0) mobileDomain (0) umts-Operation-Maintenance (3) ts-32-235 (235)
informationModel (0) asn1Module (2) version1 (1)}

DEFINITIONS IMPLICIT TAGS ::=

BEGIN

-- EXPORTS everything

IMPORTS

CallEventRecord, CallEventRecordType, ChargeIndicator, CallDuration, TimeStamp, MSISDN, CallReference, MscNo, ManagementExtensions
FROM TS32205-DataTypes {itu-t (0) identified-organization (4) etsi(0) mobileDomain (0) umts-Operation-Maintenance (3) ts-32-205 (205)
informationModel (0) asn1Module (2) version1 (1)}
--
-- see TS 32.205[8]
--

ChargingID, IPAddress, GSNAddress, LocalSequenceNumber
FROM TS32215-DataTypes {itu-t (0) identified-organization (4) etsi (0) mobileDomain (0) umts-Operation-Maintenance (3) ts-32-215 (215)
informationModel (0) asn1Module (2) version1 (1)}
```

```
--
-- see TS 32.215[9]
--

-------------------------------------------------------------------------------
--
--  CALL AND EVENT RECORDS
--
-------------------------------------------------------------------------------
```

…

<unmodified text>

…

```
MMR1RtRqRecord          ::= SET
{
    recordType                      [0]  CallEventRecordType,
    recipientMmsRSAddress           [1]  MMSRSAddress,
    messageID                       [2]  OCTET STRING,
    originatorAddress               [3] MMSAgentAddress,
    recipientAddress                [4] MMSAgentAddress,
    accessCorrelation               [5] AccessCorrelation OPTIONAL,
    messageReference                [6] OCTET STRING,
    mmStatusCode                    [7] MMStatusCodeType OPTIONAL,
    statusText                      [8] StatusTextType OPTIONAL,
    recordTimeStamp                 [9] TimeStamp OPTIONAL,
    localSequenceNumber             [10] LocalSequenceNumber OPTIONAL,
    recordExtensions                [11] ManagementExtensions OPTIONAL
}

MMR1RtRsRecord          ::= SET
{
    recordType                      [0] CallEventRecordType,
    recipientMmsRSAddress           [1] MMSRSAddress,
    messageID                       [2] OCTET STRING,
    replyChargingID                 [3] OCTET STRING OPTIONAL,
    senderAddress                   [4] MMSAgentAddress OPTIONAL,
    recipientAddress                [5] MMSAgentAddress,
    accessCorrelation               [6] AccessCorrelation OPTIONAL,
    contentType                     [7] ContentType,
    mmComponentType                 [8] MMComponentType OPTIONAL,
    messageClass                    [9] MessageClass OPTIONAL,
    submissionTime                  [10] TimeStamp,
    messageSize                     [11] DataVolume OPTIONAL,
    deliveryReportRequested         [12] BOOLEAN OPTIONAL,
    priority                        [13] PriorityType OPTIONAL,
    readReplyRequested              [14] BOOLEAN OPTIONAL,
    mmStatusCode                    [15] MMStatusCodeType OPTIONAL,
    statusText                      [16] StatusTextType OPTIONAL,
    replyDeadline                   [17] WaitTime OPTIONAL,
    replyChargingSize               [18] DataVolume OPTIONAL,
    durationOfTransmission          [19] INTEGER OPTIONAL,
    timeOfExpiry                    [20] WaitTime OPTIONAL,
    recordTimeStamp                 [21] TimeStamp OPTIONAL,
,   localSequenceNumber             [22] LocalSequenceNumber OPTIONAL,
    recordExtensions                [23] ManagementExtensions OPTIONAL,
    messageReference                [24] OCTET STRING,

}
```

…

<unmodified text>

…

3GPP TSG-SA5 (Telecom Management) **S5-024334**
Meeting #30, Tampere, FINLAND, 19 - 23 August 2002

CR-Form-v5

CHANGE REQUEST

⌘ **32.235** **CR** **005** ⌘ **rev** **-** ⌘ Current version: **4.2.0** ⌘

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

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

Title:	⌘	Alignment of the Message size definition with TS 23.140
Source:	⌘	SA5
Work item code:	⌘	OAM-CH
Date:	⌘	23/08/2002
Category:	⌘	**F**
Release:	⌘	*REL-4*

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

Use one of the following releases:

2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
REL-4	*(Release 4)*
REL-5	*(Release 5)*

Reason for change:	⌘	Modification of the definition of the Message Size parameter in TS 23.140.
Summary of change:	⌘	Alignement with the latest version of TS 23.140 concerning the definition the Message Size parameter.
Consequences if not approved:	⌘	The charged message size may not reflect the actual size of the submitted MM resulting in charging errors.

Clauses affected:	⌘	5.16		
Other specs affected:	⌘	☐ Other core specifications ☐ Test specifications ☐ O&M Specifications	⌘	
Other comments:	⌘			

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

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

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

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

5.16 Message Size

The message size includes the number of octets of the subject information element and of all media components of the transmitted MM ~~except the presentation description component~~.

The message size in a CDR is calculated from the event (“abstract message”) on the MM1 reference point or on the MM4 reference point that triggered the creation of this CDR, as specified in table 4.1 - 4.3. E.g. for the O1S CDR this is the MM1_submit_RES, and for the O4FRq CDR it is the MM4_forward_REQ.