**3GPP TSG-CT WG1 Meeting #129-eC1-212391**

**Electronic meeting, 19-23 April 2021 (was C1-212058)**

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| *CR-Form-v12.0* |
| **CHANGE REQUEST** |
|  |
|  | **24.282**  | **CR** | **0200** | **rev** | **3** | **Current version:** | **17.2.0** |  |
|  |
| *For* [***HE******LP***](http://www.3gpp.org/3G_Specs/CRs.htm#_blank)*on using this form: comprehensive instructions can be found at* [*http://www.3gpp.org/Change-Requests*](http://www.3gpp.org/Change-Requests)*.* |
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| ***Proposed change affects:*** | UICC apps |  | ME | **X** | Radio Access Network |  | Core Network | **X** |

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|  |
| ***Title:***  | Add Application metadata container - MCData |
|  |  |
| ***Source to WG:*** | FirstNet, AT&T |
| ***Source to TSG:*** | C1 |
|  |  |
| ***Work item code:*** | eMCData3 |  | ***Date:*** | 19 April 2021 |
|  |  |  |  |  |
| ***Category:*** | **B** |  | ***Release:*** | Rel-17 |
|  | *Use one of the following categories:****F*** *(correction)****A*** *(mirror corresponding to a change in an earlier release)****B*** *(addition of feature),* ***C*** *(functional modification of feature)****D*** *(editorial modification)*Detailed explanations of the above categories canbe found in 3GPP [TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm). | *Use one of the following releases:Rel-8 (Release 8)Rel-9 (Release 9)Rel-10 (Release 10)Rel-11 (Release 11)Rel-12 (Release 12)**Rel-13 (Release 13)Rel-14 (Release 14)Rel-15 (Release 15)Rel-16 (Release 16)Rel-17 (Release 17)Rel-18 (Release 18)* |
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| ***Reason for change:*** | Stage 2 (TS 23.282) has specified the optional inclusion of additional application metadata in an SDS or FD transfer. Such information can be used by the application to enhance the application's use of MCData. The content of the application metadata is not to be specified by 3GPP, only the syntax. |
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| ***Summary of change:*** | A new IE, Application metadata container, is added to SDS and FD transfers. A flexible syntax is specified. It is also specified that the MCData server shall store the Application metadata container IE in the Content Store with the SDS or FD content and shall transfer the Application metadata container IE to the MCData client with the SDS or FD content. |
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| ***Consequences if not approved:*** | The Application metadata container feature will not be available to users of MCData applications, such as public safety users. |
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| ***Clauses affected:*** | 6.2.2.1, 6.2.2.2, 6.2.2.3, 9.2.1.2, 10.2.1.2.1, 10.2.1.2.2, 10.2.1.2.3, 10.2.4.4.1, 10.2.4.4.2, 10.2.5.2.4, 15.1.2.1, 15.1.3.1, 15.2.XX (new) |
|  |  |
|  | **Y** | **N** |  |  |
| ***Other specs*** |  | **X** |  Other core specifications  | TS/TR ... CR ...  |
| ***affected:*** |  | **X** |  Test specifications | TS/TR ... CR ...  |
| ***(show related CRs)*** |  | **X** |  O&M Specifications | TS/TR ... CR ...  |
|  |  |
| ***Other comments:*** |  |
|  |  |
| ***This CR's revision history:*** | Rev 1:* Changed 8 occurrences of "subclause E.1" and "subclause E.2" to "clause E.1" and "clause E.2".

Rev 2:* Only change is to update this CR to TS 24.282 v17.2.0. It was postponed in CT1#128-e while SA6 finished some work.

Rev 3:* Removed extra duplicate text in subclauses 10.2.1.2.1 and 10.2.4.4.2.
* Added a missing space at the end of bullet 10 in 9.2.1.2.
* Removed an extra space in the table heading "Table 15.2.XX".
* Removed the superfluous change in 10.2.5.4.3. It was not wrong, but was unnecessary.
* In 15.2.XX, the first octet was allocated for the IEI.
* In 15.2.XX, the "/" before tag-value-delimiter in delimiter-definition was removed.
* The Application Metadata Container IEI was changed from 52 to 52, since 52 was already allocated.
* The ABNF in 15.2.XX was cleaned up a bit and examples were added.
* Reverted the changes of "subclause E.1" to "clause E.1" and "subclause E.2" to "clause E.2".
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**\* \* \* \* \* FIRST CHANGE \* \* \* \* \***

#### 6.2.2.1 Generating an SDS Message

In order to generate an SDS message, the MCData client:

1) shall generate an SDS SIGNALLING PAYLOAD message as specified in subclause 15.1.2;

2) shall generate a DATA PAYLOAD message as specified in subclause 15.1.4;

3) shall include in the SIP request, the SDS SIGNALLING PAYLOAD message in an application/vnd.3gpp.mcdata-signalling MIME body as specified in subclause E.1; and

4) shall include in the SIP request, the DATA PAYLOAD message in an application/vnd.3gpp.mcdata-payload MIME body as specified in subclause E.2.

When generating an SDS SIGNALLING PAYLOAD message as specified in subclause 15.1.2, the MCData client:

1) shall set the Date and time IE to the current time as specified in subclause 15.2.8;

2) if the SDS message starts a new conversation, shall set the Conversation ID IE to a newly generated Conversation ID value as specified in subclause 15.2.9;

3) if the SDS message continues an existing unfinished conversation, shall set the Conversation ID IE to the Conversation ID value of the existing conversation as specified in subclause 15.2.9;

4) shall set the Message ID IE to a newly generated Message ID value as specified in subclause 15.2.10;

5) if the SDS message is in reply to a previously received SDS message, shall include the InReplyTo message ID IE with the Message ID value in the previously received SDS message;

6) if the SDS message is for user consumption, shall not include an Application ID IE as specified in subclause 15.2.7and shall not include an Extended application ID IE as specified in subclause 15.2.24;

7) if the SDS message is intended for an application on the terminating MCData client, shall include:

a) an Application ID IE with a Application ID value representing the intended application as specified in subclause 15.2.7; or

b) an Extended application ID IE with an Extended application ID value representing the intended application as specified in subclause 15.2.24;

NOTE: The value chosen for the Application ID value is decided by the mission critical organisation.

8) if only a delivery disposition notification is required shall include a SDS disposition request type IE set to "DELIVERY" as specified in subclause 15.2.3;

9) if only a read disposition notification is required shall include a SDS disposition request type IE set to "READ" as specified in subclause 15.2.3;

10) if both a delivery and read disposition notification is required shall include a SDS disposition request type IE set to "DELIVERY AND READ" as specified in subclause 15.2.3;

11) may set the User location IE to the current location of the UE as specified in subclause 15.2.25; and

12) may include an Application metadata container IE as specified in subclause 15.2.XX.

When generating an DATA PAYLOAD message for SDS as specified in subclause 15.1.4, the MCData client:

1) shall set the Number of payloads IE to the number of Payload IEs that needs to be encoded, as specified in subclause 15.2.12;

2) if end-to-end security is required for a one-to-one communication, shall include the Security parameters and Payload IE with security parameters as described in 3GPP TS 33.180 [26]. Otherwise, if end-to-end security is not required for a one-to-one communication, shall include the Payload IE as specified in subclause 15.1.4; and

3) for each Payload IE included:

a) if the payload is text, shall set the Payload content type as "TEXT" as specified in subclause 15.2.13;

b) if the payload is binary data, shall set the Payload content type as "BINARY" as specified in subclause 15.2.13;

c) if the payload is hyperlinks, shall set the Payload content type as "HYPERLINKS" as specified in subclause 15.2.13;

d) if the payload is location, shall set the Payload content type as "LOCATION" as specified in subclause 15.2.13;

e) if payload is enhanced status for a group, shall set the Payload content type as “ENHANCED STATUS” as specified in subclase 15.2.13; and

f) shall include the data to be sent in the Payload data.

**\* \* \* \* \* NEXT CHANGE \* \* \* \* \***

#### 6.2.2.2 Generating an FD Message for FD using HTTP

In order to generate an FD message, the MCData client:

1) shall generate an FD SIGNALLING PAYLOAD message as specified in subclause 15.1.3; and

2) shall include in the SIP request, the FD SIGNALLING PAYLOAD message in an application/vnd.3gpp.mcdata-signalling MIME body as specified in subclause E.1.

When generating an FD SIGNALLING PAYLOAD message as specified in subclause 15.1.3, the MCData client:

1) shall set the Date and time IE to the current time as specified in subclause 15.2.8;

2) if the FD message starts a new conversation, shall set the Conversation ID IE to a newly generated Conversation ID value as specified in subclause 15.2.9;

3) if the FD message continues an existing unfinished conversation, shall set the Conversation ID IE to the Conversation ID value of the existing conversation as specified in subclause 15.2.9;

4) shall set the Message ID IE to a newly generated Message ID value as specified in subclause 15.2.10;

5) if the FD message is in reply to a previously received MCData message, shall include the InReplyTo message ID IE with the Message ID value in the previously received MCData message;

6) if the FD message is for user consumption, shall not include an Application ID IE as specified in subclause 15.2.7 and shall not include an Extended application ID IE as specified in subclause 15.2.24;

7) if the FD message is intended for an application on the terminating MCData client, shall include:

a) an Application ID IE with a Application ID value representing the intended application as specified in subclause 15.2.7; or

b) an Extended application ID IE with an Extended application ID value representing the intended application as specified in subclause 15.2.24;

NOTE: The value and field chosen for coding the identity of the application are coordinated by the mission critical organisation.

8) may include an FD disposition request type IE set to "FILE DOWNLOAD COMPLETE UPDATE" as specified in subclause 15.2.4;

9) if requiring mandatory download at the recipient side, shall include a Mandatory download IE as specified in subclause 15.2.16 set to the value of "MANDATORY DOWNLOAD";

10) shall include a Payload IE with:

a) the Payload content type set to "FILEURL" as specified in subclause 15.2.13; and

b) the URL of the file in the Payload data as as specified in subclause 15.2.13;

11) may include a Metadata IE with the required file description information and file availability information, as specified in subclause 15.2.17; and

12) may include an Application metadata container IE as specified in subclause 15.2.XX.

**\* \* \* \* \* NEXT CHANGE \* \* \* \* \***

#### 6.2.2.3 Generating an FD Message for FD using media plane

In order to generate an FD message, the MCData client:

1) shall generate an FD SIGNALLING PAYLOAD message as specified in subclause 15.1.3; and

2) shall include in the SIP request, the FD SIGNALLING PAYLOAD message in an application/vnd.3gpp.mcdata-signalling MIME body as specified in subclause E.1.

When generating an FD SIGNALLING PAYLOAD message as specified in subclause 15.1.3, the MCData client:

1) shall set the Date and time IE to the current time as specified in subclause 15.2.8;

2) if the filestarts a new conversation, shall set the Conversation ID IE to a newly generated Conversation ID value as specified in subclause 15.2.9;

3) if the filecontinues an existing conversation, shall set the Conversation ID IE to the Conversation ID value of the existing conversation as specified in subclause 15.2.9;

4) shall set the Message ID IE to a newly generated Message ID value as specified in subclause 15.2.10;

5) if the fileis in reply to a previously received SDS message or file, shall include the InReplyTo message ID IE with the Message ID value in the previously received SDS message or file;

6) if the file is for user consumption, shall not include an Application ID IE as specified in subclause 15.2.7 and shall not include an Extended application ID IE as specified in subclause 15.2.24;

7) if the file is intended for an application on the terminating MCData client, shall include:

a) an Application ID IE with a Application ID value representing the intended application as specified in subclause 15.2.7; or

b) an Extended application ID IE with an Extended application ID value representing the intended application as specified in subclause 15.2.24;

NOTE: The value and field chosen for coding the identity of the application are coordinated by the mission critical organisation.

8) if a file download complete notification is required shall include a FD disposition request type IE set to "FILE DOWNLOAD COMPLETED UPDATE" as specified in subclause 15.2.4;

9) shall include and set the Mandatory download IE to "MANDATORY DOWNLOAD" as described in subclause 15.2.16; and

10) may include an Application metadata container IE as specified in subclause 15.2.XX.

**\* \* \* \* \* NEXT CHANGE \* \* \* \* \***

#### 9.2.1.2 Handling of received SDS messages with or without disposition requests

When a MCData client has received a SIP request containing:

- an application/vnd.3gpp.mcdata-signalling MIME body as specified in subclause E.1; and

- an application/vnd.3gpp.mcdata-payload MIME body as specified in subclause E.2;

the MCData Client:

1) shall decode the contents of the application/vnd.3gpp.mcdata-signalling MIME body;

2) shall decode the contents of the application/vnd.3gpp.mcdata-payload MIME body;

3) if the SDS SIGNALLING PAYLOAD message contains a new Conversation ID, shall instantiate a new conversation with the Message ID in the SDS SIGNALLING PAYLOAD identifying the first message in the conversation thread;

4) if the SDS SIGNALLING PAYLOAD message contains an existing Conversation ID and:

a) if the SDS SIGNALLING PAYLOAD message does not contain an InReplyTo message ID, shall use the Message ID in the SDS SIGNALLING PAYLOAD to identify a new message in the existing conversation thread; and

b) if the SDS SIGNALLING PAYLOAD message contains an InReplyTo message ID, shall associate the message to an existing message in the conversation thread as identified by the InReplyTo message ID in the SDS SIGNALLING PAYLOAD, and use the Message ID in the SDS SIGNALLING PAYLOAD to identify the new message;

5) shall identify the number of Payload IEs in the DATA PAYLOAD message from the Number of payloads IE in the DATA PAYLOAD message;

6) if the SDS SIGNALLING PAYLOAD message does not contain an Application ID IE and does not contain an Extended application ID IE:

a) shall determine that the payload contained in the DATA PAYLOAD message is for user consumption

b) may notify the MCData user;

c) may display to the MCData user the functional alias of the originating MCData user, if provided; and

d) shall render the contents of the Payload IE(s) to the MCData user.

7) if the SDS SIGNALLING PAYLOAD message contains an Application ID IE:

a) shall determine that the payload contained in the DATA PAYLOAD message is not for user consumption,

b) shall not notify the MCData user;

c) if the Application ID value is unknown, shall discard the SDS message; and

d) if the Application ID value is known, shall deliver the contents of the Payload IE(s) to the identified application;

NOTE 1: If required, the MCData client decrypts the Payload IEs before rendering the SDS message to the user or delivering the SDS message to the application.

NOTE 2: The actions taken when the payload contains application data not meant for user consumption or command instructions are based upon the contents of the payload. If the payload content is addressed to a non-MCData application that is not running, the MCData client starts the local non-MCData application and delivers the payload to that application.

NOTE 3: User consent is not required before accepting the data.

8) if the SDS SIGNALLING PAYLOAD message contains an Extended application ID IE:

a) shall determine that the payload contained in the DATA PAYLOAD message is not for user consumption;

b) shall not notify the MCData user;

c) if the Extended application ID value is unknown, shall discard the SDS message; and

d) if the Extended application ID value is known, shall deliver the contents of the Payload IE(s) to the identified application;

NOTE 4: If required, the MCData client decrypts the Payload IEs before rendering the SDS message to the user or delivering the SDS message to the application.

NOTE 5: The actions taken when the payload contains application data not meant for user consumption or command instructions are based upon the contents of the payload. If the payload content is addressed to a non-MCData application that is not running, the MCData client starts the local non-MCData application and delivers the payload to that application.

NOTE 6: User consent is not required before accepting the data.

9) may store the message payload in local storage along with the Conversation ID, Message ID, InReplyTo message ID and Date and time;

10) if the received SDS SIGNALLING PAYLOAD message contains an SDS disposition request type IE shall follow the procedures in subclause 9.2.1.3; and

11) if the received SDS SIGNALLING PAYLOAD message contains an Application metadata container IE, may process the content of that IE per local policy.

**\* \* \* \* \* NEXT CHANGE \* \* \* \* \***

##### 10.2.1.2.1 Initial processing of the received FD message

When a MCData client has received a SIP request containing an application/vnd.3gpp.mcdata-signalling MIME body as specified in subclause E.1, the MCData Client:

1) shall decode the contents of the application/vnd.3gpp.mcdata-signalling MIME body;

2) if the application/vnd.3gpp.mcdata-signalling MIME body does not contain an FD SIGNALLING PAYLOAD message as specified in subclause 15.1.3, shall exit this subclause;

3) if more than one Payload IE is included in the FD SIGNALLING PAYLOAD message, shall exit this subclause;

4) if the Payload content type in the Payload IE in the FD SIGNALLING PAYLOAD message is not set to "FILEURL", shall exit this subclause;

5) if the FD SIGNALLING PAYLOAD message contains a Mandatory download IE set to the value of "MANDATORY DOWNLOAD" shall follow the procedures in subclause 10.2.1.2.2;

6) if the FD SIGNALLING PAYLOAD message does not contain a Mandatory download IE, shall follow the procedures in subclause 10.2.1.2.3; and

7) if the received FD SIGNALLING PAYLOAD message contains an Application metadata container IE, may process the content of that IE per local policy.

**\* \* \* \* \* NEXT CHANGE \* \* \* \* \***

##### 10.2.1.2.2 Mandatory Download

The MCData client:

1) if the FD SIGNALLING PAYLOAD message contains a new Conversation ID, shall instantiate a new conversation with the Message ID in the FD SIGNALLING PAYLOAD identifying the first message in the conversation thread;

2) if the FD SIGNALLING PAYLOAD message contains an existing Conversation ID and:

a) if the FD SIGNALLING PAYLOAD message does not contain an InReplyTo message ID, shall use the Message ID in the FD SIGNALLING PAYLOAD to identify a new message in the existing conversation thread; and

b) if the FD SIGNALLING PAYLOAD message contains an InReplyTo message ID, shall associate the message to an existing message in the conversation thread as identified by the InReplyTo message ID in the FD SIGNALLING PAYLOAD, and use the Message ID in the FD SIGNALLING PAYLOAD to identify the new message;

3) may store the Conversation ID, Message ID, InReplyTo message ID and Date and time in local storage;

4) if the FD SIGNALLING PAYLOAD message does not contain an Application ID IE and does not contain an Extended application ID IE:

a) shall determine that the payload contained in the Payload IE in the FD SIGNALLING PAYLOAD message is for user consumption;

b) shall notify the user or application that the file identified by file URL in the Payload data in the Payload IE will be downloaded automatically; and

c) if the FD SIGNALLING PAYLOAD message contains a Metadata IE, shall deliver the contents of the Metadata IE to the user or application;

5) if the FD SIGNALLING PAYLOAD message contains an Application ID IE:

a) shall determine that the payload contained in the Payload IE in the FD SIGNALLING PAYLOAD message is not for user consumption;

b) if the Application ID value is unknown, shall discard the FD message and exit this subclause;

c) if the Application ID value is known, shall notify the application that the file identified by file URL in the Payload data in the Payload IE will be downloaded automatically; and

NOTE 1: If the FD request is addressed to a non-MCData application that is not running, the MCData client starts the local non-MCData application. Subsequent automatic download of the file is then started and the file is delivered to that application.

d) if the FD SIGNALLING PAYLOAD message contains a Metadata IE, shall deliver the contents of the Metadata IE to the application;

6) if the FD SIGNALLING PAYLOAD message contains an Extended application ID IE:

a) shall determine that the payload contained in the Payload IE in the FD SIGNALLING PAYLOAD message is not for user consumption;

b) if the Extended application ID value is unknown, shall discard the FD message and exit this clause;

c) if the Extended application ID value is known, shall notify the application that the file identified by file URL in the Payload data in the Payload IE will be downloaded automatically; and

NOTE 2: If the FD request is addressed to a non-MCData application that is not running, the MCData client starts the local non-MCData application. Subsequent automatic download of the file is then started and the file is delivered to that application.

d) if the FD SIGNALLING PAYLOAD message contains a Metadata IE, shall deliver the contents of the Metadata IE to the application;

7) shall generate an FD NOTIFICATION indicating acceptance of the FD request as specified in subclause 12.2.1.1;

8) shall attempt to download the file as identified by the file URL in the Payload IE in the FD SIGNALLING PAYLOAD message, as specified in subclause 10.2.3.1;

9) if the received FD SIGNALLING PAYLOAD message contains an FD disposition request type IE requesting a file download completed update indication, then after the file has been successfully downloaded, shall generate an FD NOTIFICATION indicating file download completed, by following the procedures in subclause 12.2.1.1 with following clarifications:

a) if the received FD SIGNALLING PAYLOAD message is not requested for a file download completed update indication in an FD disposition request type IE, shall not include the target MCData user by skipping the step 3) of subclause 12.2.1.1; and

NOTE 3: The FD disposition request will be sent irrespective of whether the received FD SIGNALLING PAYLOAD message contains an FD disposition request type IE requesting a file download completed update indication or not.

10) if the received FD SIGNALLING PAYLOAD message contains an Application metadata container IE, may process the content of that IE per local policy.

**\* \* \* \* \* NEXT CHANGE \* \* \* \* \***

##### 10.2.1.2.3 Non-Mandatory download

The MCData client:

1) if the FD SIGNALLING PAYLOAD message does not contain an Application ID IE and does not contain an Extended application ID IE:

a) shall determine that the payload contained in the Payload IE in the FD SIGNALLING PAYLOAD message is for user consumption;

b) shall notify the user about the incoming FD request; and

c) if the FD SIGNALLING PAYLOAD message contains a Metadata IE, shall deliver the contents of the Metadata IE to the user;

2) if the FD SIGNALLING PAYLOAD message contains an Application ID IE:

a) shall determine that the payload contained in the Payload IE in the FD SIGNALLING PAYLOAD message is not for user consumption;

b) if the Application ID value is unknown, shall discard the FD message and exit this subclause;

c) if the Application ID value is known, shall notify the application of the incoming FD request; and

NOTE 1: If FD request is addressed to a non-MCData application that is not running, the MCData client starts the local non-MCData application.

d) if the FD SIGNALLING PAYLOAD message contains a Metadata IE, shall deliver the contents of the Metadata IE to the application;

2A) if the FD SIGNALLING PAYLOAD message contains an Extended application ID IE:

a) shall determine that the payload contained in the Payload IE in the FD SIGNALLING PAYLOAD message is not for user consumption;

b) if the Extended application ID value is unknown, shall discard the FD message and exit this clause;

c) if the Extended application ID value is known, shall notify the application of the incoming FD request; and

NOTE 2: If the FD request is addressed to a non-MCData application that is not running, the MCData client starts the local non-MCData application.

d) if the FD SIGNALLING PAYLOAD message contains a Metadata IE, shall deliver the contents of the Metadata IE to the application;

3) shall start a timer TDU2 (FD non-mandatory download timer) with the timer value as specified in subclause F.2.3;

4) shall wait for the user or application to request to download the file indicated by file URL in the Payload data in the Payload IE in the FD SIGNALLING PAYLOAD message;

5) if the user or application accepts or rejects or decides to defer the FD request, shall stop timer TDU2 (FD non-mandatory download timer);

6) if the user defered the FD request while the timer TDU2 (FD non-mandatory download timer) was running, shall generate an FD NOTIFICATION indicating deferral of the FD request as specified in subclause 12.2.1.1;

NOTE 3: Once the timer TDU2 (FD non-mandatory download timer) has expired the FD request can only be accepted or rejected with an appropriate action by the MCData client.

NOTE 4: Once the timer TDU2 (FD non-mandatory download timer) has expired, no action is taken by the MCData client if the FD request is deferred.

7) if the user or application rejects the FD request, shall generate an FD NOTIFICATION indicating rejection of the FD request as specified in subclause 12.2.1.1 and shall exit this subclause; and

8) if the user accepts the FD request:

a) shall generate an FD NOTIFICATION indicating acceptance of the FD request as specified in subclause 12.2.1.1;

b) if the FD SIGNALLING PAYLOAD message contains a new Conversation ID, shall instantiate a new conversation with the Message ID in the FD SIGNALLING PAYLOAD identifying the first message in the conversation thread;

c) if the FD SIGNALLING PAYLOAD message contains an existing Conversation ID and:

i) if the FD SIGNALLING PAYLOAD message does not contain an InReplyTo message ID, shall use the Message ID in the FD SIGNALLING PAYLOAD to identify a new message in the existing conversation thread; and

ii) if the FD SIGNALLING PAYLOAD message contains an InReplyTo message ID, shall associate the message to an existing message in the conversation thread as identified by the InReplyTo message ID in the FD SIGNALLING PAYLOAD, and use the Message ID in the FD SIGNALLING PAYLOAD to identify the new message;

d) may store the Conversation ID, Message ID, InReplyTo message ID and Date and time in local storage;

e) shall attempt to download the file as identified by the file URL in the Payload IE in the FD SIGNALLING PAYLOAD message, as specified in subclause 10.2.3.1;

f) if the received FD SIGNALLING PAYLOAD message contains an FD disposition request type IE requesting a file download completed update, then after the file download has been successfully downloaded, shall generate an FD NOTIFICATION by following the procedures in subclause 12.2.1.1 with following clarifications:

i) if the received FD SIGNALLING PAYLOAD message is not requested for a file download completed update indication in an FD disposition request type IE, shall not include the target MCData user by skipping the step 3) of subclause 12.2.1.1; and

NOTE 5: The FD disposition request will be sent irrespective of whether the received FD SIGNALLING PAYLOAD message contains an FD disposition request type IE requesting a file download completed update indication or not.

g) if the received FD SIGNALLING PAYLOAD message contains an Application metadata container IE, may process the content of that IE per local policy.

**\* \* \* \* \* NEXT CHANGE \* \* \* \* \***

##### 10.2.4.4.1 Originating controlling MCData function procedures

This subclause describes the procedures for sending a SIP MESSAGE from the controlling MCData function and is initiated by the controlling MCData function as a result of an action in subclause 10.2.4.4.2.

The controlling MCData function:

1) shall generate a SIP MESSAGE request in accordance with 3GPP TS 24.229 [5] and IETF RFC 3428 [6];

2) shall include an Accept-Contact header field containing the g.3gpp.mcdata.fd media feature tag along with the "require" and "explicit" header field parameters according to IETF RFC 3841 [8] in the outgoing SIP MESSAGE request;

3) shall include an Accept-Contact header field with the media feature tag g.3gpp.icsi-ref with the value of "urn:urn-7:3gpp-service.ims.icsi.mcdata.fd" along with parameters "require" and "explicit" according to IETF RFC 3841 [8] in the outgoing SIP MESSAGE request;

4) shall copy the following MIME bodies in the received SIP MESSAGE request into the outgoing SIP MESSAGE request by following the guidelines in subclause 6.4:

a) application/vnd.3gpp.mcdata-info+xml MIME body; and

b) application/vnd.3gpp.mcdata-signalling MIME body;

5) if the application/vnd.3gpp.mcdata-signalling MIME body in the received SIP MESSAGE request contained a FD SIGNALLING PAYLOAD message without the Mandatory download IE included, then:

a) shall execute the procedures in subclause 11.2;

b) if the procedures in subclause 11.2 indicate that the mandatory download indication needs to be included, shall include the Mandatory download IE set to a value of "MANDATORY DOWNLOAD" in the FD SIGNALLING PAYLOAD message of the outgoing SIP MESSAGE request;

6) in the application/vnd.3gpp.mcdata-info+xml MIME body:

a) shall set the <mcdata-request-uri> element set to the MCData ID of the terminating user; and

b) if the <request-type> element in the application/vnd.3gpp.mcdata-info+xml MIME body of the incoming SIP MESSAGE request was set to a value of "group-fd", shall set the <mcdata-calling-group-id> element to the group identity;

7) shall set the Request-URI to the public service identity of the terminating participating MCData function associated to the MCData user to be invited;

8) shall copy the public user identity of the calling MCData user from the P-Asserted-Identity header field of the incoming SIP MESSAGE request into the P-Asserted-Identity header field of the outgoing SIP MESSAGE request;

9) shall include a P-Asserted-Service header field with the value "urn:urn-7:3gpp-service.ims.icsi.mcdata.fd"; and

10) shall send the SIP MESSAGE request according to according to rules and procedures of 3GPP TS 24.229 [5].

**\* \* \* \* \* NEXT CHANGE \* \* \* \* \***

##### 10.2.4.4.2 Terminating controlling MCData function procedures

The procedures in this subclause are executed upon:

- receipt of a "SIP MESSAGE request for FD using HTTP for controlling MCData function", the controlling MCData function; or

- a decision to now process a previously received "SIP MESSAGE request for FD using HTTP for controlling MCData function" that had been queued for later transmission;

NOTE 1: The controlling MCData function may postpone the continuation of an FD using HTTP procedure by queuing the received "SIP MESSAGE request for FD using HTTP for controlling MCData function". The management of the queue is specified in Annex B of 3GPP TS 23.282 [2].

the controlling MCData function:

1) if unable to process the request due to a lack of resources or a risk of congestion exists, may reject the SIP MESSAGE request with a SIP 500 (Server Internal Error) response or queue the received SIP MESSAGE. The controlling MCData function may include a Retry-After header field to the SIP 500 (Server Internal Error) response as specified in IETF RFC 3261 [4];

2) if the received SIP MESSAGE request has been queued for later transmission, shall include warning text set to "215 request to transmit is queued by the server" in a Warning header field as specified in subclause 4.9;, in the SIP 202 (Accepted) response and not continue with the remaining steps in this subclause. Otherwise, continue with the rest of the steps;

3) if the SIP MESSAGE does not contain:

a) an application/vnd.3gpp.mcdata-info+xml MIME body; and

b) an application/vnd.3gpp.mcdata-signalling MIME body;

shall reject the SIP MESSAGE request with a SIP 403 (Forbidden) response, with warning text set to "199 expected MIME bodies not in the request" in a Warning header field as specified in subclause 4.9, and shall not continue with the rest of the steps in this subclause;

4) shall decode the contents of the application/vnd.3gpp.mcdata-signalling MIME body contained in the SIP MESSAGE;

5) if the application/vnd.3gpp.mcdata-signalling MIME body does not contain only one FD SIGNALLING PAYLOAD message or FD HTTP TERMINATION message, shall reject the SIP MESSAGE request with a SIP 403 (Forbidden) response, with warning text set to "209 one FD SIGNALLING PAYLOAD message or FD HTTP TERMINATION message only must be present in FD request" in a Warning header field as specified in subclause 4.9, and shall not continue with the rest of the steps in this subclause;

6) if the FD SIGNALLING PAYLOAD message or FD HTTP TERMINATION message does not contain only one Payload IE, shall reject the SIP MESSAGE request with a SIP 403 (Forbidden) response, with warning text set to "210 Only one File URL must be present in the FD request" in a Warning header field as specified in subclause 4.9, and shall not continue with the rest of the steps in this subclause;

7) if the Payload IE has Payload contents:

a) with a Payload content type set to a value other than "FILEURL" shall reject the SIP MESSAGE request with a SIP 403 (Forbidden) response, with warning text set to "211 payload for an FD request is not FILEURL" in a Warning header field as specified in subclause 4.9, and shall not continue with the rest of the steps in this subclause; and

b) with Payload data containing a file URL identifying a file that does not exist on the media storage function, shall reject the SIP MESSAGE request with a SIP 403 (Forbidden) response, with warning text set to "212 file referenced by file URL does not exist" in a Warning header field as specified in subclause 4.9, and shall not continue with the rest of the steps in this subclause;

8) if the application/vnd.3gpp.mcdata-signalling MIME body contains an FD SIGNALLING PAYLOAD message with a FD disposition request type IE, shall store the value of the Conversation ID IE and the value of the Message ID IE in the FD SIGNALLING PAYLOAD message;

NOTE 2: The controlling MCData function uses the Conversation ID and Message ID for correlation with disposition notifications.

9) if the application/vnd.3gpp.mcdata-signalling MIME body contains an FD SIGNALLING PAYLOAD message:

a) with a Metadata IE, shall derive a timer value for the file availability timer as the minimum of the file availability information in the metadata and the value contained in the <max-file-availability> element in the MCData service configuration document as specified in 3GPP TS 24.484 [12];

b) without a Metadata IE, shall derive a timer value for the file availability timer as the value contained in the <default-file-availability> element in the MCData service configuration document as specified in 3GPP TS 24.484 [12]; and

c) if the FD SIGNALLING PAYLOAD message contains an Application metadata container IE, shall keep the Application metadata container IE with the file, both in storage and in any subsequent transmissions;

10) if the <request-type> element in the application/vnd.3gpp.mcdata-info+xml MIME body of the SIP MESSAGE request is set to a value of "one-to-one-fd" and the SIP MESSAGE request:

a) does not contain an application/resource-lists MIME body or contains an application/resource-lists MIME body with more than one <entry> element, shall return a SIP 403 (Forbidden) response with the warning text set to "205 unable to determine targeted user for one-to-one FD" in a Warning header field as specified in subclause 4.9, and skip the rest of the steps below; and

b) if the application/vnd.3gpp.mcdata-signalling MIME body contains an FD SIGNALLING PAYLOAD message contains an application/resource-lists MIME body with exactly one <entry> element, shall send a SIP MESSAGE request to the MCData user identified in the <entry> element of the MIME body, as specified in subclause 10.2.4.4.1;

11) if the application/vnd.3gpp.mcdata-signalling MIME body contains an FD HTTP TERMINATION message:

a) if the FD HTTP TERMINATION message doesn’t contain Conversation Id or Message Id, shall reject the SIP MESSAGE request with a SIP 403 (Forbidden) response, with warning text set to "223 No Conversation ID or Message ID present" and shall not continue with rest of the steps; and

b) if not identified any transmission with given Conversation ID, Message ID shall send 404 with reason with waring text set to "224 No transmission available" in a Warning header field as specified in subclause 4.9, and shall not continue with the rest of the steps;

12) if the application/vnd.3gpp.mcdata-signalling MIME body contains an FD SIGNALLING PAYLOAD message and if the <request-type> element in the application/vnd.3gpp.mcdata-info+xml MIME body of the SIP MESSAGE request is set to a value of "group-fd":

a) shall retrieve the group document associated with the group identity in the SIP MESSAGE request by following the procedures in subclause 6.3.3, and shall continue with the remaining steps if the procedures in subclause 6.3.3 were successful;

b) if the <on-network-disabled> element is present in the group document, shall send a SIP 403 (Forbidden) response with the warning text set to "115 group is disabled" in a Warning header field as specified in subclause 4.9 and shall not continue with the rest of the steps;

b1) if the group document contains a <list-service> element that contains a <preconfigured-group-use-only> element that is set to the value "true", shall reject the SIP MESSAGE request with a SIP 403 (Forbidden) response with the warning text set to "167 call is not allowed on the preconfigured group" as specified in subclause 4.9 "Warning header field" and shall skip the rest of this procedure;

c) if the <entry> element of the <list> element of the <list-service> element in the group document does not contain an <mcdata-mcdata-id> element with a "uri" attribute matching the MCData ID of the originating user contained in the <mcdata-calling-user-id> element of the application/vnd.3gpp.mcdata-info+xml MIME body in the SIP MESSAGE request, shall send a SIP 403 (Forbidden) response with the warning text set to "116 user is not part of the MCData group" in a Warning header field as specified in subclause 4.9 and shall not continue with the rest of the steps;

d) if the <list-service> element contains a <mcdata-allow-file-distribution> element in the group document set to a value of "false", shall send a SIP 403 (Forbidden) response with the warning text set to "213 file distribution not allowed for this group" in a Warning header field as specified in subclause 4.9 and shall not continue with the rest of the steps;

e) if the <supported-services> element is not present in the group document or is present and contains a <service> element containing an "enabler" attribute which is not set to the value "urn:urn-7:3gpp-service.ims.icsi.mcdata.fd", shall send a SIP 488 (Not Acceptable) response with the warning text set to "214 FD services not supported for this group" in a Warning header field as specified in subclause 4.9 and shall not continue with the rest of the steps;

f) if the MCData server group FD procedures in subclause 11.1 indicate that the user identified by the MCData ID:

i) is not allowed to initiate group MCData communications on this group identity as determined by step 2) of subclause 11.1, shall reject the SIP MESSAGE request with a SIP 403 (Forbidden) response, with warning text set to "201 user not authorised to transmit data on this group identity" in a Warning header field as specified in subclause 4.9, and shall not continue with the rest of the steps in this subclause; and

ii) is not allowed to initiate group MCData communications on this group identity due to exceeding the maximum amount of data that can be sent in a single request as determined by step 8) of subclause 11.1, shall reject the SIP MESSAGE request with a SIP 403 (Forbidden) response to the SIP MESSAGE request, with warning text set to "208 user not authorised for MCData communications on this group identity due to exceeding the maximum amount of data that can be sent in a single request" in a Warning header field as specified in subclause 4.9, and shall not continue with the rest of the steps in this subclause;

iii) is not allowed to initiate group MCData communications on this group identity due to exceeding the maximum allowed file size as determined by step 6) of subclause 11.1, shall reject the SIP MESSAGE request with a SIP 403 (Forbidden) response to the SIP MESSAGE request, with warning text set to "208 user not authorised for MCData communications on this group identity due to exceeding the maximum amount of data that can be sent in a single request" in a Warning header field as specified in subclause 4.9, and shall not continue with the rest of the steps in this subclause;

g) if the originating user identified by the MCData ID is not affiliated to the group identity contained in the SIP MESSAGE request, as specified in subclause 6.3.5, shall return a SIP 403 (Forbidden) response with the warning text set to "120 user is not affiliated to this group" in a Warning header field as specified in subclause 4.9, and skip the rest of the steps below;

h) shall determine targeted group members for MCData communications by following the procedures in subclause 6.3.4;

i) if the procedures in subclause 6.3.4 result in no affiliated members found in the selected MCData group, shall return a SIP 403 (Forbidden) response with the warning text set to "198 no users are affiliated to this group" in a Warning header field as specified in subclause 4.9, and skip the rest of the steps below; and

j) shall send SIP MESSAGE requests to the targeted group members identified in step j) above by following the procedure in subclause 10.2.4.4.1;

13) if the application/vnd.3gpp.mcdata-signalling MIME body contains an FD SIGNALLING PAYLOAD message, shall start TDC2 (file availability timer) with the value derived in step 9 of this subclause;

14) if the application/vnd.3gpp.mcdata-signalling MIME body contains an FD SIGNALLING PAYLOAD message, shall associate the running timer TDC2 (file availability timer) to the Conversation ID, Message ID, Application ID (if included), and Extended application ID (if included) contained in the FD SIGNALLING PAYLOAD message;

NOTE 3: Multiple file availability timers can be running for a file. Each file availability timer is uniquely associated to a Conversation ID and Message ID.

15) shall generate a SIP 202 (Accepted) response in response to the "SIP MESSAGE request for FD using HTTP for controlling MCData function"; and

16) shall send the SIP 202 (Accepted) response towards the originating participating MCData function according to 3GPP TS 24.229 [5].

17) if the application/vnd.3gpp.mcdata-signalling MIME body contains an FD HTTP TERMINATION message and Termination information type IE set to "TERMINATION REQUEST" then:

a) shall identify the FILE transmission with Conversation ID and Message ID and "FILE URL". If any ongoing transmission exist then execute the procedure described in subclause 12.4.2.1 with the following clarifications:

i) shall set the FD notification type IE as "FILE DELETED UNAVAILABLE TO DOWNLOAD" as specified in subclause 15.2.18;

b) shall generate a SIP MESSAGE request in accordance with 3GPP TS 24.229 [5] and IETF RFC 3428 [6]. In the generation of the SIP MESSAGE request, the controlling MCData function:

i) shall include an Accept-Contact header field with the media feature tag g.3gpp.icsi-ref with the value of "urn:urn-7:3gpp-service.ims.icsi.mcdata.fd" along with parameters "require" and "explicit" according to IETF RFC 3841 [8] in the outgoing SIP MESSAGE request;

ii) shall include a P-Asserted-Service header field with the value "urn:urn-7:3gpp-service.ims.icsi.mcdata.fd";

iii) shall set the Request-URI of the outgoing SIP MESSAGE request to the public service identity of the participating MCData function associated to the MCData ID of the originating user mentioned in the <mcdata-calling-user-id> element of the application/vnd.3gpp.mcdata-info+xml MIME body of the incoming SIP MESSAGE request;

iv) shall copy the public user identity of the calling MCData user from the P-Asserted-Identity header field of the incoming SIP MESSAGE request into the P-Asserted-Identity header field of the outgoing SIP MESSAGE request;

v) shall include an application/vnd.3gpp.mcdata-info+xml MIME body in the SIP MESSAGE request, following the rules specified in subclause 6.4 for the handling of MIME bodies in a SIP message:

A) fill <mcdata-request-uri> element from <mcdata-calling-user-id> element of the application/vnd.3gpp.mcdata-info+xml in received SIP MESSAGE;

vi) shall generate FD HTTP TERMINATION message as described in subclause 6.3.6.1;

vii) shall set the Termination information type IE set to "TERMINATION RESPONSE" as specified in subclause 15.2.22.

viii) if clause is successful shall set Release response type IE of FD HTTP TERMINATION MESSAGE to "RELEASE SUCCESS" else set to "RELEASE FAILED" as described in subclause 15.2.23; and

ix) shall include in the SIP request, the FD HTTP TERMINATION message in an application/vnd.3gpp.mcdata-signalling MIME body as specified in subclause E.1;

c) shall send the SIP MESSAGE request towards the originating participating MCData function as specified in 3GPP TS 24.229 [5]; and

18) if the application/vnd.3gpp.mcdata-signalling MIME body contains an FD HTTP TERMINATION message and Termination information type IE set to other than "TERMINATION REQUEST" then follow procedures described on subclause 13.2.5 and subclause 13.2.6.

**\* \* \* \* \* NEXT CHANGE \* \* \* \* \***

##### 10.2.5.2.4 MCData client terminating procedures

Upon receipt of a SIP INVITE request for file distribution for terminating MCData client"request, the MCData client shall follow the procedures for termination of multimedia sessions in the IM CN subsystem as specified in 3GPP TS 24.229 [5] with the clarifications below.

The MCData client:

1) may reject the SIP INVITE request if either of the following conditions are met:

a) MCData client does not have enough resources to handle the communication; or

b) any other reason outside the scope of this specification;

and skip the rest of the steps after step 2;

2) if the SIP INVITE request is rejected in step 1), shall respond toward participating MCData function either with appropriate reject code as specified in 3GPP TS 24.229 [5] and warning texts as specified in subclause 4.9 or with SIP 480 (Temporarily unavailable) response not including warning texts if the user is authorised to restrict the reason for failure and skip the rest of the steps of this subclause;

3) if the SDP offer of the SIP INVITE request contains an "a=key-mgmt" attribute field with a "mikey" attribute value containing a MIKEY-SAKKE I\_MESSAGE:

a) shall extract the MCData ID of the originating MCData user from the initiator field (IDRi) of the I\_MESSAGE as described in 3GPP TS 33.180 [26];

b) shall convert the MCData ID to a UID as described in 3GPP TS 33.180 [26];

c) shall use the UID to validate the signature of the MIKEY-SAKKE I\_MESSAGE as described in 3GPP TS 33.180 [26];

d) if authentication verification of the MIKEY-SAKKE I\_MESSAGE fails, shall reject the SIP INVITE request with a SIP 488 (Not Acceptable Here) response as specified in IETF RFC 4567 [45], and include warning text set to "136 authentication of the MIKEY-SAKKE I\_MESSAGE failed" in a Warning header field as specified in subclause 4.9 and not continue with rest of the steps in this subclause; and

e) if the signature of the MIKEY-SAKKE I\_MESSAGE was successfully validated:

i) shall extract and decrypt the encapsulated PCK using the terminating user's (KMS provisioned) UID key as described in 3GPP TS 33.180 [26]; and

ii) shall extract the PCK-ID, from the payload as specified in 3GPP TS 33.180 [26];

NOTE: With the PCK successfully shared between the originating MCData client and the terminating MCData client, both clients are able to create an end-to-end secure session.

4) may display to the MCData user the MCData ID of the inviting MCData user;

4A) may display to the MCData user the functional alias of the inviting MCData user, if provided;

5) may display to the MCData user the file meta-data of the incoming file as described by the SDP included in the received SIP INVITE request;

5A) if the SIP INVITE request contains an application/vnd.3gpp.mcdata-info+xml MIME body with the <mcdatainfo> element containing the <emergency-ind> element set to a value of "true":

a) should display to the MCData user an indication that this is a SIP INVITE request for an MCData emergency group communication and:

i) should display the MCData ID of the originator of the MCData emergency group communication contained in the <mcdata-calling-user-id> element of the application/vnd.3gpp.mcdata-info+xml MIME body;

ii) should display the MCData group identity of the group with the emergency condition contained in the <mcdata-calling-group-id> element; and

iii) if the <alert-ind> element within the <mcdata-Params> element is set to "true", should display to the MCData user an indication of the MCData emergency alert and associated information;

b) shall set the MCData emergency group state to "MDEG 2: in-progress";

c) shall set the MCData imminent peril group state to "MDIG 1: no-imminent-peril"; and

d) shall set the MCData imminent peril group communication state to "MDIGC 1: imminent-peril-gc-capable"; otherwise

5B) if the SIP INVITE request contains an application/vnd.3gpp.mcdata-info+xml MIME body with the <mcdatainfo> element containing the <imminentperil-ind> element set to a value of "true":

a) should display to the MCData user an indication that this is a SIP INVITE request for an MCData imminent peril group communication and:

i) should display the MCData ID of the originator of the MCData imminent peril group communication contained in the <mcdata-calling-user-id> element of the application/vnd.3gpp.mcdata-info+xml MIME body; and

ii) should display the MCData group identity of the group with the imminent peril condition contained in the <mcdata-calling-group-id> element; and

b) shall set the MCData imminent peril group state to "MDIG 2: in-progress"; and

6) if the Mandatory indication IE of the FD SIGNALLING PAYLOAD contained in the application/vnd.3gpp.mcdata-signalling MIME body received in the SIP INVITE request is set to "MANDATORY", then:

i) shall accept the SIP INVITE request and generate a SIP 200 (OK) response according to rules and procedures of 3GPP TS 24.229 [5];

ii) shall include the option tag "timer" in a Require header field of the SIP 200 (OK) response;

iii) shall include the Session-Expires header field in the SIP 200 (OK) response and start the SIP session timer according to IETF RFC 4028 [38]. The "refresher" parameter in the Session-Expires header field shall be set to "uas";

iv) shall include the g.3gpp.mcdata.fd media feature tag in the Contact header field of the SIP 200 (OK) response;

v) shall include the g.3gpp.icsi-ref media feature tag containing the value of "urn:urn-7:3gpp-service.ims.icsi.mcdata.fd" in the Contact header field of the SIP 200 (OK) response;

vi) shall include an SDP answer in the SIP 200 (OK) response to the SDP offer in the incoming SIP INVITE request according to 3GPP TS 24.229 [5] with the clarifications given in subclause 10.2.5.2.2; and

vii) shall send the SIP 200 (OK) response towards the MCData server according to rules and procedures of 3GPP TS 24.229 [5].

On receipt of an SIP ACK message to the sent SIP 200 (OK) message, the MCData client shall:

1) shall interact with the media plane as specified in 3GPP TS 24.582 [15] subclause 7.1.3.

On receipt of an indication from the media plane of the successful download of the file:

1) if the received FD SIGNALLING PAYLOAD message contained an Application metadata container IE, then the MCData client may process the content of that IE per local policy; and

2) if the received FD SIGNALLING PAYLOAD message contained an FD disposition request type IE requesting a file download completed update indication, then the MCData client shall follow the procedures described in subclause 12.2.1.1.

**\* \* \* \* \* NEXT CHANGE \* \* \* \* \***

#### 15.1.2.1 Message definition

This message is sent by the UE to other UEs when sending an SDS data payload. This message provides the signalling content related to the SDS data payload. For the contents of the message see Table 15.1.2.1-1.

Message type: SDS SIGNALLING PAYLOAD

Direction: UE to other UEs (can be via network)

Table 15.1.2.1-1: SDS SIGNALLING PAYLOAD message content

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| IEI | Information Element | Type/Reference | Presence | Format | Length |
|  | SDS signalling payload message identity | Message type15.2.2 | M | V | 1 |
|  | Date and time | Date and time15.2.8 | M | V | 5 |
|  | Conversation ID | Conversation ID15.2.9 | M | V | 16 |
|  | Message ID | Message ID15.2.10 | M | V | 16 |
| 21 | InReplyTo message ID | InReplyTo message ID15.2.11 | O | TV | 17 |
| 22 | Application ID | Application ID15.2.7 | O | TV | 2 |
| 8- | SDS disposition request type | SDS disposition request type15.2.3 | O | TV | 1 |
| 7D | Extended application ID | Extended application ID15.2.24 | O | TLV-E | 3-x |
| 7E | User location | User location15.2.25 | O | TLV-E | 4-x |
| 51 | Sender MCData user ID | MCData user ID15.2.15 | O | TLV-E | 4-x |
| 53 | Application metadata container | Application metadata container15.2.XX | O | TLV-E | 4-x |

**\* \* \* \* \* NEXT CHANGE \* \* \* \* \***

#### 15.1.3.1 Message definition

This message is sent by the UE to other UEs when sending an FD data payload. This message provides the signalling content related to the FD data payload. For the contents of the message see Table 15.1.3.1-1.

Message type: FD SIGNALLING PAYLOAD

Direction: UE to other UEs (via the network)

Table 15.1.3.1-1: FD SIGNALLING PAYLOAD message content

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| IEI | Information Element | Type/Reference | Presence | Format | Length |
|  | FD signalling payload message identity | Message type15.2.2 | M | V | 1 |
|  | Date and time | Date and time15.2.8 | M | V | 5 |
|  | Conversation ID | Conversation ID15.2.9 | M | V | 16 |
|  | Message ID | Message ID15.2.10 | M | V | 16 |
| 21 | InReplyTo message ID | InReplyTo message ID15.2.11 | O | TV | 17 |
| 22 | Application ID | Application ID15.2.7 | O | TV | 2 |
| 9- | FD disposition request type | FD disposition request type15.2.4 | O | TV | 1 |
| A- | Mandatory download | Mandatory download15.2.16 | O | TV | 1 |
| 78 | Payload | Payload15.2.13 | O | TLV-E | 3-x |
| 79 | Metadata | Metadata15.2.17 | O | TLV-E | 3-x |
| 7D | Extended application ID | Extended application ID15.2.24 | O | TLV-E | 3-x |
| 51 | Sender MCData user ID | MCData user ID15.2.15 | O | TLV-E | 4-x |
| 53 | Application metadata container | Application metadata container15.2.XX | O | TLV-E | 4-x |

**\* \* \* \* \* NEXT CHANGE \* \* \* \* \***

### 15.2.XX Application metadata container

The Application metadata container information element is used to carry metadata specific to the application.

The Application metadata container information element is coded as shown in figure 15.2.XX-1 and table 15.2.XX-1.

The Application metadata container information element is a type 6 information element.

The Application metadata container information element provides a means for the sender of the SDS or file to attach application-specific information to the SDS or file.

NOTE: For example, a police officer could send a data file with attached Application metadata container content: {value-end-delimiter='#'}agency-ID=county-police-dept#incident-ID=N5Q432X1#injuries=3#

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |  |
| Application metadata container IEI | octet 1 |
| Length of Application metadata container contents | octet 2 |
|  | octet 3 |
|  | octet 4 |
| Application metadata container contents |  |
|  | octet n |

Figure 15.2.XX-1: Application metadata container information element

Table 15.2.XX-1: Application metadata container information element

|  |
| --- |
| Application metadata is contained in octet 4 to octet n; Maximum value of n is 65533. The Application metadata content is formatted per the syntax below. |
|  |
|  |

Table 15.2.XX-2: Syntax of Application metadata container information element

Application-metadata-container-content = "{" 0\*delimiter-definition "}" 1\*organization-attribute

delimiter-definition = tag-end-delimiter / value-end-delimiter / escape-character

tag-end-delimiter = tag-delimiter \*\*\*CHARACTER-DEFINITION\*\*\*

value-end-delimiter = value-delimiter \*\*\*CHARACTER-DEFINITION\*\*\*

escape-character = \*\*\*CHARACTER-DEFINITION\*\*\*

organization-attribute = tag tag-value-delimiter attribute-value value-end-delimiter

tag = 1\*\*\*\*CHARACTER-DEFINITION\*\*\*

attribute-value = 1\*\*\*\*CHARACTER-DEFINITION\*\*\*

 ; If a delimiter is not defined, the default value shall be used.

 ; The default tag-value-delimiter shall be '='.

 ; The default value-end-delimiter shall be ';'.

 ; The default escape-character shall be '\'.

; An escape-character plus the next following character shall be treated as the value of the following character.
The following character shall not be treated as a tag-value-delimiter or a value-end-delimiter.

; The tag can contain any printable UTF-8 character except the tag-value-delimiter unless the character defined as the tag-value-delimiter is escaped using the escape-character.

; The attribute-value can contain any printable UTF-8 character except the value-end-delimiter and the escape-character unless the character defined as the value-end-delimiter is escaped using the escape-character or the character defined as the escape-character is escaped using the escape-character. For example, if the escape-character is '\', then the '\' character can be included in the attribute-value by using '\\'.

Examples:

{}officer-name=John Smith;incident=123abc;

{tag-delimiter#}name#John Smith;incident#123abc;

{tag-delimitere}nam\eeJohn Smith;incid\ente123abc;

{value-delimiter%}name=John Smith%incident=123abc%

{tag-delimiter:value-delimiter|}FirstName:John|LastName:Smith|

**\* \* \* \* \* END CHANGES \* \* \* \* \***