**3GPP TSG-CT WG1 Meeting #132-eC1-215719**

**Electronic meeting, 11-15 October 2021 *(was* *C1-21xxxx)***

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| *CR-Form-v12.0* |
| **CHANGE REQUEST** |
|  |
|  | **24.282** | **CR** | **0260** | **rev** | **-** | **Current version:** | **17.4.0** |  |
|  |
| *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:***  | MCData procedures for on-network private emergency communication |
|  |  |
| ***Source to WG:*** | AT&T |
| ***Source to TSG:*** | C1 |
|  |  |
| ***Work item code:*** | eMCData3 |  | ***Date:*** | 26-09-2021 |
|  |  |  |  |  |
| ***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)* |
|  |  |
| ***Reason for change:*** | This CR adds/updates support for *on-network* private (one-to-one) emergency communications as prescribed by Stage 2 (23.282), when SDS session or FD using media are used. |
|  |  |
| ***Summary of change:*** | Adapted text from 24.379 is added or used to update existing text.The main changes are:* Determination of authorization for private emergency communications
* Update of emergency-related state variables: MDEPC, MDEPP
* Inclusion of Resource-Priority headers in SIP messages to control priority for emergency cases
* Addition of a new error code

Some minor editorials are corrected in impacted sections. |
|  |  |
| ***Consequences if not approved:*** | The specified emergency related functionalities will not be available, and harmonization across the services would not be possible. |
|  |  |
| ***Clauses affected:*** | 4.9.2, 9.2.4.2.3, 9.2.4.2.4, 9.2.4.3.3, 9.2.4.3.4, 9.2.4.4.3, 9.2.4.4.4, 10.2.5.2.3, 10.2.5.2.4, 10.2.5.3.3, 10.2.5.3.4,10.2.5.4.3, 10.2.5.4.4 |
|  |  |
|  | **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:*** |  |

\* \* \* \* \* \* FIRST CHANGE \* \* \* \* \* \*

### 4.9.2 Warning texts

The text string included in a Warning header field consists of an explanatory text preceded by a 3-digit text code, according to the following format in Table 4.9.2-1.

Table 4.9.2-1 ABNF for the Warning text

warn-text =/ DQUOTE mcdata-warn-code SP mcdata-warn-text DQUOTE

mcdata-warn-code = DIGIT DIGIT DIGIT

mcdata-warn-text = \*( qdtext | quoted-pair )

Table 4.9.2-2 defines the warning texts that are defined for the Warning header field when a Warning header field is included in a response to a SIP request as specified in subclause 4.9.1.

Table 4.9.2-2: Warning texts defined for the Warning header field

|  |  |  |
| --- | --- | --- |
| Code | Explanatory text | Description |
| 101 | service authorisation failed | The service authorisation of the MCData ID against the IMPU failed at the MCData server. |
| 102 | too many simultaneous affiliations | The MCData user already has N2 maximum number of simultaneous affiliations. |
| 104 | isfocus not assigned | A controlling MCData function has not been assigned to the MCData session. |
| 110 | user declined the call invitation | The MCData user declined to accept the call for the file distribuition. |
| 113 | group document does not exist | The group document requested from the group management server does not exist. |
| 114 | unable to retrieve group document | The group document exists on the group management server but the MCData server was unable to retrieve it. |
| 115 | group is disabled | The group has the <disabled> element set to "true" in the group management server. |
| 116 | user is not part of the MCData group | The group exists on the group management server, but the requesting user is not part of this group. |
| 120 | user is not affiliated to this group | The MCData user is not affiliated to the group. |
| 136  | authentication of the MIKEY-SAKKE I\_MESSAGE failed | Security context establishment failed. |
| 139 | integrity protection check failed | The integrity protection of an XML MIME body failed. |
| 140 | unable to decrypt XML content | The XML content cannot be decrypted. |
| 141 | user unknown to the participating function | The participating function is unable to associate the public user identity with an MCData ID. |
| 142 | unable to determine the controlling function | The participating function is unable to determine the controlling function for the group call or private call. |
| 145 | unable to determine called party | The participating function was unable to determine the called party from the information received in the SIP request. |
| 148 | group is regrouped | The group hosted by a non-controlling function is part of a temporary group session as the result of the group regroup function. |
| 149 | SIP-INFO request pending | The MCData client needs to wait for a SIP-INFO request with specific content, before taking further action. |
| 150 | invalid combinations of data received in MIME body | The MCData client included invalid combinations of data in the SIP request. |
| 160 | user not authorised to request creation of a regroup | The user is not authorised to request creation of a regroup. |
| 161 | user not authorised to request removal of a regroup | The user is not authorised to request removal of a regroup. |
| 162 | group call abandoned due to required group members not affiliated | The group call was abandoned as the required number of affiliated group members is not met or some required members are not affiliated. |
| 163 | the group identity indicated in the request does not exist | The server determines that the group identity indicates a user or group regroup based on a preconfigured group that does not exist. |
| 165 | group ID for regroup already in use | The group ID proposed by the client for the user/group regroup based on a preconfigured group is already in use. |
| 167 | call is not allowed on the preconfigured group | Calls are not allowed on this group that is administratively designated for preconfigured group use only. |
| 168 | alert is not allowed on the preconfigured group | Alerts are not allowed on this group that is administratively designated for preconfigured group use only. |
| 198 | no users are affiliated to this group | No users in the group are affiliated. |
| 199 | expected MIME bodies not in the request" | The expected MIME bodies were not received in the SIP request. |
| 200 | user not authorised to transmit data | The MCData user is not authorised to transmit data. |
| 201 | user not authorised to transmit data on this group identity | The MCData user is not authorised to transmit data on the group identity included in the request. |
| 202 | user not authorised for one-to-one MCData communications due to exceeding the maximum amount of data that can be sent in a single request | The MCData user is not authorised for one-to-one MCData communications due to exceeding the maximum amount of data that can be sent in a single request |
| 203 | message too large to send over signalling control plane | The MCData client sent data that is greater than the size that can be handled by the signalling control plane. |
| 204 | unable to determine targeted user for one-to-one SDS | The MCData server is unable to determine the targeted user for one-to-one SDS. |
| 205 | unable to determine targeted user for one-to-one FD | The MCData server is unable to determine the targeted user for one-to-one FD. |
| 206 | short data service not allowed for this group | SDS is not allowed on the group indicated in the SDS request. |
| 207 | SDS services not supported for this group | SDS services not supported for this group |
| 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 | The MCData user is not authorised for group MCData communications due to exceeding the maximum amount of data that can be sent in a single request. |
| 209 | one FD SIGNALLING PAYLOAD or FD HTTP TERMINATION message only must be present in FD request | Only one FD SIGNALLING PAYLOAD or FD HTTP TERMINATION message must be present in FD request |
| 210 | Only one File URL must be present in the FD request | Only one File URL must be present in the FD request. |
| 211 | payload for an FD request is not FILEURL | The payload in the FD request did not contain a FILEURL |
| 212 | file referenced by file URL does not exist | The MCData server was unable to locate the file referenced by the file URL. |
| 213 | file distribution not allowed for this group | FD is not allowed on the group indicated in the FD request. |
| 214 | FD services not supported for this group | FD services not supported for this group |
| 215 | request to transmit is queued by the server | The MCData request was queued by the server for later transmission. |
| 216 | unable to correlate the disposition notification | The MCData server was unable to correlate the disposition notification to a MCData message. |
| 217 | user not authorised for SDS communications on this group identity due to message size | The size of the message exceeded the maximum data allowed for SDS communications on this group identity |
| 218 | user not authorised for one-to-one SDS communications due to message size | The size of the message exceeded the maximum data allowed for one-to-one SDS communications. |
| 219 | user not authorised for FD communications on this group identity due to file size | The size of the file exceeded the maximum data allowed for FD communications on this group identity |
| 220 | user not authorised for FD communications due to file size | The size of the file exceeded the maximum data allowed for one-to-one FD communications. |
| 221 | user not authorised to initiate one-to-one SDS session | The MCData user is not authorised to initiate a one-to-one SDS session. |
| 222 | user not authorised to initiate group SDS session on this group identity | The MCData user is not authorised to initiate a SDS session on the group identity included in the request. |
| 223 | No Conversation ID or Message ID present | Conversation ID and Message ID required to identify transmission |
| 224 | No Transmission available | No transmission identified with given Conversation ID, Message Id and file URL |
| 225 | User not authorized to initiate pre-established session | The MCData user is not authorised to initiate a pre-established MCData session. |
| 226 | function not allowed due to pre-established session not supported | Pre-established session is not supported by MCData participating function |
| 227 | unable to determine targeted user for one-to-one IP Connectivity | The MCData server is unable to determine the targeted user for one-to-one IP Connectivity. |
| 228 | maximum number of service authorizations reached | The number of maximum simultaneous service authorizations for the MCData user has been reached. |
| 229 | one-to-one MCData communication not authorised to the targeted user | The user is not authorised to initiate one-to-one MCData communication to this targeted user. |
| 230 | one-to-one MCData communication not authorised from this originating user | The user is not authorised to receive one-to-one MCData communication from this originating user. |
| 231 | user deferred the call invitation | The MCData user deferred the call invitation for the file distribuition. |
| 232 | communication is stored for later delivery | The participating MCData function stores the communication for later delivery if the receiving MCData user is not available at the time of data delivery or the network is congested, or the request is deferred by the MCData user. If the communication is for file distribution, then the file content is also stored. |
| MNP | user not authorised to initiate emergency communication | The user is not authorised to initiate emergency MCData communication. |

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

##### 9.2.4.2.3 MCData client originating procedures

The MCData client shall generate a SIP INVITE request in accordance with 3GPP TS 24.229 [5] with the clarifications given below.

The MCData client:

1) shall include the g.3gpp.mcdata.sds media feature tag and the g.3gpp.icsi-ref media feature tag with the value of "urn:urn-7:3gpp-service.ims.icsi.mcdata.sds" in the Contact header field of the SIP INVITE request according to IETF RFC 3840 [16];

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

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

4) shall include the ICSI value "urn:urn-7:3gpp-service.ims.icsi.mcdata.sds" (coded as specified in 3GPP TS 24.229 [5]), in a P-Preferred-Service header field according to IETF RFC 6050 [7] in the SIP INVITE request;

5) should include the "timer" option tag in the Supported header field;

6) should include the Session-Expires header field according to IETF RFC 4028 [38]. It is recommended that the "refresher" header field parameter is omitted. If included, the "refresher" header field parameter shall be set to "uac";

7) if a one-to-one SDS session is requested:

a0) if the MCData user has requested the origination of an MCData emergency one-to-one communication or is originating an MCData one-to-one communication and the MCData emergency state is already set, then:

i) if this is an authorised request for an MCData emergency one-to-one communication as determined by the procedures of subclause 6.2.8.3.1.1, shall comply with the procedures in subclause 6.2.8.3.2; or

ii) if this is an unauthorised request for an MCData emergency one-to-one communication as determined in step i) above, should indicate to the MCData user that initiation of an MCData emergency one-to-one communication is not authorized and shall release the generated SIP INVITE request and end the procedure;

a) shall insert in the SIP INVITE request a MIME resource-lists body with the MCData ID of the invited MCData user, according to rules and procedures of IETF RFC 5366 [18];

b) shall contain an application/vnd.3gpp.mcdata-info+xml MIME body with the <mcdatainfo> element containing the <mcdata-Params> element with:

i) the <request-type> element set to a value of "one-to-one-sds-session"; and

ii) if the MCData client is aware of active functional aliases and if an active functional alias is to be included in the SIP INVITE request, the <functional-alias-URI> element set to the URI of the used functional alias;

NOTE 0: The MCData client learns the functional aliases that are activated for an MCData ID from procedures specified in subclause 22.2.1.3.

c) if an end-to-end security context needs to be established and the security context does not exist or if the existing security context has expired, then:

i) if necessary, shall instruct the key management client to request keying material from the key management server as described in 3GPP TS 33.180 [26];

ii) shall use the keying material to generate a PCK as described in 3GPP TS 33.180 [26];

iii) shall use the PCK to generate a PCK-ID with the four most significant bits set to "0001" to indicate that the purpose of the PCK is to protect one-to-one communications and with the remaining twenty eight bits being randomly generated as described in 3GPP TS 33.180 [26];

iv) shall encrypt the PCK to a UID associated to the MCData client using the MCData ID of the invited user and a time related parameter as described in 3GPP TS 33.180 [26];

v) shall generate a MIKEY-SAKKE I\_MESSAGE using the encapsulated PCK and PCK-ID as specified in 3GPP TS 33.180 [26];

vi) shall add the MCData ID of the originating MCData user to the initiator field (IDRi) of the I\_MESSAGE as described in 3GPP TS 33.180 [26]; and

vii) shall sign the MIKEY-SAKKE I\_MESSAGE using the originating MCData user's signing key provided in the keying material together with a time related parameter, and add this to the MIKEY-SAKKE payload, as described in 3GPP TS 33.180 [26]; and

d) if the MCData emergency private communication state is set to either "MDEPC 2: emergency-pc-requested" or "MDEPC 3: emergency-pc-granted" or if the MCData emergency private priority state of this one-to-one communication is set to a value other than "MDEPP 2: in-progress" or "MDEPP 3: confirm-pending", shall execute the procedures in subclause 6.2.8.3.3 to include the Resource-Priority header field;

8) if a group SDS session is requested:

a) if the "/*<x>*/<x>/Common/MCData/AllowedSDS" leaf node present in the group document of the requested MCData group, configured on the group management client as specified in 3GPP TS 24.483 [42] is set to "false", shall reject the request to send SDS and not continue with the rest of the steps in this subclause;

a1) if the group document contains a <list-service> element that contains a <preconfigured-group-use-only> element that is set to the value "true":

i) should notify the MCData user that an SDS session is not allowed on this preconfigured group; and

ii) shall skip the rest of this procedure;

b) shall contain in an application/vnd.3gpp.mcdata-info+xml MIME body with the <mcdatainfo> element containing the <mcdata-Params> element with:

i) the <request-type> element set to a value of "group-sds-session";

ii) the <mcdata-request-uri> element set to the MCData group identity; and

iii) the <mcdata-client-id> element set to the MCData client ID of the originating MCData client;

NOTE 1: The MCData client does not include the MCData ID of the originating MCData user in the body, as this will be inserted into the body of the SIP INVITE request that is sent from the originating participating MCData function.

iv) if the MCData client is aware of active functional aliases, and an active functional alias is to be included in the SIP INVITE request, the <functional-alias-URI> set to the URI of the used functional alias;

c) if the MCData user has requested the origination of an MCData emergency group communication or is originating an MCData pre-arranged group communication and the MCData emergency state is already set, the MCData client shall execute the procedures in subclause 6.2.8.1.1;

d) if the MCData user has requested the origination of an MCData imminent peril group communication, the MCData client shall execute the procedures in subclause 6.2.8.1.9;

e) if the MCData client emergency group state for this group is set to "MDEG 2: in-progress" or "MDEG 4: confirm-pending", the MCData client shall execute the procedures in subclause 6.2.8.1.2 to include the Resource-Priority header field; and

f) if the MCData client imminent peril group state for this group is set to "MDIG 2: in-progress" or "MDIG 4: confirm-pending", shall execute the procedures in subclause 6.2.8.1.12 to include the Resource-Priority header field;

9) shall set the Request-URI of the SIP INVITE request to the public service identity identifying the participating MCData function serving the MCData user;

NOTE 2: The MCData client is configured with public service identity identifying the participating MCData function serving the MCData user.

10) may include a P-Preferred-Identity header field in the SIP INVITE request containing a public user identity as specified in 3GPP TS 24.229 [5];

11) shall include an SDP offer according to 3GPP TS 24.229 [5] with the clarifications given in subclause 9.2.4.2.1; and

12) shall send the SIP INVITE request towards the MCData server according to 3GPP TS 24.229 [5].

Upon receiving a SIP 183 (Session Progress) response to the SIP INVITE request, the MCData client:

1) may indicate the progress of the session establishment to the inviting MCData user.

On receipt of a SIP 2xx response to the SIP INVITE request, the MCData client:

0) if the response is to a SIP INVITE request for an MCData emergency group communication or an MCData imminent peril group communication, shall perform the actions specified in subclause 6.2.8.1.4;

1) if the response is to a SIP INVITE request for an MCData emergency one-to-one communication, shall perform the actions specified in subclause 6.2.8.3.4;

2) shall send a SIP ACK request as specified in 3GPP TS 24.229 [5];

3) shall start the SIP Session timer according to rules and procedures of IETF RFC 4028 [38]; and

4) shall interact with the media plane as specified in 3GPP TS 24.582 [15] subclause 6.1.2.2.

On receipt of a SIP 4xx response, a SIP 5xx response or a SIP 6xx response to the SIP INVITE request, the MCData client:

0) if the response is to a SIP INVITE request for an MCData emergency group communication or an MCData imminent peril group communication, shall perform the actions specified in subclause 6.2.8.1.5;

1) if the response is to a SIP INVITE request for an MCData emergency one-to-one communication, shall perform the actions specified in subclause 6.2.8.3.5;

2) shall indicate to the MCData user that the SDS message could not be sent; and

3) shall send a SIP ACK request as specified in 3GPP TS 24.229 [5].

On receipt of a SIP INFO request where the Request-URI contains an MCData session ID identifying an ongoing group session, the MCData client shall follow the actions specified in subclause 6.2.8.1.13.

On receipt of a SIP INFO request where the Request-URI contains an MCData session ID identifying an ongoing one‑to-one session, the MCData client shall follow the actions specified in clause 6.2.8.3.7.

On receipt of an indication from the media plane indicating that the SDS message was not sent successfully, the MCData client:

1) shall generate a SIP BYE request according to 3GPP TS 24.229 [5] with:

a) Reason code set to "SIP";

b) cause set to "480"; and

c) text set to "transmission failed";

2) shall set the Request-URI to the MCData session identity to release; and

3) shall send a SIP BYE request towards MCData server according to 3GPP TS 24.229 [5].

##### 9.2.4.2.4 MCData client terminating procedures

Upon receipt of a " SIP INVITE request for SDS session 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 any of the following conditions are met:

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

b) it is an emergency group SDS session request and the number of maximum simultaneous emergency group calls supported for the specific calling functional alias as specified in the <MaxSimultaneousEmergencyGroupCalls> element within the <FunctionalAliasList> list element of the MCData user profile document (see the MCData user profile document in 3GPP TS 24.484 [12]) has been reached; or

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

2) if the SIP INVITE request is rejected in step 1), shall respond toward the participating MCData function either with an 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 one or more of the MCData ID of the inviting MCData user, the type of SDS request and the functional alias of the inviting MCData user, if provided;

4A) if the SIP INVITE request contains an application/vnd.3gpp.mcdata-info+xml MIME body with the <mcdatainfo> element containing an <mcdata-Params> element containing an <mcdata-calling-group-id> element and containing a <request-type> element set to a value of "group-sds-session" and also containing an <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 <mcdata-Params> 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 of the <mcdata-Params> of the application/vnd.3gpp.mcdata-info+xml MIME body; and

iii) if the <alert-ind> element within the <mcdata-Params> element of the application/vnd.3gpp.mcdata-info+xml MIME body 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

4B) if the SIP INVITE request contains an application/vnd.3gpp.mcdata-info+xml MIME body with the <mcdatainfo> element containing an <mcdata-Params> element containing an <mcdata-calling-group-id> element and containing a <request-type> element set to a value of "group-sds-session" and also containing an <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 <mcdata-Params> 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 of the <mcdata-Params> element of the application/vnd.3gpp.mcdata-info+xml MIME body; and

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

4C) if the SIP INVITE request contains an application/vnd.3gpp.mcdata-info+xml MIME body with the <mcdatainfo> element containing the <mcdata-Params> element containing a <request-type> element set to a value of "one-to-one-sds-session" and also containing an <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 private communication and:

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

ii) if the <alert-ind> element within the <mcdata-Params> element of the application/vnd.3gpp.mcdata-info+xml MIME body is set to "true", should display to the MCData user an indication of the MCData emergency alert and associated information; and

b) shall set the MCData emergency private priority state to "MDEPP 2: in-progress" for this private communication;

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

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

7) 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";

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

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

10) 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 9.2.4.2.2; and

11) if a SIP CANCEL request associated with the SIP INVITE request was received, shall execute the procedure in subclause 6.2.8.4.1, otherwise shall send the SIP 200 (OK) response towards the MCData server according to rules and procedures of 3GPP TS 24.229 [5].

If the SIP 200 (OK) response to the received SIP INVITE request was sent, on receipt of an SIP ACK message to the sent SIP 200 (OK) message, the MCData client:

1) shall interact with the media plane as specified in 3GPP TS 24.582 [15] subclause 6.1.2.3.

To send a disposition notification after the media plane is released, the MCData client:

1) shall follow the procedures described in subclause 12.2.1.1.

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

##### 9.2.4.3.3 Originating participating MCData function procedures

Upon receipt of a "SIP INVITE request for SDS session for originating participating MCData function", the participating MCData function:

1) if unable to process the request, may reject the SIP INVITE request with a SIP 500 (Server Internal Error) response. The participating MCData function may include a Retry-After header field to the SIP 500 (Server Internal Error) response as specified in IETF RFC 3261 [4] and skip the rest of the steps;

NOTE 1: if the SIP INVITE request contains an emergency indication or an imminent peril indication set to a value of "true" and this is an authorised request for originating a priority communication as determined by subclause 6.3.7.2.6, the participating MCData function can, according to local policy, choose to accept the request.

2) shall determine the MCData ID of the calling user from the public user identity in the P-Asserted-Identity header field of the SIP INVITE request, and shall authorise the calling user;

NOTE 2: The MCData ID of the calling user is bound to the public user identity at the time of service authorisation, as documented in subclause 7.3.

3) if the participating MCData function cannot find a binding between the public user identity and an MCData ID or if the validity period of an existing binding has expired, then the participating MCData function shall reject the SIP INVITE request with a SIP 404 (Not Found) response with the warning text set to "141 user unknown to the participating function" in a Warning header field as specified in subclause 4.9, and shall not continue with any of the remaining steps;

4) if the <request-type> element in the application/vnd.3gpp.mcdata-info+xml MIME body of the SIP INVITE request is:

a) set to a value of "group-sds-session", shall determine the public service identity of the controlling MCData function associated with the MCData group identity in the <mcdata-request-uri> element of the application/vnd.3gpp.mcdata-info+xml MIME body in the SIP INVITE request; or

b) set to a value of "one-to-one-sds-session", shall determine the public service identity of the controlling MCData function hosting the one-to-one SDS session service for the calling user;

5) if unable to identify the controlling MCData function for SDS session, it shall reject the SIP INVITE request with a SIP 404 (Not Found) response with the warning text "142 unable to determine the controlling function" in a Warning header field as specified in subclause 4.9, and shall not continue with any of the remaining steps;

6) shall determine whether the MCData user identified by the MCData ID is authorised for MCData communications by following the procedures in subclause 11.1;

7) if the procedures in subclause 11.1 indicate that the user identified by the MCData ID

a) is not allowed to send MCData communications as determined by step 1) of subclause 11.1, shall reject the "SIP INVITE request for SDS session for originating participating MCData function" with a SIP 403 (Forbidden) response to the SIP INVITE request, with warning text set to "221 user not authorised to initiate one-to-one SDS session" 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) is not allowed to initiate one-to-one MCData communications to the targeted user as determined by step 1a) of subclause 11.1, shall reject the "SIP INVITE request for SDS session for originating participating MCData function" with a SIP 403 (Forbidden) response including warning text set to "229 one-to-one MCData communication not authorised to the targeted user" in a Warning header field as specified in subclause 4.9 and shall not continue with the rest of the steps;

7A) if the user identified by the MCData ID requests to initiate an emergency communication, but is not allowed to do so, as determined by executing the procedures in subclause 6.7.3.2.6, shall reject the "SIP INVITE request for SDS session for originating participating MCData function" with a SIP 403 (Forbidden) response including warning text set to "MNP user not authorised to initiate emergency communication" in a Warning header field as specified in subclause 4.9 and shall not continue with the rest of the steps;

8) shall generate a SIP INVITE request in accordance with 3GPP TS 24.229 [5];

9) shall include the option tag "timer" in the Supported header field;

10) should include the Session-Expires header field according to IETF RFC 4028 [38]. It is recommended that the "refresher" header field parameter is omitted. If included, the "refresher" header field parameter shall be set to "uac";

11) shall set the Request-URI of the outgoing SIP INVITE request to the public service identity of the controlling MCData function as determined by step 4) in this subclause;

11a) shall copy the application/vnd.3gpp.mcdata-info+xml MIME body from the incoming SIP INVITE request to the outgoing SIP INVITE request;

12) shall include the MCData ID of the originating user in the <mcdata-calling-user-id> element of the application/vnd.3gpp.mcdata-info+xml MIME body of the outgoing SIP INVITE request;

12A) if the incoming SIP INVITE request contains an application/vnd.3gpp.mcdata-info+xml MIME body that contains a <functional-alias-URI> element, shall check if the status of the functional alias is activated for the MCData ID. If the functional alias status is activated, then the participating MCData function shall set the <functional-alias-URI> element of the application/vnd.3gpp.mcdata-info+xml MIME body in the outgoing SIP INVITE request to the received value, otherwise shall not include a <functional-alias-URI> element;

13) shall include the ICSI value "urn:urn-7:3gpp-service.ims.icsi.mcdata.sds" (coded as specified in 3GPP TS 24.229 [5]), into the P-Asserted-Service header field of the outgoing SIP INVITE request;

14) shall set the P-Asserted-Identity in the outgoing SIP INVITE request to the public user identity in the P-Asserted-Identity header field contained in the received SIP INVITE request;

15) shall include a Resource-Priority header field according to rules and procedures of 3GPP TS 24.229 [5] set to the value indicated in the Resource-Priority header field, if included in the SIP INVITE request from the MCData client;

16) shall include in the SIP INVITE request an SDP offer based on the SDP offer in the received SIP INVITE request from the MCData client as specified in subclause 9.2.4.3.1; and

17) shall send the SIP INVITE request as specified to 3GPP TS 24.229 [5].

Upon receipt of a SIP 200 (OK) response in response to the SIP INVITE request in step 16):

1) shall generate a SIP 200 (OK) response as specified in 3GPP TS 24.229 [5];

2) shall include in the SIP 200 (OK) response an SDP answer as specified in the subclause 9.2.4.3.2;

3) shall include the option tag "timer" in a Require header field;

4) shall include the Session-Expires header field according to rules and procedures of IETF RFC 4028 [38], "UAS Behavior". If the "refresher" parameter is not included in the received request, the "refresher" parameter in the Session-Expires header field shall be set to "uac";

5) shall include the following in the Contact header field:

a) the g.3gpp.mcdata.sds media feature tag;

b) the g.3gpp.icsi-ref media feature tag containing the value of “urn:urn-7:3gpp-service.ims.icsi.mcdata.sds"; and

c) the isfocus media feature tag;

6) shall include Warning header field(s) that were received in the incoming SIP 200 (OK) response;

7) shall include an MCData session identity mapped to the MCData session identity provided in the Contact header field of the received SIP 200 (OK) response;

8) if the incoming SIP 200 (OK) response contained an application/vnd.3gpp.mcdata-info+xml MIME body, shall copy the application/vnd.3gpp.mcdata-info+xml MIME body to the outgoing SIP 200 (OK) response.

9) shall include the public service identity received in the P-Asserted-Identity header field of the incoming SIP 200 (OK) response into the P-Asserted-Identity header field of the outgoing SIP 200 (OK) response; and

10) shall interact with the media plane as specified in 3GPP TS 24.582 [15] subclause 6.2.2.4;

11) shall send the SIP 200 (OK) response to the MCData client according to 3GPP TS 24.229 [5]; and

12) shall start the SIP Session timer according to rules and procedures of IETF RFC 4028 [38].

Upon receipt of a SIP 4xx, 5xx or 6xx response to the SIP INVITE request in step 16) the participating MCData function:

1) shall generate a SIP response according to 3GPP TS 24.229 [5];

2) shall include Warning header field(s) that were received in the incoming SIP response; and

3) shall forward the SIP response to the MCData client according to 3GPP TS 24.229 [5].

##### 9.2.4.3.4 Terminating participating MCData function procedures

Upon receipt of a "SIP INVITE request for SDS session for terminating participating MCData function", the participating MCData function:

1) if unable to process the request, may reject the SIP INVITE request with a SIP 500 (Server Internal Error) response. The participating MCData function may include a Retry-After header field to the SIP 500 (Server Internal Error) response as specified in IETF RFC 3261 [4] and skip the rest of the steps;

NOTE: If the SIP INVITE request contains an emergency indication or an imminent peril indication set to a value of "true", the participating MCData function can, according to local policy, choose to accept the request even if the maximum number of acceptable communications is exceeded.

2) shall check the presence of the isfocus media feature tag in the URI of the Contact header field and if it is not present then the participating MCData function shall reject the request with a SIP 403 (Forbidden) response with the warning text set to "104 isfocus not assigned" in a Warning header field as specified in subclause 4.9, and shall not continue with the rest of the steps;

3) shall use the MCData ID present in the <mcdata-request-uri> element of the application/vnd.3gpp.mcdata-info+xml MIME body of the incoming SIP INVITE request to retrieve the binding between the MCData ID and public user identity of the terminating MCData user;

4) if the binding between the MCData ID and public user identity of the terminating MCData user does not exist, then the participating MCData function shall reject the SIP INVITE request with a SIP 404 (Not Found) response, and shall not continue with the rest of the steps;

4A) if the <IncomingOne-to-OneCommunicationList> element exists in the MCData user profile document with one or more <One-to-One-CommunicationListEntry> elements (see the MCData user profile document in 3GPP TS 24.484 [12]) and:

i) if the <mcdata-calling-user-id> element of the application/vnd.3gpp.mcdata-info+xml MIME body of the incoming SIP INVITE request does not match with the <entry> element of any of the <One-to-One-CommunicationListEntry> elements in the <IncomingOne-to-OneCommunicationList> element of the MCData user profile document (see the MCData user profile document in 3GPP TS 24.484 [12]); and

ii) if configuration is not set in the MCData user profile document that allows the MCData user to receive one-to-one MCData communication from any user (see <allow-one-to-one-communication-from-any-user> element in MCData user profile document in 3GPP TS 24.484 [12]);

 then:

i) shall reject the SIP INVITE request with a SIP 403 (Forbidden) response including warning text set to "230 one-to-one MCData communication not authorised from this originating user" in a Warning header field as specified in subclause 4.9 and shall not continue with the rest of the steps;

5) shall generate a SIP INVITE request in accordance with 3GPP TS 24.229 [5];

6) should include the Session-Expires header field according to IETF RFC 4028 [38]. It is recommended that the "refresher" header field parameter is omitted. If included, the "refresher" header field parameter shall be set to "uac";

7) shall include the option tag "timer" in the Supported header field;

8) shall include the following in the Contact header field:

a) the g.3gpp.mcdata.sds media feature tag;

b) the g.3gpp.icsi-ref media feature tag containing the value of “urn:urn-7:3gpp-service.ims.icsi.mcdata.sds";

c) the isfocus media feature tag;

d) an MCData session identity mapped to the MCData session identity provided in the Contact header field of the incoming SIP INVITE request; and

e) any other uri-parameter provided in the Contact header field of the incoming SIP INVITE request;

9) shall include in the SIP INVITE request all Accept-Contact header fields and all Reject-Contact header fields, with their feature tags and their corresponding values along with parameters according to rules and procedures of IETF RFC 3841 [8] that were received (if any) in the incoming SIP INVITE request;

10) shall set the Request-URI of the outgoing SIP INVITE request to the public user identity associated to the MCData ID of the terminating MCData user;

11) shall populate the outgoing SIP INVITE request with the MIME bodies that were present in the incoming SIP INVITE request;

12) shall copy the contents of the P-Asserted-Identity header field of the incoming SIP INVITE request to the P-Asserted-Identity header field of the outgoing SIP INVITE request;

13) shall include in the SIP INVITE request an SDP offer based on the SDP offer in the received "SIP INVITE request for SDS session for terminating participating MCData function" as specified in subclause 9.2.4.3.1; and

14) shall send the SIP INVITE request as specified in 3GPP TS 24.229 [5].

Upon receipt of a SIP 200 (OK) response in response to the above SIP INVITE request, the participating MCData function:

1) shall generate a SIP 200 (OK) response as specified in 3GPP TS 24.229 [5];

2) shall include in the SIP 200 (OK) response an SDP answer based on the SDP answer in the received SIP 200 (OK) response as specified in subclause 9.2.4.3.2;

3) shall include the option tag "timer" in a Require header field;

4) shall include the Session-Expires header field according to rules and procedures of IETF RFC 4028 [38], "UAS Behavior". If no "refresher" parameter was included in the SIP INVITE request, the "refresher" parameter in the Session-Expires header field shall be set to "uas";

5) shall include the following in the Contact header field:

a) the g.3gpp.mcdata.sds media feature tag;

b) the g.3gpp.icsi-ref media feature tag containing the value of “urn:urn-7:3gpp-service.ims.icsi.mcdata.sds"; and

c) an MCData session identity mapped to the MCData session identity provided in the Contact header field of the received SIP INVITE request from the controlling MCData function;

6) if the incoming SIP response contained an application/vnd.3gpp.mcdata-info+xml MIME body, shall copy the application/vnd.3gpp.mcdata-info+xml MIME body to the outgoing SIP 200 (OK) response.

7) shall copy the P-Asserted-Identity header field from the incoming SIP 200 (OK) response to the outgoing SIP 200 (OK) response;

8) shall start the SIP Session timer according to rules and procedures of IETF RFC 4028 [38].

9) shall interact with the media plane as specified in 3GPP TS 24.582 [15] subclause 6.2.2.5; and

10) shall send the SIP 200 (OK) response to the controlling MCData function according to 3GPP TS 24.229 [5].

Upon receipt of a SIP 4xx, 5xx or 6xx response to the above SIP INVITE request, the participating MCData function:

1) shall generate a SIP response according to 3GPP TS 24.229 [5];

2) shall include Warning header field(s) that were received in the incoming SIP response; and

3) shall forward the SIP response to the controlling MCData function according to 3GPP TS 24.229 [5].

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

##### 9.2.4.4.3 Originating controlling MCData function procedures

This subclause describes the procedures for inviting an MCData user to an MCData session. The procedure is initiated by the controlling MCData function as the result of:

- an action in subclause 9.2.4.4.4; or

- for group SDS session, when an MCData client successfully affiliates the MCData group after the SDS session has been established.

The controlling MCData function:

1) shall generate a SIP INVITE request as specified in 3GPP TS 24.229 [5] with an application/vnd.3gpp.mcdata-info+xml MIME body included;

1A) if the received SIP INVITE request contains an authorised request for an MCData emergency communication as determined by clause 6.3.7.2.6, shall, in the generated SIP INVITE request:

1. set the <emergency-ind> element of the application/vnd.3gpp.mcdata-info+xml MIME body to a value of "true";
2. include a Resource-Priority header field populated with the values for an MCData emergency communication as specified in subclause 6.3.7.1.4;

c) if the <alert-ind> element is set to "true" in the received SIP INVITE request and the initiation of MCData emergency alerts is authorized, as determined by the procedures of subclause 6.3.7.2.1, populate the application/vnd.3gpp.mcdata-info+xml MIME body and the application/vnd.3gpp.mcdata-location-info+xml MIME body as specified in subclause 6.3.7.1.3. Otherwise, set the <alert-ind> element to a value of "false" in the application/vnd.3gpp.mcdata-info+xml MIME body;

d) for a group communication, if the in-progress imminent peril state of the group is set to a value of "true", include in the application/vnd.3gpp.mcdata-info+xml MIME body an <imminentperil-ind> element set to a value of "false"; and

NOTE 1: If the imminent peril state of the group is true at this point, the controlling function will set it to false as part of the calling procedure.

1. set the <request-type> element of the application/vnd.3gpp.mcdata-info+xml MIME body to the value of the <request-type> element of the application/vnd.3gpp.mcdata-info+xml MIME body of the received SIP INVITE request;

1B) for a group communication, if the in-progress emergency state of the group is set to a value of "false" and the in-progress imminent peril state of the group is set to a value of "true", the controlling MCData function:

a) shall include a Resource-Priority header field populated with the values for an MCData imminent peril group communication as specified in subclause 6.3.7.1.4; and

b) shall include in the application/vnd.3gpp.mcdata-info+xml MIME body an <imminentperil-ind> element set to a value of "true".

2) shall include the Supported header field set to "timer";

3) should include the Session-Expires header field according to rules and procedures of IETF RFC 4028 [38]. The refresher parameter shall be omitted;

4) shall include an Accept-Contact header field containing the g.3gpp.mcdata.sds media feature tag along with the "require" and "explicit" header field parameters according to IETF RFC 3841 [8];

5) 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.sds" along with parameters "require" and "explicit" according to IETF RFC 3841 [8];

6) shall include a Referred-By header field with the public user identity of the inviting MCData client;

7) shall include in the Contact header field an MCData session identity for the MCData session with the g.3gpp.mcdata.sds media feature tag, the isfocus media feature tag and the g.3gpp.icsi-ref media feature tag with the value of "urn:urn-7:3gpp-service.ims.icsi.mcdata.sds" according to IETF RFC 3840 [16];

8) shall include in the application/vnd.3gpp.mcdata-info+xml MIME body in the outgoing SIP INVITE request:

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

b) the <mcdata-calling-group-id> element set to the group identity if the request is for group sds; and

c) the <mcdata-calling-user-id> element set to the calling user MCData ID;

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

NOTE 2: How the controlling MCData function finds the address of the terminating participating MCData function is out of the scope of the current release.

10) shall set the P-Asserted-Identity header field to the public service identity of the controlling MCData function;

11) shall include the ICSI value "urn:urn-7:3gpp-service.ims.icsi.mcdata.sds" (coded as specified in 3GPP TS 24.229 [5]), in a P-Asserted-Service-Id header field according to IETF RFC 6050 [7] in the SIP INVITE request;

12) shall include in the SIP INVITE request an SDP offer based on the SDP offer in the received SIP INVITE request from the originating client according to the procedures specified in subclause 9.2.4.4.1; and

13) shall send the SIP INVITE request towards the terminating client in accordance with 3GPP TS 24.229 [5].

Upon receiving a SIP 200 (OK) response for the SIP INVITE request the controlling MCData function:

1) shall interact with the media plane as specified in 3GPP TS 24.582 [15] subclause 6.3.2.

NOTE 3: The procedures executed by the controlling MCData function prior to sending a response to the inviting MCData client are specified in subclause 9.2.4.4.4.

##### 9.2.4.4.4 Terminating controlling MCData function procedures

In the procedures in this subclause:

1) MCData ID in an incoming SIP INVITE request refers to the MCData ID of the originating user from the <mcdata-calling-user-id> element of the application/vnd.3gpp.mcdata-info+xml MIME body of the incoming SIP INVITE request;

2) group identity in an incoming SIP INVITE request refers to the group identity from the <mcdata-request-uri> element of the application/vnd.3gpp.mcdata-info+xml MIME body of the incoming SIP INVITE request; and

3) MCData ID in an outgoing SIP INVITE request refers to the MCData ID of the called user in the <mcdata-request-uri> element of the application/vnd.3gpp.mcdata-info+xml MIME body of the outgoing SIP INVITE request;

Upon receipt of a "SIP INVITE request for controlling MCData function for SDS session", 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 INVITE request with a SIP 500 (Server Internal Error) response. 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] and skip the rest of the steps;

NOTE: If the SIP INVITE request contains an emergency indication or an imminent peril indication set to a value of "true" and this is an authorised request originating an MCData emergency group communication as determined by subclause 6.3.7.2.6, or for originating an MCData imminent peril group communication as determined by subclause 6.3.7.2.4, the controlling MCData function can, according to local policy, choose to accept the request.

2) shall determine if the media parameters are acceptable and the MSRP URI is offered in the SDP offer and if not reject the request with a SIP 488 (Not Acceptable Here) response and skip the rest of the steps;

3) shall reject the SIP request with a SIP 403 (Forbidden) response and not process the remaining steps if:

a) an Accept-Contact header field does not include the g.3gpp.mcdata.sds media feature tag; or

b) an Accept-Contact header field does not include the g.3gpp.icsi-ref media feature tag containing the value of "urn:urn-7:3gpp-service.ims.icsi.mcdata.sds";

3A) if the received SIP INVITE request includes an application/vnd.3gpp.mcdata-info+xml MIME body with an <emergency-ind> element included or an <imminentperil-ind> element included, shall validate the request as described in subclause 6.3.7.1.9;

3B) if the SIP INVITE request contains an unauthorised request for an MCData emergency communication as determined by subclause 6.3.7.2.6:

a) shall reject the SIP INVITE request with a SIP 403 (Forbidden) response as specified in subclause 6.3.7.2.7; and

b) shall send the SIP 403 (Forbidden) response as specified in 3GPP TS 24.229 [5] and skip the rest of the steps;

3C) if the SIP INVITE request contains an unauthorised request for an MCData imminent peril group communication as determined by subclause 6.3.7.2.4, shall reject the SIP INVITE request with a SIP 403 (Forbidden) response with the following clarifications:

a) shall include in the SIP 403 (Forbidden) response an application/vnd.3gpp.mcdata-info+xml MIME body as specified in clause D.1 with the <mcdatainfo> element containing the <mcdata-Params> element with the <imminentperil-ind> element set to a value of "false"; and

b) shall send the SIP 403 (Forbidden) response as specified in 3GPP TS 24.229 [5] and skip the rest of the steps;

3D) if a Resource-Priority header field is included in the SIP INVITE request:

a) if the Resource-Priority header field is set to the value indicated for emergency communications and the SIP INVITE request does not contain an emergency indication and the in-progress emergency state of the group is set to a value of "false", shall reject the SIP INVITE request with a SIP 403 (Forbidden) response and skip the rest of the steps; or

b) if the Resource-Priority header field is set to the value indicated for imminent peril communications and the SIP INVITE request does not contain an imminent peril indication and the in-progress imminent peril state of the group is set to a value of "false", shall reject the SIP INVITE request with a SIP 403 (Forbidden) response and skip the rest of the steps;

4) shall cache SIP feature tags, if received in the Contact header field and if the specific feature tags are supported;

5) void;

6) shall start the SIP Session timer according to rules and procedures of IETF RFC 4028 [38];

7) if the <request-type> element in the application/vnd.3gpp.mcdata-info+xml MIME body of the SIP INVITE request is set to a value of "one-to-one-sds-session" and the SIP INVITE 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 "204 unable to determine targeted user for one-to-one SDS" in a Warning header field as specified in subclause 4.9, and skip the rest of the steps below;

b) contains an application/resource-lists MIME body with exactly one <entry> element, shall invite the MCData user identified by the <entry> element of the MIME body, as specified in subclause 9.2.4.4.3; and

c) shall interact with the media plane as specified in 3GPP TS 24.582 [15] subclause 6.3.2;

8) if the <request-type> element in the application/vnd.3gpp.mcdata-info+xml MIME body of the SIP INVITE request is set to a value of "group-sds-session":

a) shall retrieve the necessary group document(s) from the group management server for the group identity contained in the SIP INVITE request and carry out initial processing as specified 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 INVITE 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 INVITE 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-short-data-service> element in the group document set to a value of "false", shall send a SIP 403 (Forbidden) response with the warning text set to "206 short data service 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.sds", shall send a SIP 488 (Not Acceptable) response with the warning text set to "207 SDS 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 SDS procedures in subclause 11.1 indicate that the user identified by the MCData ID is not allowed to send group MCData communications on this group identity as determined by step 2) of subclause 11.1, shall reject the SIP INVITE request with a SIP 403 (Forbidden) response, with warning text set to "222 user not authorised to initiate group SDS session 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;

g) if the originating user identified by the MCData ID is not affiliated to the group identity contained in the SIP INVITE 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 invite each group member determined in step g) above, to the group session, as specified in subclause 9.2.4.4.3; and

k) shall interact with the media plane as specified in 3GPP TS 24.582 [15] subclause 6.3.2.

Upon receiving a SIP 200 (OK) response for a SIP INVITE request as specified in subclause 9.2.4.4.3 and if the MCData ID in the SIP 200 (OK) response matches to the MCData ID in the corresponding SIP INVITE request, the controlling MCData function:

1) shall generate SIP 200 (OK) response to the SIP INVITE request according to 3GPP TS 24.229 [5];

2) shall include the option tag "timer" in a Require header field;

3) shall include the Session-Expires header field and start supervising the SIP session according to rules and procedures of IETF RFC 4028 [38], "UAS Behavior". The "refresher" parameter in the Session-Expires header field shall be set to "uac";

4) shall include a P-Asserted-Identity header field with the public service identity of the controlling MCData function;

5) shall include a SIP URI for the MCData session identity in the Contact header field identifying the MCData session at the controlling MCData function;

6) shall include the following in the Contact header field:

a) the g.3gpp.mcdata.sds media feature tag;

b) the g.3gpp.icsi-ref media feature tag containing the value of “urn:urn-7:3gpp-service.ims.icsi.mcdata.sds"; and

c) the isfocus media feature tag;

7) shall include Warning header field(s) received in incoming responses to the SIP INVITE request;

8) shall include in the SIP 200 (OK) response an SDP answer to the SDP offer in the incoming SIP INVITE request as specified in the subclause 9.2.4.4.2;

8A) if the SIP INVITE request contains an alert indication set to a value of "true" and this is an unauthorised request for an MCData emergency alert as specified in subclause 6.3.7.2.1, shall include in the SIP 200 (OK) response the warning text set to "149 SIP INFO request pending" in a Warning header field as specified in subclause 4.9;

8B) if the received SIP INVITE request contains an application/vnd.3gpp.mcdata-info+xml MIME body with the <imminentperil-ind> element set to a value of "true" and if the in-progress emergency state of the group is set to a value of "true", shall include in the SIP 200 (OK) response the warning text set to "149 SIP INFO request pending" in a Warning header field as specified in subclause 4.9;

9) shall interact with the media plane as specified in 3GPP TS 24.582 [15] subclause 6.3.2; and

10) shall send a SIP 200 (OK) response to the inviting MCData client according to 3GPP TS 24.229 [5].

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

##### 10.2.5.2.3 MCData client originating procedures

The MCData client shall generate a SIP INVITE request in accordance with 3GPP TS 24.229 [5] with the clarifications given below.

The MCData client:

1) shall include the g.3gpp.mcdata.fd media feature tag and the g.3gpp.icsi-ref media feature tag with the value of "urn:urn-7:3gpp-service.ims.icsi.mcdata.fd" in the Contact header field of the SIP INVITE request according to IETF RFC 3840 [16];

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];

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

4) shall include the ICSI value "urn:urn-7:3gpp-service.ims.icsi.mcdata.fd" (coded as specified in 3GPP TS 24.229 [5]), in a P-Preferred-Service header field according to IETF RFC 6050 [7] in the SIP INVITE request;

5) should include the "timer" option tag in the Supported header field;

6) should include the Session-Expires header field according to IETF RFC 4028 [38]. It is recommended that the "refresher" header field parameter is omitted. If included, the "refresher" header field parameter shall be set to "uac";

7) shall generate and contain an application/vnd.3gpp.mcdata-signalling MIME body with the FD SIGNALLING PAYLOAD as described in subclause 6.2.2.3;

8) if a one-to-one file distribution is requested:

a0) if the MCData user has requested the origination of an MCData emergency one-to-one communication or is originating an MCData one-to-one communication and the MCData emergency state is already set, then:

i) if this is an authorised request for an MCData emergency one-to-one communication as determined by the procedures of subclause 6.2.8.3.1.1, shall comply with the procedures in subclause 6.2.8.3.2; or

ii) if this is an unauthorised request for an MCData emergency one-to-one communication as determined in step i) above, should indicate to the MCData user that initiation of an MCData emergency one-to-one communication is not authorized and shall release the generated SIP INVITE request and end the procedure;

a) shall insert in the SIP INVITE request a MIME resource-lists body with the MCData ID of the invited MCData user, according to rules and procedures of IETF RFC 5366 [18];

b) shall contain an application/vnd.3gpp.mcdata-info+xml MIME body with the <mcdatainfo> element containing the <mcdata-Params> element with:

i) the <request-type> element set to a value of "one-to-one-fd"; and

ii) if the MCData client is aware of active functional aliases and if an active functional alias is to be included in the SIP INVITE request, the <functional-alias-URI> element set to the URI of the used functional alias;

c) if an end-to-end security context needs to be established and the security context does not exist or if the existing security context has expired, then:

i) if necessary, shall instruct the key management client to request keying material from the key management server as described in 3GPP TS 33.180 [26];

ii) shall use the keying material to generate a PCK as described in 3GPP TS 33.180 [26];

iii) shall use the PCK to generate a PCK-ID with the four most significant bits set to "0001" to indicate that the purpose of the PCK is to protect one-to-one communications and with the remaining twenty eight bits being randomly generated as described in 3GPP TS 33.180 [26];

iv) shall encrypt the PCK to a UID associated to the MCData client using the MCData ID of the invited user and a time related parameter as described in 3GPP TS 33.180 [26];

v) shall generate a MIKEY-SAKKE I\_MESSAGE using the encapsulated PCK and PCK-ID as specified in 3GPP TS 33.180 [26]; and

vi) shall add the MCData ID of the originating MCData user to the initiator field (IDRi) of the I\_MESSAGE as described in 3GPP TS 33.180 [26]; and

vii) shall sign the MIKEY-SAKKE I\_MESSAGE using the originating MCData user's signing key provided in the keying material together with a time related parameter, and add this to the MIKEY-SAKKE payload, as described in 3GPP TS 33.180 [26]; and

d) if the MCData emergency private communication state is set to either "MDEPC 2: emergency-pc-requested" or "MDEPC 3: emergency-pc-granted" or if the MCData emergency private priority state of this one-to-one communication is set to a value other than "MDEPP 2: in-progress" or "MDEPP 3: confirm-pending", shall execute the procedures in subclause 6.2.8.3.3 to include the Resource-Priority header field;

9) if a group file distribution is requested:

a) if the "/*<x>*/<x>/Common/MCData/AllowedFD" leaf node present in the group document of the requested MCData group, configured on the group management client as specified in 3GPP TS 24.483 [42] is set to "false", shall reject the request for FD and not continue with the rest of the steps in this subclause;

a1) if the group document contains a <list-service> element that contains a <preconfigured-group-use-only> element. If a <preconfigured-group-use-only> element exists and is set to the value "true", then the MCData client:

i) should indicate to the MCData user that group file distribution is not allowed on the indicated group; and

ii) shall skip the remainder of this procedure; and

b) shall contain in an application/vnd.3gpp.mcdata-info+xml MIME body with the <mcdatainfo> element containing the <mcdata-Params> element with:

i) the <request-type> element set to a value of "group-fd";

ii) the <mcdata-request-uri> element set to the MCData group identity;

iii) the <mcdata-client-id> element set to the MCData client ID of the originating MCData client; and

NOTE 1: The MCData client does not include the MCData ID of the originating MCData user in the body, as this will be inserted into the body of the SIP INVITE request that is sent from the originating participating MCData function.

iv) if the MCData client is aware of active functional aliases and if an active functional alias is to be included in the SIP INVITE request, the <functional-alias-URI> element set to the URI of the used functional alias;

c) if the MCData user has requested the origination of an MCData emergency group communication or is originating an MCData pre-arranged group communication and the MCData emergency state is already set, the MCData client shall execute the procedures in subclause 6.2.8.1.1;

d) if the MCData user has requested the origination of an MCData imminent peril group communication, the MCData client shall execute the procedures in subclause 6.2.8.1.9;

e) if the MCData client emergency group state for this group is set to "MDEG 2: in-progress" or "MDEG 4: confirm-pending", the MCData client shall execute the procedures in subclause 6.2.8.1.2 to include the Resource-Priority header field; and

f) if the MCData client imminent peril group state for this group is set to "MDIG 2: in-progress" or "MDIG 4: confirm-pending", shall execute the procedures in subclause 6.2.8.1.12 to include the Resource-Priority header field;

10) shall set the Request-URI of the SIP INVITE request to the public service identity identifying the participating MCData function serving the MCData user;

NOTE 2: The MCData client is configured with public service identity identifying the participating MCData function serving the MCData user.

11) may include a P-Preferred-Identity header field in the SIP INVITE request containing a public user identity as specified in 3GPP TS 24.229 [5];

12) shall include an SDP offer according to 3GPP TS 24.229 [5] with the clarifications given in subclause 10.2.5.2.1; and

13) shall send the SIP INVITE request towards the MCData server according to 3GPP TS 24.229 [5].

On receipt of a SIP 2xx response to the SIP INVITE request, the MCData client:

0) if the response is to a SIP INVITE request for an MCData emergency group an MCData imminent peril group communication, shall perform the actions specified in subclause 6.2.8.1.4;

1) if the response is to a SIP INVITE request for an MCData emergency one-to-one communication, shall perform the actions specified in subclause 6.2.8.3.4;

2) shall send a SIP ACK request as specified in 3GPP TS 24.229 [5];

3) shall start the SIP Session timer according to rules and procedures of IETF RFC 4028 [38]; and

4) shall interact with the media plane as specified in 3GPP TS 24.582 [15] subclause 7.1.2.

On receipt of a SIP 4xx response, a SIP 5xx response or a SIP 6xx response to the SIP INVITE request, the MCData client:

0) if the response is to a SIP INVITE request for an MCData emergency group communication an MCData imminent peril group communication, shall perform the actions specified in subclause 6.2.8.1.5;

1) if the response is to a SIP INVITE request for an MCData emergency one-to-one communication, shall perform the actions specified in subclause 6.2.8.3.5;

2) shall indicate to the MCData user that the file could not be sent; and

3) shall send a SIP ACK request as specified in 3GPP TS 24.229 [5].

On receipt of a SIP INFO request where the Request-URI contains an MCData session ID identifying an ongoing group session, the MCData client shall follow the actions specified in subclause 6.2.8.1.13.

On receipt of a SIP INFO request where the Request-URI contains an MCData session ID identifying an ongoing one‑to-one session, the MCData client shall follow the actions specified in clause 6.2.8.3.7.

On receipt of an indication from the media plane indicating that the file was not sent successfully, the MCData client shall:

1) shall generate a SIP BYE request according to 3GPP TS 24.229 [5] with:

a) Reason code set to "SIP";

b) cause set to "480"; and

c) text set to "transmission failed";

2) shall set the Request-URI to the MCData session identity to release; and

3) shall send a SIP BYE request towards MCData server according to 3GPP TS 24.229 [5].

##### 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 any of the following conditions are met:

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

b) it is an emergency group file distribution request and the number of maximum simultaneous emergency group calls supported for the specific calling functional alias as specified in the <MaxSimultaneousEmergencyGroupCalls> element within the <FunctionalAliasList> list element of the MCData user profile document (see the MCData user profile document in 3GPP TS 24.484 [12]) has been reached; or

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

2) if the SIP INVITE request is rejected in step 1), shall respond toward the participating MCData function either with an 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 an <mcdata-Params> element containing an <mcdata-calling-group-id> element and containing a <request-type> element set to a value of "group-fd" and also containing an 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 <mcdata-Params> 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 of the <mcdata-Params> of the application/vnd.3gpp.mcdata-info+xml MIME body; and

iii) if the <alert-ind> element within the <mcdata-Params> element of the application/vnd.3gpp.mcdata-info+xml MIME body 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 an <mcdata-Params> element containing an <mcdata-calling-group-id> element and containing a <request-type> element set to a value of "group-fd"and also containing an <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 <mcdata-Params 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 of the <mcdata-Params> element of the application/vnd.3gpp.mcdata-info+xml MIME body;

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

5C) if the SIP INVITE request contains an application/vnd.3gpp.mcdata-info+xml MIME body with the <mcdatainfo> element containing the <mcdata-Params> element containing a <request-type> element set to a value of "one-to-one-fd" and also containing an <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 private communication and:

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

ii) if the <alert-ind> element within the <mcdata-Params> element of the application/vnd.3gpp.mcdata-info+xml MIME body is set to "true", should display to the MCData user an indication of the MCData emergency alert and associated information; and

b) shall set the MCData emergency private priority state to "MDEPP 2: in-progress" for this private communication;

6) if the Mandatory download 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 DOWNLOAD" or if the user has accepted the file download request, then:

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

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

c) 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";

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

e) 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;

f) 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;

g) if a SIP CANCEL request associated with the SIP INVITE request was received, shall execute the procedure in subclause 6.2.8.4.1, otherwise shall send the SIP 200 (OK) response towards the MCData server according to rules and procedures of 3GPP TS 24.229 [5]; and

h) If the SIP 200 (OK) response to the received SIP INVITE request was sent, on receipt of an SIP ACK message to the sent SIP 200 (OK) message, the MCData client shall interact with the media plane as specified in 3GPP TS 24.582 [15] subclause 6.1.2.3;

otherwise, if the user has not accepted or has rejected the file download request:

a) shall send a SIP 403 (Forbidden) response towards the MCData server according to rules and procedures of 3GPP TS 24.229 [5]; and

NOTE: It is possible that the file download does not proceed, but state variables (e.g., group or private emergency, imminent peril, etc.) are modified as result of the processing of the received SIP INVITE request. In this case, it is the responsibility of the implementation and of the user to set the state variables appropriately.

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

a) shall notify the MCData user about the incoming FD request and wait for the MCData user to accept or reject or defer the FD request;

b) if the MCData user declines the FD session invitation:

i) shall send a SIP 480 (Temporarily Unavailable) response towards the MCData server with the warning text set to "110 user declined the call invitation" in a Warning header field as specified in clause 4.9;

 and skip the rest of the steps in this clause;

c) if the MCData user defers the FD session invitation:

i) shall send a SIP 480 (Temporarily Unavailable) response towards the MCData server with the warning text set to "231 user deferred the call invitation" in a Warning header field as specified in clause 4.9;

 and skip the rest of the steps in this clause; and

d) if the MCData user accepts the FD session invitation:

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;

vii) if a SIP CANCEL request associated with the SIP INVITE request was received, shall execute the procedure in subclause 6.2.8.4.1, otherwise shall send the SIP 200 (OK) response towards the MCData server according to rules and procedures of 3GPP TS 24.229 [5];

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

ix) if the SIP 200 (OK) response to the received SIP INVITE request was sent, on receipt of an SIP ACK message to the sent SIP 200 (OK) message, the MCData client shall interact with the media plane as specified in 3GPP TS 24.582 [15] subclause 6.1.2.3;

 otherwise, if the user has not accepted or has rejected the session invitation:

i) shall send a SIP 403 (Forbidden) response towards the MCData server according to rules and procedures of 3GPP TS 24.229 [5].

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.

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

##### 10.2.5.3.3 Originating participating MCData function procedures

Upon receipt of a "SIP INVITE request for file distribution for originating participating MCData function", the participating MCData function:

1) if unable to process the request, may reject the SIP INVITE request with a SIP 500 (Server Internal Error) response. The participating MCData function may include a Retry-After header field to the SIP 500 (Server Internal Error) response as specified in IETF RFC 3261 [4] and skip the rest of the steps;

NOTE 1: If the SIP INVITE request contains an emergency indication or an imminent peril indication set to a value of "true" and this is an authorised request for originating a priority communication as determined by subclause 6.3.7.2.6, the participating MCData function can, according to local policy, choose to accept the request.

2) shall determine the MCData ID of the calling user from the public user identity in the P-Asserted-Identity header field of the SIP INVITE request, and shall authorise the calling user;

NOTE 2: The MCData ID of the calling user is bound to the public user identity at the time of service authorisation, as documented in subclause 7.3.

3) if the participating MCData function cannot find a binding between the public user identity and an MCData ID or if the validity period of an existing binding has expired, then the participating MCData function shall reject the SIP INVITE request with a SIP 404 (Not Found) response with the warning text set to "141 user unknown to the participating function" in a Warning header field as specified in subclause 4.9, and shall not continue with any of the remaining steps;

4) if the <request-type> element in the application/vnd.3gpp.mcdata-info+xml MIME body of the SIP INVITE request is:

a) set to a value of "group-fd", shall determine the public service identity of the controlling MCData function associated with the MCData group identity in the <mcdata-request-uri> element of the application/vnd.3gpp.mcdata-info+xml MIME body in the SIP INVITE request; or

b) set to a value of "one-to-one-fd", shall determine the public service identity of the controlling MCData function hosting the file distribution service for the calling user;

5) if unable to identify the controlling MCData function for file distribution, it shall reject the SIP INVITE request with a SIP 404 (Not Found) response with the warning text "142 unable to determine the controlling function" in a Warning header field as specified in subclause 4.9, and shall not continue with any of the remaining steps;

6) shall determine whether the MCData user identified by the MCData ID is authorised for MCData communications by following the procedures in subclause 11.1;

7) if the procedures in subclause 11.1 indicate that the user identified by the MCData ID:

a) is not allowed to initiate MCData communications as determined by step 1) of subclause 11.1, shall reject the "SIP INVITE request for file distribution for originating participating MCData function" with a SIP 403 (Forbidden) response to the SIP INVITE request, with warning text set to "200 user not authorised to transmit data" in a Warning header field as specified in subclause 4.9, and shall not continue with the rest of the steps in this subclause;

b) is not allowed to initiate one-to-one MCData communications due to exceeding the maximum amount of data that can be sent in a single request as determined by step 7) of subclause 11.1, shall reject the "SIP INVITE request for file distribution for originating participating MCData function" with a SIP 403 (Forbidden) response to the SIP INVITE request, with warning text set to "202 user not authorised for one-to-one MCData communications 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; and

c) is not allowed to initiate one-to-one MCData communications to the targeted user as determined by step 1a) of clause 11.1, shall reject the "SIP INVITE request for file distribution for originating participating MCData function" with a SIP 403 (Forbidden) response including warning text set to "229 one-to-one MCData communication not authorised to the targeted user" in a Warning header field as specified in subclause 4.9 and shall not continue with the rest of the steps;

7A) if the user identified by the MCData ID requests to initiate an emergency communication, but is not allowed to do so, as determined by executing the procedures in subclause 6.7.3.2.6, shall reject the "SIP INVITE request for file distribution for originating participating MCData function" with a SIP 403 (Forbidden) response including warning text set to "MNP user not authorised to initiate emergency communication" in a Warning header field as specified in subclause 4.9 and shall not continue with the rest of the steps;

8) shall generate a SIP INVITE request in accordance with 3GPP TS 24.229 [5];

9) shall include the option tag "timer" in the Supported header field;

10) should include the Session-Expires header field according to IETF RFC 4028 [38]. It is recommended that the "refresher" header field parameter is omitted. If included, the "refresher" header field parameter shall be set to "uac";

11) shall set the Request-URI of the outgoing SIP INVITE request to the public service identity of the controlling MCData function as determined by step 4) in this subclause;

11a) shall copy the application/vnd.3gpp.mcdata-info+xml MIME body from the incoming SIP INVITE request to the outgoing SIP INVITE request;

12) shall include the MCData ID of the originating user in the <mcdata-calling-user-id> element of the application/vnd.3gpp.mcdata-info+xml MIME body of the outgoing SIP INVITE request;

12A) if the incoming SIP INVITE request contains an application/vnd.3gpp.mcdata-info+xml MIME body that contains a <functional-alias-URI> element, shall check if the status of the functional alias is activated for the MCData ID. If the functional alias status is activated, then the participating MCData function shall set the <functional-alias-URI> element of the application/vnd.3gpp.mcdata-info+xml MIME body in the outgoing SIP INVITE request to the received value, otherwise shall not include a <functional-alias-URI> element;

13) shall include in the outgoing SIP INVITE request, the application/vnd.3gpp.mcdata-signalling MIME body that was present in the incoming SIP INVITE request;

14) shall include the ICSI value "urn:urn-7:3gpp-service.ims.icsi.mcdata.fd" (coded as specified in 3GPP TS 24.229 [5]), into the P-Asserted-Service header field of the outgoing SIP INVITE request;

15) shall set the P-Asserted-Identity in the outgoing SIP INVITE request to the public user identity in the P-Asserted-Identity header field contained in the received SIP INVITE request;

15A) shall include a Resource-Priority header field according to rules and procedures of 3GPP TS 24.229 [5] set to the value indicated in the Resource-Priority header field, if included in the SIP INVITE request from the MCData client;

16) shall include in the SIP INVITE request an SDP offer based on the SDP offer in the received SIP INVITE request from the MCData client as specified in subclause 10.2.5.3.1; and

17) shall send the SIP INVITE request as specified to 3GPP TS 24.229 [5].

Upon receipt of a SIP 200 (OK) response in response to the SIP INVITE request in step 16):

1) shall generate a SIP 200 (OK) response as specified in 3GPP TS 24.229 [5];

2) shall include in the SIP 200 (OK) response an SDP answer as specified in the subclause 10.2.5.3.2;

3) shall include the option tag "timer" in a Require header field;

4) shall include the Session-Expires header field according to rules and procedures of IETF RFC 4028 [38], "UAS Behavior". If the "refresher" parameter is not included in the received request, the "refresher" parameter in the Session-Expires header field shall be set to "uac";

5) shall include the following in the Contact header field:

a) the g.3gpp.mcdata.fd media feature tag;

b) the g.3gpp.icsi-ref media feature tag containing the value of "urn:urn-7:3gpp-service.ims.icsi.mcdata.fd"; and

c) the isfocus media feature tag;

6) shall include Warning header field(s) that were received in the incoming SIP 200 (OK) response;

7) shall include an MCData session identity mapped to the MCData session identity provided in the Contact header field of the received SIP 200 (OK) response;

8) if the incoming SIP 200 (OK) response contained an application/vnd.3gpp.mcdata-info+xml MIME body, shall copy the application/vnd.3gpp.mcdata-info+xml MIME body to the outgoing SIP 200 (OK) response.

9) shall include the public service identity received in the P-Asserted-Identity header field of the incoming SIP 200 (OK) response into the P-Asserted-Identity header field of the outgoing SIP 200 (OK) response; and

10) shall interact with the media plane as specified in 3GPP TS 24.582 [15] subclause 7.2.1;

11) shall send the SIP 200 (OK) response to the MCData client according to 3GPP TS 24.229 [5]; and

12) shall start the SIP Session timer according to rules and procedures of IETF RFC 4028 [38].

Upon receipt of a SIP 4xx, 5xx or 6xx response to the SIP INVITE request in step 16) the participating MCData function:

1) shall generate a SIP response according to 3GPP TS 24.229 [5];

2) shall include Warning header field(s) that were received in the incoming SIP response; and

3) shall forward the SIP response to the MCData client according to 3GPP TS 24.229 [5].

##### 10.2.5.3.4 Terminating participating MCData function procedures

Upon receipt of a "SIP INVITE request for file distribution for terminating participating MCData function, the participating MCData function:

1) if unable to process the request, may reject the SIP INVITE request with a SIP 500 (Server Internal Error) response. The participating MCData function may include a Retry-After header field to the SIP 500 (Server Internal Error) response as specified in IETF RFC 3261 [4] and skip the rest of the steps;

NOTE: If the SIP INVITE request contains an emergency indication or an imminent peril indication set to a value of "true", the participating MCData function can, according to local policy, choose to accept the request even if the maximum number of acceptable communications is exceeded.

2) shall check the presence of the isfocus media feature tag in the URI of the Contact header field and if it is not present then the participating MCData function shall reject the request with a SIP 403 (Forbidden) response with the warning text set to "104 isfocus not assigned" in a Warning header field as specified in subclause 4.9, and shall not continue with the rest of the steps;

3) shall use the MCData ID present in the <mcdata-request-uri> element of the application/vnd.3gpp.mcdata-info+xml MIME body of the incoming SIP INVITE request to retrieve the binding between the MCData ID and public user identity of the terminating MCData user;

4) if the binding between the MCData ID and public user identity of the terminating MCData user does not exist, then the participating MCData function shall reject the SIP INVITE request with a SIP 404 (Not Found) response, and shall not continue with the rest of the steps;

4A) if the <IncomingOne-to-OneCommunicationList> element exists in the MCData user profile document with one or more <One-to-One-CommunicationListEntry> elements (see the MCData user profile document in 3GPP TS 24.484 [12]) and:

i) if the <mcdata-calling-user-id> element of the application/vnd.3gpp.mcdata-info+xml MIME body of the incoming SIP INVITE request does not match with the <entry> element of any of the <One-to-One-CommunicationListEntry> elements in the <IncomingOne-to-OneCommunicationList> element of the MCData user profile document (see the MCData user profile document in 3GPP TS 24.484 [12]); and

ii) if configuration is not set in the MCData user profile document that allows the MCData user to receive one-to-one MCData communication from any user (see <allow-one-to-one-communication-from-any-user> element in MCData user profile document in 3GPP TS 24.484 [12]);

 then:

i) shall reject the SIP INVITE request with a SIP 403 (Forbidden) response including warning text set to "230 one-to-one MCData communication not authorised from this originating user" in a Warning header field as specified in subclause 4.9 and shall not continue with the rest of the steps;

5) shall generate a SIP INVITE request in accordance with 3GPP TS 24.229 [5];

6) should include the Session-Expires header field according to IETF RFC 4028 [38]. It is recommended that the "refresher" header field parameter is omitted. If included, the "refresher" header field parameter shall be set to "uac";

7) shall include the option tag "timer" in the Supported header field;

8) shall include the following in the Contact header field:

a) the g.3gpp.mcdata.fd media feature tag;

b) the g.3gpp.icsi-ref media feature tag containing the value of "urn:urn-7:3gpp-service.ims.icsi.mcdata.fd";

c) the isfocus media feature tag;

d) an MCData session identity mapped to the MCData session identity provided in the Contact header field of the incoming SIP INVITE request; and

e) any other uri-parameter provided in the Contact header field of the incoming SIP INVITE request;

9) shall include in the SIP INVITE request all Accept-Contact header fields and all Reject-Contact header fields, with their feature tags and their corresponding values along with parameters according to rules and procedures of IETF RFC 3841 [8] that were received (if any) in the incoming SIP INVITE request;

10) shall set the Request-URI of the outgoing SIP INVITE request to the public user identity associated to the MCData ID of the terminating MCData user;

11) shall populate the outgoing SIP INVITE request with the MIME bodies that were present in the incoming SIP INVITE request;

12) shall copy the contents of the P-Asserted-Identity header field of the incoming SIP INVITE request to the P-Asserted-Identity header field of the outgoing SIP INVITE request;

13) shall include in the SIP INVITE request an SDP offer based on the SDP offer in the received "SIP INVITE request for file distribution for terminating participating MCData function" as specified in subclause 10.2.5.3.1; and

14) shall send the SIP INVITE request as specified in 3GPP TS 24.229 [5].

Upon receipt of a SIP 200 (OK) response in response to the above SIP INVITE request, the participating MCData function:

1) shall generate a SIP 200 (OK) response as specified in 3GPP TS 24.229 [5];

2) shall include in the SIP 200 (OK) response an SDP answer based on the SDP answer in the received SIP 200 (OK) response as specified in subclause 10.2.5.3.2;

3) shall include the option tag "timer" in a Require header field;

4) shall include the Session-Expires header field according to rules and procedures of IETF RFC 4028 [38], "UAS Behavior". If no "refresher" parameter was included in the SIP INVITE request, the "refresher" parameter in the Session-Expires header field shall be set to "uas";

5) shall include the following in the Contact header field:

a) the g.3gpp.mcdata.fd media feature tag;

b) the g.3gpp.icsi-ref media feature tag containing the value of "urn:urn-7:3gpp-service.ims.icsi.mcdata.fd"; and

c) an MCData session identity mapped to the MCData session identity provided in the Contact header field of the received SIP INVITE request from the controlling MCData function;

6) if the incoming SIP response contained an application/vnd.3gpp.mcdata-info+xml MIME body, shall copy the application/vnd.3gpp.mcdata-info+xml MIME body to the outgoing SIP 200 (OK) response.

7) shall copy the P-Asserted-Identity header field from the incoming SIP 200 (OK) response to the outgoing SIP 200 (OK) response;

8) shall start the SIP Session timer according to rules and procedures of IETF RFC 4028 [38];

9) shall interact with the media plane as specified in 3GPP TS 24.582 [15] subclause 7.2.2; and

10) shall send the SIP 200 (OK) response to the controlling MCData function according to 3GPP TS 24.229 [5].

Upon receipt of a SIP 4xx, 5xx or 6xx response to the above SIP INVITE request, the participating MCData function:

1) shall generate a SIP response according to 3GPP TS 24.229 [5];

2) shall include Warning header field(s) that were received in the incoming SIP response; and

3) shall forward the SIP response to the controlling MCData function according to 3GPP TS 24.229 [5].

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

##### 10.2.5.4.3 Originating controlling MCData function procedures

This subclause describes the procedures for inviting an MCData user to an MCData session. The procedure is initiated by the controlling MCData function as the result of an action in subclause 10.2.5.4.4.

The controlling MCData function:

1) shall generate a SIP INVITE request as specified in 3GPP TS 24.229 [5] with an application/vnd.3gpp.mcdata-info+xml MIME body included;

1A) if the received SIP INVITE request contains an authorised request for an MCData emergency communication as determined by clause 6.3.7.2.6, shall, in the generated SIP INVITE request:

1. set the <emergency-ind> element of the application/vnd.3gpp.mcdata-info+xml MIME body to a value of "true";
2. include a Resource-Priority header field populated with the values for an MCData emergency communication as specified in subclause 6.3.7.1.4;

c) if the <alert-ind> element is set to "true" in the received SIP INVITE request and the initiation of MCData emergency alerts is authorized, as determined by the procedures of subclause 6.3.7.2.1, populate the application/vnd.3gpp.mcdata-info+xml MIME body and the application/vnd.3gpp.mcdata-location-info+xml MIME body as specified in subclause 6.3.7.1.3. Otherwise, set the <alert-ind> element to a value of "false" in the application/vnd.3gpp.mcdata-info+xml MIME body; and

d) for a group communication, if the in-progress imminent peril state of the group is set to a value of "true", include in the application/vnd.3gpp.mcdata-info+xml MIME body an <imminentperil-ind> element set to a value of "false";

NOTE 1: If the imminent peril state of the group is true at this point, the controlling function will set it to false as part of the calling procedure.

1. set the <request-type> element of the application/vnd.3gpp.mcdata-info+xml MIME body to the value of the <request-type> element of the application/vnd.3gpp.mcdata-info+xml MIME body of the received SIP INVITE request;

1B) for a group communication, if the in-progress emergency state of the group is set to a value of "false" and the in-progress imminent peril state of the group is set to a value of "true", the controlling MCData function:

a) shall include a Resource-Priority header field populated with the values for an MCData imminent peril group communication as specified in subclause 6.3.7.1.4; and

b) shall include in the application/vnd.3gpp.mcdata-info+xml MIME body an <imminentperil-ind> element set to a value of "true".

2) shall include the Supported header field set to "timer";

3) should include the Session-Expires header field according to rules and procedures of IETF RFC 4028 [38]. The refresher parameter shall be omitted;

4) 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];

5) 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];

6) shall include a Referred-By header field with the public user identity of the inviting MCData client;

7) shall include in the Contact header field an MCData session identity for the MCData session with the g.3gpp.mcdata.fd media feature tag, the isfocus media feature tag and the g.3gpp.icsi-ref media feature tag with the value of "urn:urn-7:3gpp-service.ims.icsi.mcdata.fd" according to IETF RFC 3840 [16];

8) shall include in the application/vnd.3gpp.mcdata-info+xml MIME body in the outgoing SIP INVITE request:

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

b) the <mcdata-calling-group-id> element set to the group identity if the request is for group file distribution; and

c) the <mcdata-calling-user-id> element set to the calling user MCData ID;

9) shall include in the outgoing SIP INVITE request, the application/vnd.3gpp.mcdata-signalling MIME body that was present in the incoming SIP INVITE request;

9A) if the application/vnd.3gpp.mcdata-signalling MIME body in the received SIP INVITE request contained a FD SIGNALLING PAYLOAD message without the Mandatory download IE included, then:

a) shall execute the procedures in subclause 11.2; and

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 INVITE request;

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

NOTE 2: How the controlling MCData function finds the address of the terminating participating MCData function is out of the scope of the current release.

11) shall set the P-Asserted-Identity header field to the public service identity of the controlling MCData function;

12) shall include the ICSI value "urn:urn-7:3gpp-service.ims.icsi.mcdata.fd" (coded as specified in 3GPP TS 24.229 [5]), in a P-Asserted-Service-Id header field according to IETF RFC 6050 [7] in the SIP INVITE request;

13) shall include in the SIP INVITE request an SDP offer based on the SDP offer in the received SIP INVITE request from the originating client according to the procedures specified in subclause 10.2.5.4.1; and

14) shall send the SIP INVITE request towards the terminating client in accordance with 3GPP TS 24.229 [5].

Upon receiving a SIP 200 (OK) response for the SIP INVITE request the controlling MCData function:

1) shall interact with the media plane as specified in 3GPP TS 24.582 [15] subclause 7.3.

NOTE 3: The procedures executed by the controlling MCData function prior to sending a response to the inviting MCData client are specified in subclause 10.2.5.4.4.

##### 10.2.5.4.4 Terminating controlling MCData function procedures

In the procedures in this subclause:

1) MCData ID in an incoming SIP INVITE request refers to the MCData ID of the originating user from the <mcdata-calling-user-id> element of the application/vnd.3gpp.mcdata-info+xml MIME body of the incoming SIP INVITE request;

2) group identity in an incoming SIP INVITE request refers to the group identity from the <mcdata-request-uri> element of the application/vnd.3gpp.mcdata-info+xml MIME body of the incoming SIP INVITE request; and

3) MCData ID in an outgoing SIP INVITE request refers to the MCData ID of the called user in the <mcdata-request-uri> element of the application/vnd.3gpp.mcdata-info+xml MIME body of the outgoing SIP INVITE request;

The procedures in this subclause are executed upon:

- receipt of a "SIP INVITE request for controlling MCData function for file distribution"; or

- a decision to now process a previously received "SIP INVITE request for controlling MCData function for file distribution" that had been queued for later transmission;

NOTE 1: The controlling MCData function may postpone the continuation of an FD using media plane procedure by queuing the received "SIP INVITE request for controlling MCData function for file distribution". 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 INVITE request with a SIP 500 (Server Internal Error) response or queue the received SIP INVITE. 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];

NOTE 1A: If the SIP INVITE request contains an emergency indication or an imminent peril indication set to a value of "true" and this is an authorised request originating an MCData emergency group communication as determined by subclause 6.3.7.2.6, or for originating an MCData imminent peril group communication as determined by subclause 6.3.7.2.4, the controlling MCData function can, according to local policy, choose to accept the request.

2) if the received SIP INVITE 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 100 (Trying) response, and shall send the SIP 100 (TRYING) response towards the originating participating MCData function according to 3GPP TS 24.229 [5] and not continue with the remaining steps in this subclause. Otherwise, continue with the rest of the steps;

3) shall determine if the media parameters are acceptable and the MSRP URI is offered in the SDP offer and if not reject the request with a SIP 488 (Not Acceptable Here) response and skip the rest of the steps;

3A) if the received SIP INVITE request includes an application/vnd.3gpp.mcdata-info+xml MIME body with an <emergency-ind> element included or an <imminentperil-ind> element included, shall validate the request as described in subclause 6.3.7.1.9;

3B) if the SIP INVITE request contains an unauthorised request for an MCData emergency communication as determined by subclause 6.3.7.2.6:

a) shall reject the SIP INVITE request with a SIP 403 (Forbidden) response as specified in subclause 6.3.7.2.7; and

b) shall send the SIP 403 (Forbidden) response as specified in 3GPP TS 24.229 [5] and skip the rest of the steps;

3C) if the SIP INVITE request contains an unauthorised request for an MCData imminent peril group communication as determined by subclause 6.3.7.2.4, shall reject the SIP INVITE request with a SIP 403 (Forbidden) response with the following clarifications:

a) shall include in the SIP 403 (Forbidden) response an application/vnd.3gpp.mcdata-info+xml MIME body as specified in clause D.1 with the <mcdatainfo> element containing the <mcdata-Params> element with the <imminentperil-ind> element set to a value of "false"; and

b) shall send the SIP 403 (Forbidden) response as specified in 3GPP TS 24.229 [5] and skip the rest of the steps;

3D) if a Resource-Priority header field is included in the SIP INVITE request:

a) if the Resource-Priority header field is set to the value indicated for emergency communications and the SIP INVITE request does not contain an emergency indication and the in-progress emergency state of the group is set to a value of "false", shall reject the SIP INVITE request with a SIP 403 (Forbidden) response and skip the rest of the steps; or

b) if the Resource-Priority header field is set to the value indicated for imminent peril communications and the SIP INVITE request does not contain an imminent peril indication and the in-progress imminent peril state of the group is set to a value of "false", shall reject the SIP INVITE request with a SIP 403 (Forbidden) response and skip the rest of the steps;

4) if the incoming SIP INVITE request does not contain an application/vnd.3gpp.mcdata-signalling MIME body with the FD SIGNALLING PAYLOAD as described in subclause 6.2.2.3, shall reject the SIP INVITE request with appropriate reject code;

5) shall reject the SIP request with a SIP 403 (Forbidden) response and not process the remaining steps if:

a) an Accept-Contact header field does not include the g.3gpp.mcdata.fd media feature tag; or

b) an Accept-Contact header field does not include the g.3gpp.icsi-ref media feature tag containing the value of "urn:urn-7:3gpp-service.ims.icsi.mcdata.fd";

6) shall cache SIP feature tags, if received in the Contact header field and if the specific feature tags are supported;

7) shall start the SIP Session timer according to rules and procedures of IETF RFC 4028 [38];

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

a) the conditions in subclause 11.1 indicate that the MCData user is not allowed to initiate FD communications due to file size exceeding allowed limits as determined by step 4) of subclause 11.1, shall reject the SIP INVITE request with a SIP 403 (Forbidden) response to the SIP INVITE request, with warning text set to "220 user not authorised for FD communications due to file size" 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

NOTE 2: The size of the file intended for transfer over the media plane is obtained from the 'size' selector of the file-selector attribute in the received SDP offer.

b) the SIP INVITE request:

i) 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

ii) contains an application/resource-lists MIME body with exactly one <entry> element, shall invite the MCData user identified by the <entry> element of the MIME body, as specified in subclause 10.2.5.4.3; and

shall interact with the media plane as specified in 3GPP TS 24.582 [15] subclause 7.3; and

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

a) shall retrieve the necessary group document(s) from the group management server for the group identity contained in the SIP INVITE request and carry out initial processing as specified 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 INVITE 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 INVITE 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 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 INVITE 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;

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 INVITE request with a SIP 403 (Forbidden) response to the SIP INVITE request, with warning text set to "208 user not authorised for MCData communications on this group identity due 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; and

iii) is not allowed to initiate FD communications on this group identity due to file size exceeding the allowed limits as determined by step 6) of subclause 11.1, shall reject the SIP INVITE request with a SIP 403 (Forbidden) response to the SIP INVITE request, with warning text set to "219 user not authorised for FD communications on this group identity due to file size" in a Warning header field as specified in subclause 4.9, and shall not continue with the rest of the steps in this subclause.

NOTE 3: The size of the file intended for transfer over the media plane is obtained from the 'size' selector of the file-selector attribute in the received SDP offer.

g) if the originating user identified by the MCData ID is not affiliated to the group identity contained in the SIP INVITE 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 invite each group member determined in step h) above, to the group session, as specified in subclause 10.2.5.4.3; and

k) shall interact with the media plane as specified in 3GPP TS 24.582 [15] subclause 7.3.

Upon receiving a SIP 200 (OK) response for a SIP INVITE request as specified in subclause 10.2.5.4.3 and if the MCData ID in the SIP 200 (OK) response matches to the MCData ID in the corresponding SIP INVITE request, the controlling MCData function:

1) shall generate SIP 200 (OK) response to the SIP INVITE request according to 3GPP TS 24.229 [5];

2) shall include the option tag "timer" in a Require header field;

3) shall include the Session-Expires header field and start supervising the SIP session according to rules and procedures of IETF RFC 4028 [38], "UAS Behavior". The "refresher" parameter in the Session-Expires header field shall be set to "uac";

4) shall include a P-Asserted-Identity header field with the public service identity of the controlling MCData function;

5) shall include a SIP URI for the MCData session identity in the Contact header field identifying the MCData session at the controlling MCData function;

6) shall include the following in the Contact header field:

a) the g.3gpp.mcdata.fd media feature tag;

b) the g.3gpp.icsi-ref media feature tag containing the value of "urn:urn-7:3gpp-service.ims.icsi.mcdata.fd"; and

c) the isfocus media feature tag;

7) shall include Warning header field(s) received in incoming responses to the SIP INVITE request;

8) shall include in the SIP 200 (OK) response an SDP answer to the SDP offer in the incoming SIP INVITE request as specified in the subclause 10.2.5.4.2;

8A) if the SIP INVITE request contains an alert indication set to a value of "true" and this is an unauthorised request for an MCData emergency alert as specified in subclause 6.3.7.2.1, shall include in the SIP 200 (OK) response the warning text set to "149 SIP INFO request pending" in a Warning header field as specified in subclause 4.9;

8B) if the received SIP INVITE request contains an application/vnd.3gpp.mcdata-info+xml MIME body with the <imminentperil-ind> element set to a value of "true" and if the in-progress emergency state of the group is set to a value of "true", shall include in the SIP 200 (OK) response the warning text set to "149 SIP INFO request pending" in a Warning header field as specified in subclause 4.9;

9) shall interact with the media plane as specified in 3GPP TS 24.582 [15] subclause 7.3; and

10) shall send a SIP 200 (OK) response to the inviting MCData client according to 3GPP TS 24.229 [5].

\* \* \* \* \* \* END CHANGE \* \* \* \* \* \*