**3GPP TSG-CT WG1 Meeting #133e-bisC1-220019**

**E-meeting, 17-21 January 2022 (*was C1-220019*)**

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| *CR-Form-v12.1* |
| **CHANGE REQUEST** |
|  |
|  | **24.282** | **CR** | **0273** | **rev** | **-** | **Current version:** | **17.5.0** |  |
|  |
| *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 |  | Radio Access Network |  | Core Network | **X** |

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|  |
| ***Title:***  | Add functionality in CF for new (Rel-17) private emgcy upgrd&downgrd  |
|  |  |
| ***Source to WG:*** | AT&T |
| ***Source to TSG:*** | C1 |
|  |  |
| ***Work item code:*** | eMCData3 |  | ***Date:*** | 23 Dec 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-15 (Release 15)Rel-16 (Release 16)Rel-17 (Release 17)Rel-18 (Release 18)* |
|  |  |
| ***Reason for change:*** | There are several MCData subservices (e.g. SDS using session, SDS using pre-established session, FD), each with separate clauses. Upgrade/downgrade (cancel) of emergency private calls is being added as part of Rel-17, and the sequence of steps is common to all those subservices, so a common procedure is added to be invoked from each service. The current CR addresses only the controlling function, as the other functions already had support added at previous meetings.  |
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| ***Summary of change:*** | Grouped a very common sequence of steps into a new procedure 6.3.7.1.23 for the generation of SIP 200 (OK) response to SIP (re-)INVITE by the controlling MCData function, to be invoked from several other procedures.  |
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| ***Consequences if not approved:*** | Incomplete functionality and needless complexity and increased chance of omission and errors when changes are made.  |
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| ***Clauses affected:*** | 6.3.7.1.19, 6.3.7.1.20, 6.3.7.1.23 (new), 9.2.3.4.4, 9.2.4.4.4, 9.2.5.2.3.3, 9.2.5.2.3.4, 10.2.5.4.4, 20.4.2 |
|  |  |
|  | **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 \* \* \* \* \* \*

##### 6.3.7.1.19 Controlling MCData function receiving a SIP re-INVITE for upgrade to emergency one-to-one communication

In the procedures in this clause:

1) emergency indication in an incoming SIP re-INVITE request refers to the <emergency-ind> element of the application/vnd.3gpp.mcdata-info+xml MIME body; and

2) alert indication in an incoming SIP re-INVITE request refers to the <alert-ind> element of the application/vnd.3gpp.mcdata-info+xml MIME body.

Upon receiving a SIP re-INVITE request with an emergency indication set to a value of "true", the controlling MCData function:

1) shall validate that the received SDP is acceptable by the controlling MCData function and if not, reject the request with a SIP 488 (Not Acceptable Here) response and skip the rest of the steps;

2) shall validate the request as described in clause 6.3.7.1.9, and if invalid, shall skip the rest of the steps;

3) if the SIP re-INVITE request contains an unauthorised request for an MCData emergency one-to-one communication as determined by clause 6.3.7.2.6:

a) shall reject the SIP re-INVITE request by generating a SIP 403 (Forbidden) response and applying the procedure in clause 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;

4) if a Resource-Priority header field is included in the received SIP re-INVITE request and if the Resource-Priority header field is set to the value indicated for emergency communications, shall reject the SIP re-INVITE request with a SIP 403 (Forbidden) response and skip the remaining steps if neither of the following conditions are true:

a) the SIP re-INVITE request contains an authorised request for an MCData emergency communication as determined in step 2 above; or

b) the originating MCData user is in an in-progress emergency private communication state with the targeted MCData user;

5) if the SIP re-INVITE request contains an emergency indication set to a value of "true" and the originating MCData user is not in an in-progress emergency private communication state with the targeted MCData user:

a) shall cache the information that the MCData user is in an in-progress emergency private communication state with the targeted MCData user; and

b) if the SIP re-INVITE request contains an alert indication set to "true" and this is an authorised request for an MCData emergency alert as specified in clause 6.3.7.2.1, shall cache the information that the MCData user has sent an MCData emergency alert to the targeted user; and

6) shall execute the procedure in clause 6.3.7.1.21 in order to send a SIP re-INVITE request towards the MCData user listed in the MIME resource-lists body of received SIP re-INVITE request.

Upon receiving a SIP 200 (OK) response for the sent SIP re-INVITE request and if a SIP response has not yet been sent to the inviting MCData client, the controlling MCData function:

1) shall invoke the procedure in clause 6.3.7.1.23 with the received indication of the applicable MCData subservice, in order to generate a SIP 200 (OK) response to the received SIP re-INVITE request;

2) if the received SIP re-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 clause 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 clause 4.9; and

NOTE: When a SIP 200 (OK) response sent to the originator as a response to a SIP INVITE or a SIP re‑INVITE request that contained authorised request(s) for an MCData emergency one-to-one communication and optionally an MCData emergency alert, the originator will consider a SIP 200 (OK) response populated in this manner as confirmation that its request(s) for an upgrade to an MCData emergency one-to-one communication and optionally an MCData emergency alert were accepted by the controlling function.

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

Upon receiving a SIP ACK to the SIP 200 (OK) response sent towards the inviting MCData client, and the SIP 200 (OK) response was sent with the warning text set to "149 SIP INFO request pending" in a Warning header field as specified in clause 4.9, the controlling MCData function shall follow the procedures in clause 6.3.7.1.10.

##### 6.3.7.1.20 Controlling MCData function receiving a SIP re-INVITE for cancellation of emergency one-to-one communication

In the procedures in this clause:

1) emergency indication in an incoming SIP re-INVITE request refers to the <emergency-ind> element of the application/vnd.3gpp.mcdata-info+xml MIME body; and

2) alert indication in an incoming SIP re-INVITE request refers to the <alert-ind> element of the application/vnd.3gpp.mcdata-info+xml MIME body.

Upon receiving a SIP re-INVITE request with an emergency indication set to a value of "false", the controlling MCPTT function:

1) shall validate the request as described in clause 6.3.7.1.9, and if invalid, shall skip the rest of the steps;

2) if the SIP re-INVITE request contains an unauthorised request for an MCData emergency private (one-to-one) communication cancellation, as determined by clause 6.3.7.2.3:

a) shall generate a SIP 403 (Forbidden) response to reject the SIP re-INVITE request;

b) shall include in the SIP 403 (Forbidden) response an application/vnd.3gpp.mcdata-info+xml MIME body as specified in annex D.1, with an <emergency-ind> element set to a value of "true";

c) if the SIP re-INVITE request contains an alert indication set to "false" and this is an unauthorised request for an MCData emergency alert cancellation as specified in clause 6.3.7.2.2, shall include in the SIP 403 (Forbidden) response an application/vnd.3gpp.mcdata-info+xml MIME body with an <alert-ind> element set to "true; and

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

4) shall reject the SIP re-INVITE request with a SIP 403 (Forbidden) response if a Resource-Priority header field is included in the received SIP re-INVITE request set to the value configured for emergency communications, and skip the remaining steps;

5) if the SIP re-INVITE request contains an authorised request for an MCData emergency private communication cancellation as determined by clause 6.3.7.2.3:

a) shall clear the cache of the MCData ID of the originator of the MCData emergency private communication that is no longer in an in-progress emergency private communication state with the targeted MCData user; and

b) if the SIP re-INVITE request contains an alert indication set to "false" and this is an authorised request for an MCData emergency alert cancellation meeting the conditions specified in clause 6.3.7.2.2:

i) if the received SIP re-INVITE request contains an <originated-by> element in the application/vnd.3gpp.mcdata-info+xml MIME body, shall clear the cache of the MCData ID of MCData user identified by the <originated-by> element as having an outstanding MCData emergency alert; and

ii) if the received SIP re-INVITE request does not contain an <originated-by> element in the application/vnd.3gpp.mcdata-info+xml MIME body, clear the cache of the MCData ID of the sender of the SIP re-INVITE request, as having an outstanding MCData emergency alert; and

6) shall execute the procedure in clause 6.3.7.1.22 in order to generate a SIP re-INVITE request and send it towards the MCData user listed in the MIME resource-lists body of the received SIP re-INVITE request.

Upon receiving a SIP 200 (OK) response for the sent SIP re-INVITE request and if a SIP response has not yet been sent to the inviting MCData client, the controlling MCData function:

1) shall invoke the procedure in clause 6.3.7.1.23 with the received indication of the applicable MCData subservice, in order to generate a SIP 200 (OK) response to the received SIP re-INVITE request;

2) if the received SIP re-INVITE request contains an alert indication set to a value of "false" and this is an unauthorised request for an MCData emergency alert cancellation as specified in clause 6.3.7.2.2, 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 clause 4.9; and

NOTE: When a SIP 200 (OK) response sent to the originator as a response to a SIP re-INVITE request that contained authorised request(s) for an MCData emergency private communication cancellation and optionally an MCData emergency alert cancellation, the originator will consider a SIP 200 (OK) response populated in this manner as confirmation that its request(s) for cancellation of an MCData emergency private communication and optionally an MCData emergency alert were accepted by the controlling function.

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

Upon receiving a SIP ACK to the SIP 200 (OK) response sent towards the inviting MCData client, and the SIP 200 (OK) response was sent with the warning text set to "149 SIP INFO request pending" in a Warning header field as specified in clause 4.9, the controlling MCData function shall follow the procedures in clause 6.3.7.1.10.

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

##### 6.3.7.1.23 Controlling MCData function generates a SIP 200 (OK) response

This procedure is invoked by other procedures in the controlling MCData function with an indication of the MCData subservice for which it is to be applied (Short Data Service using media plane or using session, File Distribution or IP Connectivity). The procedure is initiated by the controlling MCData function as the result of receiving a SIP INVITE or a SIP re-INVITE request.

The controlling MCData function:

1) shall generate a SIP 200 (OK) response to the SIP INVITE or SIP re-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 one of the the following in the Contact header field:

a) if the indicated MCData subservice is Short Data Service using media plane or using session:

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

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

iii) the isfocus media feature tag;

b) if the indicated MCData subservice is File Distribution:

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

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

iii) the isfocus media feature tag; or

c) if the indicated MCData subservice is IP Connectivity:

i) the g.3gpp.mcdata.ipconn media feature tag;

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

iii) the isfocus media feature tag;

7) in response to the SDP offer in the incoming SIP INVITE or SIP re-INVITE request, shall include in the SIP 200 (OK) response an SDP answer specified as follows:

a) as in clause 9.2.3.4.2, if the MCData subservice is Short Data Service using media plane; or

b) as in clause 9.2.4.4.2, if the indicated MCData subservice is Short Data Service using session; or

c) as in clause 10.2.5.4.2, if the indicated MCData subservice is File Distribution; or

d) as in clause 20.1.2, if the indicated MCData subservice is IP Connectivity;

8) shall include Warning header field(s) received in incoming responses to the SIP INVITE or SIP re-INVITE request; and

9) shall interact with the media plane as specified in 3GPP TS 24.582 [15] clause 6.3.1.

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

##### 9.2.3.4.4 Terminating controlling MCData function procedures

In the procedures in this clause:

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 standalone SDS over media plane", 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;

1A) 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 clause 4.9 "Warning header field" and shall skip the rest of this procedure;

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";

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

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

6) 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" 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 clause 4.9, and skip the rest of the steps below; and

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 clause 9.2.3.4.3; and

c) shall interact with the media plane as specified in 3GPP TS 24.582 [15] clause 6.3.1;

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 "group-sds":

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 clause 6.3.3, and shall continue with the remaining steps if the procedures in clause 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 clause 4.9 and shall not continue with the rest of the steps;

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 clause 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 clause 4.x 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 clause 4.9 and shall not continue with the rest of the steps;

f) if the MCData server group SDS procedures in clause 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 clause 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 clause 4.9, and shall not continue with the rest of the steps in this clause;

g) the originating user identified by the MCData ID is not affiliated to the group identity contained in the SIP INVITE request, as specified in clause 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 clause 4.9, and skip the rest of the steps below;

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

i) if the procedures in clause 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 clause 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 clause 9.2.3.4.3; and

k) shall interact with the media plane as specified in 3GPP TS 24.582 [15] clause 6.3.1.

Upon receiving a SIP 200 (OK) response for a SIP INVITE request as specified in clause 9.2.3.4.3 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 invoke the procedure in clause 6.3.7.1.23 with an indication that the applicable MCData subservice is Short Data Service using media, in order to generate a SIP 200 (OK) response to the received SIP INVITE request; and

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

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

##### 9.2.4.4.4 Terminating controlling MCData function procedures

In the procedures in this clause:

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 clause 6.3.7.2.6, or for originating an MCData imminent peril group communication as determined by clause 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 clause 6.3.7.1.9;

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

a) shall reject the SIP INVITE request with a SIP 403 (Forbidden) response as specified in clause 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 clause 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 clause 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 clause 9.2.4.4.3; and

c) shall interact with the media plane as specified in 3GPP TS 24.582 [15] clause 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 clause 6.3.3, and shall continue with the remaining steps if the procedures in clause 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 clause 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 clause 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 clause 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 clause 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 clause 4.9 and shall not continue with the rest of the steps;

f) if the MCData server group SDS procedures in clause 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 clause 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 clause 4.9, and shall not continue with the rest of the steps in this clause;

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 clause 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 clause 4.9, and skip the rest of the steps below;

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

i) if the procedures in clause 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 clause 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 clause 9.2.4.4.3; and

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

Upon receiving a SIP 200 (OK) response for a SIP INVITE request as specified in clause 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 invoke the procedure in clause 6.3.7.1.23 with an indication that the applicable MCData subservice is Short Data Service using session, in order to generate a SIP 200 (OK) response to the received SIP INVITE request according to 3GPP TS 24.229 [5];

2) if the received 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 clause 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 clause 4.9;

3) 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 clause 4.9; and

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

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

###### 9.2.5.2.3.3 Controlling MCData function receiving a request for upgrade to emergency one‑to‑one SDS communication

The controlling MCData function shall execute the procedure in clause 6.3.7.1.19, with an indication that the applicable MCData subservice is Short Data Service using session.

###### 9.2.5.2.3.4 Controlling MCData function receiving a request for cancellation of emergency one‑to‑one SDS communication

The controlling MCData function shall execute the procedure in clause 6.3.7.1.20, with an indication that the applicable MCData subservice is Short Data Service using session.

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

##### 10.2.5.4.4 Terminating controlling MCData function procedures

In the procedures in this clause:

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 clause 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 clause 6.3.7.2.6, or for originating an MCData imminent peril group communication as determined by clause 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 clause 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 clause. 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 clause 6.3.7.1.9;

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

a) shall reject the SIP INVITE request with a SIP 403 (Forbidden) response as specified in clause 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 clause 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 clause 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 clause 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 clause 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 clause 4.9, and shall not continue with the rest of the steps in this clause; 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 clause 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 clause 10.2.5.4.3; and

shall interact with the media plane as specified in 3GPP TS 24.582 [15] clause 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 clause 6.3.3, and shall continue with the remaining steps if the procedures in clause 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 clause 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 clause 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 clause 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 clause 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 clause 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 clause 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 clause 4.9, and shall not continue with the rest of the steps in this clause;

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 clause 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 clause 4.9, and shall not continue with the rest of the steps in this clause; 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 clause 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 clause 4.9, and shall not continue with the rest of the steps in this clause.

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 clause 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 clause 4.9, and skip the rest of the steps below;

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

i) if the procedures in clause 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 clause 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 clause 10.2.5.4.3; and

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

Upon receiving a SIP 200 (OK) response for a SIP INVITE request as specified in clause 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 invoke the procedure in clause 6.3.7.1.23 with an indication that the applicable MCData subservice is File Distribution, in order to generate a SIP 200 (OK) response to the received SIP INVITE request according to 3GPP TS 24.229 [5];

2A) if the received 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 clause 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 clause 4.9;

2B) 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 clause 4.9; and

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

Upon receiving a SIP 200 (OK) response for a SIP INVITE request as specified in clause 10.2.5.4.3 and, if the warning text set to "232 communication is stored for later delivery" is received in a Warning header field as specified in clause 4.9, the controlling MCData function:

1) shall invoke the procedure in clause 6.3.7.1.23 with an indication that the applicable MCData subservice is File Distribution, in order to generate a SIP 200 (OK) response to the received SIP INVITE request according to 3GPP TS 24.229 [5];

2A) 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 clause 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 clause 4.9;

2B) 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 clause 4.9; and

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

NOTE 4: When requested to release the associated media plane resources and to tear down the MCData session, the controlling MCData function stores the INVITE session information that is established between the participating function and the controlling function for later delivery.

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

### 20.4.2 Terminating procedures

In the procedures in this clause:

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) 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 IP Connectivity session", the controlling MCData function:

1) if unable to process the request 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;

2) 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.ipconn 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.ipconn";

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

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

5) 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-ipconn" 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 "227 unable to determine targeted user for one-to-one IP Connectivity" in a Warning header field as specified in clause 4.9, and skip the rest of the steps below; and

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 clause 20.4.1; and

c) can interact with the media plane, in case routing or transmission control is necessary.

Upon receiving a SIP 200 (OK) response for a SIP INVITE request as specified in clause 20.4.1 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 invoke the procedure in clause 6.3.7.1.23 with an indication that the applicable MCData subservice is IP Connectivity, in order to generate a SIP 200 (OK) response to the received SIP INVITE request according to 3GPP TS 24.229 [5]; and

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

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