**3GPP TSG-CT WG1 Meeting #128-eC1-212365**

**Electronic meeting, 25 February – 5 March 2021**

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| *CR-Form-v12.1* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  | **24.282** | **CR** | **0219** | **rev** | **1** | **Current version:** | **17.2.0** |  |
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| *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 |  |

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| ***Title:*** | Limiting the number of MCData emergency group participations per FA | | | | | | | | | |
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| ***Source to WG:*** | Nokia, Nokia Shanghai Bell | | | | | | | | | |
| ***Source to TSG:*** | C1 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | eMONASTERY2 | | | | |  | ***Date:*** | | | 2021-04-01 |
|  |  | | | |  | |  | | |  |
| ***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 can be 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)* | |
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| ***Reason for change:*** | | Stage-1 requirement [R-5.4.2-007a] applies to all MC services.  *"Depending on meaningful elements of a functional alias the MCX Service shall be able to restrict or allow MCX Users to be involved in more than one MCX Service Emergency Group Communication at a time."*  Stage 2 TS 23.379 specifies how Functional Aliases can be supported in emergency/imminent-peril group calls, but limiting the number of emergency group calls for a specific functional alias is only specified for MCPTT.  At stage 3 the use of FA as the role of a calling party in MCData is already supported. However, existing stage 3 specs do not support limiting the number of emergency group calls for a specific calling functional alias.  The same functionality is already implemented in stage-3 for MCPTT and MCVideo. | | | | | | | | |
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| ***Summary of change:*** | | 1)Inclusion of maximum number of simultaneous emergency group calls control for a specific FA .  2)Remove unclear step skipping | | | | | | | | |
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| ***Consequences if not approved:*** | | Stage 1 requirements on limiting the number of MCData emergency group calls for a specific functional alias are not supported. | | | | | | | | |
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| ***Clauses affected:*** | | 9.2.4.2.4, 10.2.5.2.4 | | | | | | | | |
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|  | | **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:*** | |  | | | | | | | | |

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

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

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

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

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

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

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

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

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

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

4) may display to the MCData user the MCData ID of the inviting MCData user and the type of SDS request;

4A) if the SIP INVITE request contains an application/vnd.3gpp.mcdata-info+xml MIME body with the <mcdatainfo> element containing the <emergency-ind> element set to a value of "true":

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

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

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

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

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

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

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

4B) if the SIP INVITE request contains an application/vnd.3gpp.mcdata-info+xml MIME body with the <mcdatainfo> element containing the <imminentperil-ind> element set to a value of "true":

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

On receipt of an indication from the media plane of the successful download of the file and if the received FD SIGNALLING PAYLOAD message contained an FD disposition request type IE requesting a file download completed update indication, then, the MCData client:

1) shall follow the procedures described in subclause 12.2.1.1.