**3GPP TSG-CT1 Meeting #134-e *C1-221692***

**Online, , 17th Feb 2022 - 25th Feb 2022**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.2* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **24.379** | **CR** | **0791** | **rev** | 1 | **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)*.* | | | | | | | | |
|  | | | | | | | | |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Proposed change affects:*** | UICC apps |  | ME |  | Radio Access Network |  | Core Network | **X** |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | |
| ***Title:*** | Reference fix and CR implemtation issues | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Nokia, Nokia Shanghai Bell | | | | | | | | | |
| ***Source to TSG:*** | C1 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | MCProtoc17 | | | | |  | ***Date:*** | | | 2022-02-10 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **F** |  | | | | | ***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-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18) Rel-19 (Release 19)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | A number of issues were detected in clauses used by emergency related procedures, mainly caused by problematic implementation of CRs | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | 1) Fix reference to wrong procedure  2)Fix normative text merged in a Note. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Normative text stays as informative due to wrong CR implementation. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 9.1, 11.1.1.4.2 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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:*** | |  | | | | | | | | |

1st change

## 9.1 General

Clause 9.2 contains the procedures for explicit affiliation at the MCPTT client, the MCPTT server serving the MCPTT user and the MCPTT server owning the MCPTT group.

Clause 9.2 contains the procedures for implicit affiliation at the MCPTT server serving the MCPTT user and the MCPTT server owning the MCPTT group.

Clause 9.3 describes the coding used for explicit affiliation.

The procedures for implicit affiliation in this clause are triggered at the MCPTT server serving the MCPTT user in the following circumstances:

- on receipt of a SIP INVITE request or a SIP REFER request from an MCPTT client to join an MCPTT chat group, where the MCPTT client is not already affiliated to the MCPTT group;

- on receipt of a SIP INVITE request or a SIP REFER request from an MCPTT client when attempting to initiate an MCPTT emergency group call or MCPTT imminent peril group call and the MCPTT client is not already affiliated to the MCPTT group;

- on receipt of a SIP MESSAGE request from an MCPTT client when initiating an MCPTT emergency alert targeted to an MCPTT group and the MCPTT client is not already affiliated to the MCPTT group; and

- on receipt of a SIP REGISTER request for service authorisation (as described in clause 7.3.2) or SIP PUBLISH request for service authorisation and service settings (as described in clause 7.3.3), as determined by configuration in the MCPTT user profile document as specified in 3GPP TS 24.484 [50].

The procedures for implicit affiliation in this clause are triggered at the MCPTT server owning the MCPTT group in the following circumstances:

- on receipt of a SIP INVITE request from the MCPTT server serving the MCPTT user where an MCPTT user wants to join an MCPTT chat group and the MCPTT client is not already affiliated to the MCPTT group;

- on receipt of a SIP INVITE request from the MCPTT server serving the MCPTT user where an MCPTT user initiates an MCPTT emergency group call or MCPTT imminent peril group call and the MCPTT client is not already affiliated to the MCPTT group; and

- on receipt of a SIP MESSAGE request from the MCPTT server serving the MCPTT user when the MCPTT user initiates an MCPTT emergency alert targeted to an MCPTT group and the MCPTT client is not already affiliated to the MCPTT group.

2nd change

##### 11.1.1.4.2 Terminating procedures

In the procedures in this clause:

1) <emergency–ind> refers to the <emergency-ind> element of the application/vnd.3gpp.mcptt-info+xml MIME body;

2) <alert–ind> refers to the <alert-ind> element of the application/vnd.3gpp.mcptt-info+xml MIME body; and

3) <session-type> refers to the <session-type> element of an application/vnd.3gpp.mcptt-info+xml MIME body.

Upon receipt of:

- a "SIP INVITE request for controlling MCPTT function of a private call"; or

- a "SIP INVITE request for controlling MCPTT function of a first-to-answer call";

the controlling MCPTT function:

1) if the <session-type> in the SIP INVITE request is set to "private":

a) shall check whether the public service identity contained in the Request-URI is allocated for private call and perform the actions specified in clause 6.3.7.1 if it is not allocated and skip the rest of the steps; and

b) shall perform actions to verify the MCPTT ID of the inviting MCPTT user in the <mcptt-calling-user-id> element of the application/vnd.3gpp.mcptt-info+xml MIME body of the SIP INVITE request, and authorise the request according to local policy, and if it is not authorised the controlling MCPTT function shall return a SIP 403 (Forbidden) response with the warning text as specified in "Warning header field" and skip the rest of the steps;

2) if the <session-type> in the SIP INVITE request is set to "first-to-answer" shall check whether the public service identity contained in the Request-URI is allocated for first-to-answer call and perform the actions specified in clause 6.3.7.1 if it is not allocated and skip the rest of the steps;

3) if the incoming SIP INVITE request does not contain an application/resource-lists MIME body shall reject the SIP INVITE request with a SIP 403 (Forbidden) response including warning text set to "145 unable to determine called party" in a Warning header field as specified in clause 4.4, and shall not continue with the rest of the steps;

4) if the <session-type> is set to "private" and the application/resource-lists MIME body contains more than one <entry> element, shall reject the "SIP INVITE request for originating participating MCPTT function" with a SIP 403 (Forbidden) response including warning text set to "145 unable to determine called party" in a Warning header field as specified in clause 4.4, and shall not continue with the rest of the steps;

5) shall validate that the received SDP offer includes at least one media stream for which the media parameters and at least one codec or media format is acceptable by the controlling MCPTT function and if not, reject the request with a SIP 488 (Not Acceptable Here) response and skip the rest of the steps;

6) if received SIP INVITE request includes an <emergency-ind>, shall validate the request as described in clause 6.3.3.1.17;

7) if the received SIP INVITE request contains an unauthorised request for an MCPTT emergency private call as determined by clause 6.3.3.1.13.2:

a) shall reject the SIP INVITE request with a SIP 403 (Forbidden) response as specified in clause 6.3.3.1.14; and

b) shall send the SIP 403 (Forbidden) response as specified in 3GPP TS 24.229 [4] and skip the rest of the steps;

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

a) the SIP INVITE request does not contain an authorised request for an MCPTT emergency call as determined in step 7 above; or

b) the originating MCPTT user is not in an in-progress emergency private call state with the targeted MCPTT user;

8a) if the <session-type> in the received SIP INVITE request is set to "private" and if the SIP INVITE request contained an application/vnd.3gpp.mcptt-info+xml MIME body with the <mcpttinfo> element containing the <mcptt-Params> element with the <call-to-functional-alias-ind> element set to "true":

a) shall identify the MCPTT ID(s) of the MCPTT user(s) that have activated the received called functional alias in the MIME resource-lists body of the SIP INVITE request by performing the actions specified in clause 9A.2.2.2.8;

b) if unable to determine the MCPTT ID(s) of the MCPTT user(s) that have activated the received called functional alias in the MIME resource-lists body of the SIP INVITE by performing the actions specified in clause 9A.2.2.2.8, shall reject the "SIP INVITE request for controlling MCPTT function of a private call" with a SIP 403 (Forbidden) response including warning text set to "145 unable to determine called party" in a Warning header field as specified in clause 4.4, and shall not continue with the rest of the steps; and

c) upon receipt of a SIP NOTIFY request with application/pidf+xml MIME body containing the MCPTT ID(s) of the MCPTT user(s) that have activated the called functional alias as specified in clause 9A.2.2.3.8, shall return a SIP 300 (Multiple Choices) response to the "SIP INVITE request for controlling MCPTT function of a private call" populated according to 3GPP TS 24.229 [4], IETF RFC 3261 [24] with:

A) a Contact header field containing a SIP URI for the MCPTT session identity; and

B) an application/vnd.3gpp.mcptt-info MIME body with a <mcptt-request-uri> element set to the MCPTT ID of one MCPTT user from the listed MCPTT user(s) in the application/pidf+xml MIME body of the SIP NOTIFY request that have activated the identified called functional alias and shall not continue with the rest of the steps in this clause;

NOTE 1: The controlling MCPTT function determines the appropriate MCPTT ID to be selected based on implementation-specific selection criteria when the functional alias used as a target of the private call request is simultaneously active for multiple MCPTT users.

9) if:

a) the received SIP INVITE request contains an emergency indication set to a value of "true";

b) the originating MCPTT user is not in an in-progress emergency private call state with the targeted MCPTT user; and

c) the <session-type> in the SIP INVITE request is set to "private";

then:

a) shall cache the information that the MCPTT user has initiated an MCPTT emergency private call to the targeted user; and

b) shall cache the information that the MCPTT user is in an in-progress emergency private call state with the targeted MCPTT user;

10) shall perform actions as described in clause 6.3.3.2.2;

11) shall allocate an MCPTT session identity for the MCPTT session;

12) if the <session-type> in the received SIP INVITE request is set to "first-to-answer" and if the SIP INVITE request contained an application/vnd.3gpp.mcptt-info+xml MIME body with the <mcpttinfo> element containing the <mcptt-Params> element with the <call-to-functional-alias-ind> element set to "true":

a) shall identify the MCPTT ID(s) of the MCPTT user(s) that have activated the received called functional alias in the MIME resource-lists body of the SIP INVITE request by performing the actions specified in clause 9A.2.2.2.8;

b) if unable to determine the MCPTT ID(s) of the MCPTT user(s) that have activated the received called functional alias in the MIME resource-lists body of the SIP INVITE by performing the actions specified in clause 9A.2.2.2.8, shall reject the "SIP INVITE request for controlling MCPTT function of a private call" with a SIP 403 (Forbidden) response including warning text set to "145 unable to determine called party" in a Warning header field as specified in clause 4.4, and shall not continue with the rest of the steps;

c) shall copy the URI of the functional alias to be called listed in the MIME resource-lists body of the incoming SIP INVITE request, into the <called-functional-alias-URI> element in the application/vnd.3gpp.mcptt-info+xml MIME body; and

d) upon receipt of a SIP NOTIFY request with application/pidf+xml MIME body containing the MCPTT ID(s) of the MCPTT user(s) that have activated as specified in clause 9A.2.2.3.8, shall invite the MCPTT user(s) listed in the application/pidf+xml MIME body of the SIP NOTIFY request as specified in clause 11.1.1.4.1;

otherwise shall invite the MCPTT user(s) listed in the MIME resource-lists body of received SIP INVITE request as specified in clause 11.1.1.4.1; and

13) if the <session-type> in the received SIP INVITE request is set to "private", shall invite the MCPTT user listed in the MIME resource-lists body of received SIP INVITE request as specified in clause 11.1.1.4.1.

Upon receiving a SIP 180 (Ringing) response and if the SIP 180 (Ringing) response or the SIP final response has not yet been sent to the inviting MCPTT client, the controlling MCPTT function:

1) if the SIP 180 (Ringing) response is associated with a SIP INVITE that contained a <session-type> set to "private", shall generate a SIP 180 (Ringing) response to the SIP INVITE request and send the SIP 180 (Ringing) response towards the inviting MCPTT client according to 3GPP TS 24.229 [4]; and

2) if the SIP 180 (Ringing) response is associated with a SIP INVITE that contained a <session-type> set to "first-to-answer", and no other SIP 180 (Ringing) responses have been received that are associated with a SIP INVITE that contained a <session-type> set to "first-to-answer", shall generate a SIP 183 (Session Progress) response to the SIP INVITE request and send the SIP 183 (Session Progress) response towards the inviting MCPTT client according to 3GPP TS 24.229 [4].

Upon receiving a SIP 183 (Session Progress) response to the SIP INVITE request specified in clause 11.1.1.4.1 containing a P-Answer-State header field with the value "Unconfirmed" as specified in IETF RFC 4964 [34], if the <session-type> in the SIP INVITE request is set to "private", the controlling MCPTT function supports media buffering and the SIP final response is not yet sent to the inviting MCPTT client, the controlling MCPTT function:

1) shall generate a SIP 200 (OK) response to SIP INVITE request as specified in the clause 6.3.3.2.3.2;

2) 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 clause 6.3.3.2.1;

3) shall include a P-Answer-State header field with the value "Unconfirmed";

4) if the received SIP INVITE request contains an alert indication set to a value of "true" and this is an unauthorised request for an MCPTT emergency alert as specified in clause 6.3.3.1.13.1, 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 4.4;

NOTE 2: This is the case when the MCPTT user's request for an MCPTT emergency private call was granted but the request for the MCPTT emergency alert was denied.

5) shall interact with the media plane as specified in 3GPP TS 24.380 [5]; and

6) shall send the SIP 200 (OK) response towards the inviting MCPTT client according to 3GPP TS 24.229 [4].

Upon receiving a SIP 200 (OK) response for the SIP INVITE request, the SIP dialog was established as a result of receiving a SIP INVITE request with a <session-type> element set to the value of "private" and the SIP final response has not yet been sent to the inviting MCPTT client, the controlling MCPTT function:

1) shall generate a SIP 200 (OK) response to the SIP INVITE request as specified in the clause 6.3.3.2.3.2 before continuing with the rest of the steps;

2) 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 clause 6.3.3.2.1;

3) if the received SIP INVITE request contains an alert indication set to a value of "true" and this is an unauthorised request for an MCPTT emergency alert as specified in clause 6.3.3.1.13.1, 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 4.4;

NOTE 3: This is the case when the MCPTT user's request for an MCPTT emergency private call was granted but the request for the MCPTT emergency alert was denied.

4) shall interact with the media plane as specified in 3GPP TS 24.380 [5]; and

NOTE 4: Resulting media plane processing is completed before the next step is performed.

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

Upon receiving a SIP 200 (OK) response for the SIP INVITE request, the SIP dialog was established as a result of receiving a SIP INVITE request with a <session-type> element set to the value of "first-to-answer" and the SIP final response has not yet been sent to the inviting MCPTT client the controlling MCPTT function:

1) shall generate a SIP 200 (OK) response to the SIP INVITE request as specified in the clause 6.3.3.2.3.2 before continuing with the rest of the steps;

2) 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 clause 6.3.3.2.1;

3) the received SIP INVITE request contains an emergency indication set to a value of "true":

a) shall cache the information that the MCPTT user has initiated an MCPTT emergency private call to the targeted user; and

b) shall cache the information that the MCPTT user is in an in-progress emergency private call state with the targeted MCPTT user;

4) if the received SIP INVITE request contains an alert indication set to a value of "true" and this is an unauthorised request for an MCPTT emergency alert as specified in clause 6.3.3.1.13.1, 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 4.4;

NOTE 5: This is the case when the MCPTT user's request for an MCPTT emergency private call was granted but the request for the MCPTT emergency alert was denied.

5) shall interact with the media plane as specified in 3GPP TS 24.380 [5];

NOTE 6: Resulting media plane processing is completed before the next step is performed.

6) shall send a SIP 200 (OK) response towards the inviting MCPTT client according to 3GPP TS 24.229 [4];

7) for all other MCPTT clients that were invited due to the controlling MCPTT function receiving a SIP INVITE request with a <session-type> element set to the value of "first-to-answer":

a) shall send a SIP BYE request to release a SIP dialog that has been established since the SIP 200 (OK) response was sent in step6) by following the procedures in clause 6.3.3.1.5 with the clarification that the SIP BYE request contain an application/vnd.3gpp.mcptt-info+xml MIME body including a <release-reason> element set to a value of "not selected for call";

b) shall generate and send a SIP CANCEL request according SIP IETF RFC 3261 [24], to cancel a SIP dialog that has not yet been established since the SIP 200 (OK) response was sent in step 6);

c) on receiving a SIP 200 (OK) to a SIP CANCEL request, shall wait to receive a SIP 487 (Request Terminated) to the original SIP INVITE request sent to the client; and

d) if a SIP 487 (Request Terminated) from the MCPTT client is not received within a time determined by the MCPTT server implementation, shall send a SIP BYE towards the MCPTT client by following the procedures in clause 6.3.3.1.5 with the clarification that the SIP BYE request contain an application/vnd.3gpp.mcptt-info+xml MIME body including a <release-reason> element set to a value of "not selected for call"; and

8) if not successful in cancelling or terminating SIP dialogs in step 7) above, may repeat the SIP CANCEL and SIP BYE requests.

Upon receiving a SIP ACK to the SIP 200 (OK) response sent towards the inviting MCPTT client, where the SIP 200 (OK) response was sent with a Warning header field as specified in clause 4.4 with the warning text containing the mcptt-warn-code set to "149", the controlling MCPTT function shall follow the procedures in clause 6.3.3.1.18.

The controlling MCPTT function shall forward any other SIP response that does not contain SDP, including any MIME bodies contained therein, along the signalling path to the originating network according to 3GPP TS 24.229 [4].

Upon receiving a SIP BYE request from the originating MCPTT client containing an application/vnd.3gpp.mcptt-info+xml MIME body containing a <release-reason> element set to a value of "authentication of the MIKEY-SAKE I\_MESSAGE failed", the controlling MCPTT function:

1) if the received "SIP INVITE request for controlling MCPTT function of a first-to-answer call" contains an emergency indication set to a value of "true":

a) shall delete from cache the information that the MCPTT user has initiated an MCPTT emergency private call to the targeted user; and

b) shall delete from cache the information that the MCPTT user is in an in-progress emergency private call state with the targeted MCPTT user; and

2) shall follow the procedures in clause 11.1.3.3.1.

End of changes