**3GPP TSG-CT WG1 Meeting #127bis-eC1-210232**

**Electronic meeting, 25-29 January 2021**

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| *CR-Form-v12.0* |
| **CHANGE REQUEST** |
|  |
|  | **24.379** | **CR** | **0668** | **rev** | **1** | **Current version:** | **17.1.0** |  |
|  |
| *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:***  | Call control of FAs allowed in a first-to-answer call |
|  |  |
| ***Source to WG:*** | Nokia, Nokia Shanghai Bell |
| ***Source to TSG:*** | C1 |
|  |  |
| ***Work item code:*** | eMONASTERY2 |  | ***Date:*** | 2021-01-11 |
|  |  |  |  |  |
| ***Category:*** | **B** |  | ***Release:*** | *Rel-17* |
|  | *Use one of the following categories:****F*** *(correction)****A*** *(mirror corresponding to a change in an earlier release)****B*** *(addition of feature),* ***C*** *(functional modification of feature)****D*** *(editorial modification)*Detailed explanations of the above categories canbe found in 3GPP [TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm). | *Use one of the following releases:Rel-8 (Release 8)Rel-9 (Release 9)Rel-10 (Release 10)Rel-11 (Release 11)Rel-12 (Release 12)**Rel-13 (Release 13)Rel-14 (Release 14)Rel-15 (Release 15)Rel-16 (Release 16)Rel-17 (Release 17)* |
|  |  |
| ***Reason for change:*** | Stage 2 requirements on support of functional aliases (FA) in first-to-answer private calls dictate that specific restrictions may apply on calls from an FA to an FA. In particular:- The MCPTT server shall check whether the calling MCPTT client is allowed to use the functional alias of the called MCPTT client to setup a private call.- The MCPTT server shall check whether the called MCPTT client is allowed to receive a private call from the calling MCPTT client using a functional alias.Stage3 does not support that an MC service user that has activated an FAshall only have private communications with those MC service users that have activated specific FAs which are configured, whereas private communications with other MC service users shall not be allowed. For this purpose, two lists are introduced, one including the FAs that a user that has activated an FA can call and a second one including the FAs of users from which a call can be received. |
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| ***Summary of change:*** | 1) Introduction of new warning texts2) Update Originating and Terminating participating procedures to capture the specific case of limiting the FAs from and to which a first-to-answer call is allowed. |
|  |  |
| ***Consequences if not approved:*** | All FAs in incoming and outgoing first-to-answer calls are allowed, which contradicts stage 2 requirements |
|  |  |
| ***Clauses affected:*** | 4.4.2, 11.1.1.3.1.1, 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:*** |  |

### 4.4.2 Warning texts

The text string included in a Warning header field consists of an explanatory text preceded by a 3-digit text code, according to the following format in Table 4.4.2-1.

Table 4.4.2-1 ABNF for the Warning text

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

mcptt-warn-code = DIGIT DIGIT DIGIT

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

Table 4.4.2-2 defines the warning texts that are defined for the Warning header field when a Warning header field is included in a response to a SIP INVITE request as specified in subclause 4.4.1.

Table 4.4.2-2: Warning texts defined for the Warning header field

|  |  |  |
| --- | --- | --- |
| Code | Explanatory text | Description |
| 100 | function not allowed due to <detailed reason> | The function is not allowed to this user.The <detailed reason> will be either "group definition", "access policy", "local policy", "user authorisation" or "pre-established session not supported", or can be a free text string. |
| 101 | service authorisation failed | The service authorisation of the MCPTT ID against the IMPU failed at the MCPTT server. |
| 102 | too many simultaneous affiliations | The MCPTT user already has N2 maximum number of simultaneous affiliations. |
| 103 | maximum simultaneous MCPTT group calls reached | The number of maximum simultaneous MCPTT group calls supported for the MCPTT user has been exceeded. |
| 104 | isfocus not assigned | A controlling MCPTT function has not been assigned to the MCPTT session. |
| 105 | subscription not allowed in a broadcast group call | Subscription to the conference event package rejected during a group call initiated as a broadcast group call. |
| 106 | user not authorised to join chat group | The MCPTT user is not authorised to join this chat group. |
| 107 | user not authorised to make private calls | The MCPTT user is not authorised to make private calls. |
| 108 | user not authorised to make chat group calls | The MCPTT user is not authorised to make chat group calls. |
| 109 | user not authorised to make prearranged group calls | The MCPTT user is not authorised to make group calls to a prearranged group. |
| 110 | user declined the call invitation | The MCPTT user declined to accept the call. |
| 111 | group call proceeded without all required group members | The required members of the group did not respond within the acknowledged call time, but the call still went ahead. |
| 112 | group call abandoned due to required group members not part of the group session | The group call was abandoned, as the required members of the group did not respond within the acknowledged call time. |
| 113 | group document does not exist | The group document requested from the group management server does not exist. |
| 114 | unable to retrieve group document | The group document exists on the group management server but the MCPTT server was unable to retrieve it. |
| 115 | group is disabled | The group has the <disabled> element set to "true" in the group management server. |
| 116 | user is not part of the MCPTT group | The group exists on the group management server but the requesting user is not part of this group. |
| 117 | the group identity indicated in the request is a prearranged group | The group id that is indicated in the request is for a prearranged group, but did not match the request from the MCPTT user. |
| 118 | the group identity indicated in the request is a chat group | The group id that is indicated in the request is for a chat group, but did not match the request from the MCPTT user. |
| 119 | user is not authorised to initiate the group call | The MCPTT user identified by the MCPTT ID is not authorised to initiate the group call. |
| 120 | user is not affiliated to this group | The MCPTT user is not affiliated to the group. |
| 121 | user is not authorised to join the group call | The MCPTT user identified by the MCPTT ID is not authorised to join the group call. |
| 122 | too many participants | The group call has reached its maximum number of participants. |
| 123 | MCPTT session already exists | Inform the MCPTT user that the group call is currently ongoing.  |
| 124 | maximum number of private calls reached | The maximum number of private calls allowed at the MCPTT server for the MCPTT user has been reached. |
| 125 | user not authorised to make private call with automatic commencement | The MCPTT user is not authorised to make a private call with automatic commencement. |
| 126 | user not authorised to make private call with manual commencement | The MCPTT user is not authorised to make a private call with manual commencement. |
| 127 | user not authorised to be called in private call | The called MCPTT user is not allowed to be part of a private call. |
| 128 | isfocus already assigned | The MCPTT server owning an MCPTT group received a SIP INVITE request destined to the MCPTT group from another MCPTT server already assigned as the controlling MCPTT function and the MCPTT server owning the MCPTT group does not support mutual aid or supports trusted mutual aid but does not authorise trusted mutual aid. |
| 136 | authentication of the MIKEY-SAKKE I\_MESSAGE failed | The MCPTT client's application of the procedures of 3GPP TS 33.180 [78] to authenticate the received I\_MESSAGE fails.  |
| 137 | the indicated group call does not exist | The participating MCPTT function cannot find an ongoing group session associated with the received MCPTT session identity. |
| 138 | subscription of conference events not allowed | The controlling MCPTT function could not allow the MCPTT user to subscribe to the conference event package. |
| 139 | integrity protection check failed | The integrity protection of an XML MIME body failed. |
| 140 | unable to decrypt XML content | The XML content cannot be decrypted. |
| 141 | user unknown to the participating function | The participating function is unable to associate the public user identity with an MCPTT ID. |
| 142 | unable to determine the controlling function | The participating function is unable to determine the controlling function for the group call or private call. |
| 143 | not authorised to force auto answer | The calling user is not authorised to force auto answer on the called user. |
| 144 | user not authorised to call this particular user | The calling user is not authorised to call this particular called user. |
| 145 | unable to determine called party | The participating function was unable to determine the called party from the information received in the SIP request. |
| 146 | T-PF unable to determine the service settings for the called user | The service settings have not been uploaded by the terminating client to the terminating participating server. |
| 147 | user is authorized to initiate a temporary group call | The non-controlling MCPTT function has authorized a request from the controlling MCPTT function to authorize a user to initiate an temporary group session. |
| 148 | group is regrouped | The group hosted by a non-controlling function is part of a temporary group session as the result of the group regroup function. |
| 149 | SIP-INFO request pending | The MCPTT client needs to wait for a SIP-INFO request with specific content, before taking further action. |
| 150 | invalid combinations of data received in MIME body | The MCPTT client included invalid combinations of data in the SIP request. |
| 151 | user not authorised to make a private call call-back request | The MCPTT user is not authorised to make a private call call-back request. |
| 152 | user not authorised to make a private call call-back cancel request | The MCPTT user is not authorised to make a private call call-back cancel request. |
| 153 | user not authorised to call any of the users requested in the first-to-answer call | All users that were invited in the first-to-answer call cannot be involved in a private call with the inviting user. |
| 154 | user not authorised to make ambient listening call | The MCPTT user is not authorised to make an ambient listening call. |
| 155 | user not authorised to change user's selected group | The MCPTT user is not authorised to change the selected group of the targeted user. |
| 156 | user not authorised to originate a first-to-answer call | The MCPTT user is not authorised to make a first-to-answer call. |
| 157 | user not authorised to request a remotely initiated group call | The MCPTT user is not authorised to request a remotely initiated group call. |
| 158 | user not authorised to request a remotely initiated private call | The MCPTT user is not authorised to request a remotely initiated private call. |
| 159 | user not authorised to be called by this originating user | The called user is not authorised to receive a call by this originating user. |
| 160 | user not authorised to request creation of a regroup | The user is not authorised to request creation of a regroup. |
| 161 | user not authorised to request removal of a regroup | The user is not authorised to request removal of a regroup. |
| 162 | group call abandoned due to required group members not affiliated | The group call was abandoned as the required number of affiliated group members is not met or some required members are not affiliated. |
| 163 | the group identity indicated in the request does not exist | The server determines that the group identity indicates a user or group regroup based on a preconfigured group that does not exist. |
| 164 | maximum number of service authorizations reached | The number of maximum simultaneous service authorizations for the MCPTT user has been reached. |
| 165 | group ID for regroup already in use | The group ID proposed by the client for the user/group regroup based on a preconfigured group is already in use. |
| 166 | constituent group is in an emergency call state | The proposed constituent group cannot be added to the temporary group because there is a call on the constituent group that is in an emergency state. |
| 167 | call is not allowed on the preconfigured group | Calls are not allowed on this group that is administratively designated for preconfigured group use only. |
| 168 | alert is not allowed on the preconfigured group | Alerts are not allowed on this group that is administratively designated for preconfigured group use only. |
| 169 | user is not authorised to remove regroup in an emergency state | The MCPTT user is not authorised to remove a regroup that is in an in-progress emergency state. |
| aaa | functional alias not allowed to call this particular functional alias | The calling user is not authorised to call this particular functional alias by using this activated functional alias |
| qqq | functional alias not allowed to be called from this functional alias | The called functional alias is not authorised to receive a call from the originating user using this particular Functional Alias |

\*\*\*\*\* Next change \*\*\*\*\*

###### 11.1.1.3.1.1 On-demand private call and first-to-answer call

Upon receipt of a "SIP INVITE request for originating participating MCPTT function" containing an application/vnd.3gpp.mcptt-info+xml MIME body with the <session-type> element set to a value of "private" or "first-to-answer", the participating MCPTT function:

1) may reject the SIP INVITE request depending on the value of the Resource-Priority header field if the Resource-Priority header field is included in the received SIP INVITE request according to rules and procedures specified in IETF RFC 4412 [29] and shall not continue with the rest of the steps;

2) if unable to process the request due to a lack of resources or a risk of congestion exists, may reject the "SIP INVITE request for originating participating MCPTT function" with a SIP 500 (Server Internal Error) response. The participating MCPTT function may include a Retry-After header field to the SIP 500 (Server Internal Error) response as specified in IETF RFC 3261 [24] and shall not continue with the rest of the steps;

NOTE 1: If the received SIP INVITE request contains an emergency indication set to a value of "true", the participating MCPTT function can choose to accept the request.

NOTE 2: If the received SIP INVITE request contains an emergency indication set to a value of "true", the participating MCPTT function can choose to allow an exception to the limit on the number of private calls and accept the request.

3) shall determine the MCPTT ID of the calling user from public user identity in the P-Asserted-Identity header field of the SIP INVITE request;

NOTE 3: The MCPTT ID of the calling user is bound to the public user identity at the time of service authorisation, as documented in subclause 7.3.

4) if the participating MCPTT function cannot find a binding between the public user identity and an MCPTT ID or if the validity period of an existing binding has expired, then the participating MCPTT function shall reject the SIP INVITE request with a SIP 404 (Not Found) response with the warning text set to "141 user unknown to the participating function" in a Warning header field as specified in subclause 4.4, and shall not continue with any of the remaining steps;

5) shall:

a) if the <session-type> is set to "private", determine that the call is a private call; and

b) if the <session-type> is set to "first-to-answer", determine that the call is a first-to-answer-call;

6) if the call is a:

a) private call, determine the public service identity of the controlling MCPTT function for the private call service associated with the originating user's MCPTT ID identity; or

b) first-to-answer, determine the public service identity of the controlling MCPTT function for the first-to-answer call service associated with the originating user's MCPTT ID identity;

7) if the participating MCPTT function is unable to identify the controlling MCPTT function for the private call service or first-to-answer call service associated with the originating user's MCPTT ID identity, it shall reject the SIP INVITE request with a SIP 404 (Not Found) response with the warning text "142 unable to determine the controlling function" in a Warning header field as specified in subclause 4.4, and shall not continue with any of the remaining steps;

8) if the incoming SIP INVITE request does not contain an application/resource-lists MIME body, 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 subclause 4.4, and shall not continue with the rest of the steps;

9) if the call is a private call and the incoming SIP INVITE request contains an application/resource-lists MIME body with 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 subclause 4.4, and shall not continue with the rest of the steps;

10) if the <allow-private-call> element of the <ruleset> element is not present in the MCPTT user profile document on the participating MCPTT function or is present with the value "false" (see the MCPTT user profile document in 3GPP TS 24.484 [50]), indicating that the user identified by the MCPTT ID is not authorised to initiate private calls, shall reject the "SIP INVITE request for originating participating MCPTT function" with a SIP 403 (Forbidden) response, with warning text set to "107 user not authorised to make private calls" in a Warning header field as specified in subclause 4.4, and shall not continue with the rest of the steps;

11) if the call is a private call and:

a) if the received SIP INVITE request includes an Answer-Mode header field as specified in IETF RFC 5373 [18] with the value "Auto" and the <allow-automatic-commencement> element of the <ruleset> element is not present in the MCPTT user profile document on the participating MCPTT function or is present with the value "false" (see the MCPTT user profile document in 3GPP TS 24.484 [50]) indicating that the user identified by the MCPTT ID is not authorised to initiate private call with automatic commencement, shall reject the "SIP INVITE request for originating participating MCPTT function" with a SIP 403 (Forbidden) response including warning text set to "125 user not authorised to make private call with automatic commencement" in a Warning header field as specified in subclause 4.4, and shall not continue with the rest of the steps;

b) if the received SIP INVITE request includes an Answer-Mode header field as specified in IETF RFC 5373 [18] with the value "Manual" and the <allow-manual-commencement> element of the <ruleset> element is not present in the MCPTT user profile document on the participating MCPTT function or is present with the value "false" (see the MCPTT user profile document in 3GPP TS 24.484 [50]), indicating that the user identified by the MCPTT ID is not authorised to initiate private call with manual commencement, shall reject the "SIP INVITE request for originating participating MCPTT function" with a SIP 403 (Forbidden) response including warning text set to "126 user not authorised to make private call with manual commencement" in a Warning header field as specified in subclause 4.4, and shall not continue with the rest of the steps;

c) if the <PrivateCall> element exists in the MCPTT user profile document with one more <entry> elements (see the MCPTT user profile document in 3GPP TS 24.484 [50]) and:

i) if the "uri" attribute of the <entry> element of the application/resource-lists MIME body does not match with one of the <entry> elements of the <PrivateCall> element of the MCPTT user profile document (see the MCPTT user profile document in 3GPP TS 24.484 [50]); and

ii) if configuration is not set in the MCPTT user profile document (see the MCPTT user profile document in 3GPP TS 24.484 [50]) that allows the MCPTT user to make a private call to users not contained within the <entry> elements of the <PrivateCall> element;

then:

i) shall reject the "SIP INVITE request for originating participating MCPTT function" with a SIP 403 (Forbidden) response including warning text set to "144 user not authorised to call this particular user" in a Warning header field as specified in subclause 4.4 and shall not continue with the rest of the steps;

12) if the call is a first-to-answer call and if the <PrivateCall> element exists in the MCPTT user profile document with one or more <entry> elements (see the MCPTT user profile document in 3GPP TS 24.484 [50]) and:

a) if:

i) the "uri" attribute of each and every <entry> element of the application/resource-lists MIME body does not match with any of the <entry> elements of the <PrivateCall> element of the MCPTT user profile document (see the MCPTT user profile document in 3GPP TS 24.484 [50]); and

ii) if configuration is not set in the MCPTT user profile document (see the MCPTT user profile document in 3GPP TS 24.484 [50]) that allows the MCPTT user to make a private call to users not contained within the <entry> elements of the <PrivateCall> element;

then:

i) shall reject the "SIP INVITE request for originating participating MCPTT function" with a SIP 403 (Forbidden) response including warning text set to "153 user not authorised to call any of the users requested in the first-to-answer call" in a Warning header field as specified in subclause 4.4 and shall not continue with the rest of the steps;

12a) if the call is a first-to-answer call, the received SIP INVITE request contains a <functional-alias-URI> element of the application/vnd.3gpp.mcptt-info+xml MIME body and with the <mcpttinfo> element containing the <mcptt-Params> element with the <call-to-functional-alias-ind> element set to "true", and the <ListOfAllowedFAsToCall> element exists with one or more <entry> elements within the entry of the FunctionalAliasList element corresponding to the calling <functional-alias-URI> in the MCPTT user profile document (see the MCPTT user profile document in 3GPP TS 24.484 [50]) and:

i) if the "uri" attribute of the <entry> element of the application/resource-lists MIME body does not match with one of the <entry> elements of the <ListOfAllowedFAsToCall> element of the entry within the FunctionalAliasList element corresponding to the calling <functional-alias-URI> of the MCPTT user profile document (see the MCPTT user profile document in 3GPP TS 24.484 [50]);

then:

i) shall reject the "SIP INVITE request for originating participating MCPTT function" with a SIP 403 (Forbidden) response including warning text set to "aaa functional alias not allowed to call this particular functional alias" in a Warning header field as specified in subclause 4.4 and shall not continue with the rest of the steps;

13) if the call is a first-to-answer call and:

a) if the <allow-request-first-to-answer-call> element of the <ruleset> element is not present in the MCPTT user profile document (see the MCPTT user profile document in 3GPP TS 24.484 [50]) or is set to a value of "false", (see the MCPTT user profile document in 3GPP TS 24.484 [50]);

then:

a) shall reject the "SIP INVITE request for originating participating MCPTT function" with a SIP 403 (Forbidden) response including warning text set to "156 user not authorised to originate a first-to-answer call" in a Warning header field as specified in subclause 4.4 and shall not continue with the rest of the steps;

14) shall validate the media parameters and if the MCPTT speech codec is not offered in the "SIP INVITE request for originating participating MCPTT function" shall reject the request with a SIP 488 (Not Acceptable Here) response. Otherwise, continue with the rest of the steps;

15) shall generate a SIP INVITE request as specified in subclause 6.3.2.1.3 with the following clarifications:

a) if the conditions in step 12) above were executed and the participating MCPTT function determined that the "uri" attribute of only one of the <entry> elements of the application/resource-lists MIME body matched with an <entry> element of the <PrivateCall> element of the MCPTT user profile document (see the MCPTT user profile document in 3GPP TS 24.484 [50]) then the <session-type> in the application/vnd.3gpp.mcptt-info+xml MIME body of the SIP INVITE request generated in subclause 6.3.2.1.3 is set to "private"; and

b) if the conditions in step 12) above were executed, then only the <entry> element(s) of the application/resource-lists MIME body that have a "uri" attribute that matched with an <entry> elements of the <PrivateCall> element of the MCPTT user profile document (see the MCPTT user profile document in 3GPP TS 24.484 [50]) are included in the application/resource-lists MIME body in the SIP INVITE request generated in subclause 6.3.2.1.3;

16) shall set the Request-URI to the public service identity of the controlling MCPTT function hosting the private call service or first-to-answer call service as determined by step 6);

17) shall set the <mcptt-calling-user-id> element in an application/vnd.3gpp.mcptt-info+xml MIME body of the SIP INVITE request to the MCPTT ID of the calling user;

18) if the call is a private call and:

a) if a Priv-Answer-Mode header field specified in IETF RFC 5373 [18] was received in the incoming SIP INVITE request with a value of "Manual", shall not include a Priv-Answer-Mode header field in the outgoing SIP INVITE request;

b) if the <allow-force-auto-answer> element of the <ruleset> element is not present in the MCPTT user profile document on the participating MCPTT function or is present with the value "false" (see the MCPTT user profile document in 3GPP TS 24.484 [50]), and the Priv-Answer-Mode header field specified in IETF RFC 5373 [18] was received in the incoming SIP INVITE request with a value of "Auto", shall reject the "SIP INVITE request for originating participating MCPTT function" with a SIP 403 (Forbidden) response including warning text set to "143 not authorised to force auto answer" in a Warning header field as specified in subclause 4.4, and shall not continue with the rest of the steps;

c) if the <allow-force-auto-answer> element of the <ruleset> element is present in the MCPTT user profile document with the value "true" (see the MCPTT user profile document in 3GPP TS 24.484 [50]) on the participating MCPTT function, and the Priv-Answer-Mode header field specified in IETF RFC 5373 [18] was received in the incoming SIP INVITE request with a value of "Auto", shall include the Priv-Answer-Mode header field set to a value of "Auto" in the outgoing SIP INVITE request;

d) if a Priv-Answer-Mode header field containing the value of "Auto" has not been included in the outgoing SIP INVITE request as specified in step 17) above and the incoming "SIP INVITE request for originating participating MCPTT function" contained an Answer-Mode header field as specified in IETF RFC 5373 [18], then shall populate the Answer-Mode header field of the outgoing SIP INVITE request with the contents of the Answer-Mode header field from the incoming "SIP INVITE request for originating participating MCPTT function";

19) shall include in the SIP INVITE request an SDP offer based on the SDP offer in the received "SIP INVITE request for originating participating MCPTT function", as specified in subclause 6.3.2.1.1.1;

19a) if the received SIP INVITE request contains a <functional-alias-URI> element of the application/vnd.3gpp.mcptt-info+xml MIME body, then shall check if the status of the functional alias is activated for the MCPTT ID. If the functional alias status is activated, then the participating MCPTT function shall set the <functional-alias-URI> element of the application/vnd.3gpp.mcptt-info+xml MIME body in the outgoing SIP INVITE request to the received value, otherwise shall not include a <functional-alias-URI> element;

NOTE 4: The participating MCPTT server learns the functional alias state for an MCPTT ID from procedures specified in subclause 9A.2.2.2.7.

20) shall include a Resource-Priority header field according to rules and procedures of 3GPP TS 24.229 [4] set to the value indicated in the Resource-Priority header field if included in the SIP INVITE request from the MCPTT client;

21) if, according to subclause 6.4, the SIP INVITE request is regarded as being received with an implicit request to grant the floor to the originating MCPTT client, the participating MCPTT function:

 if:

a) the incoming SIP INVITE request contained an application/vnd.3gpp.mcptt-location-info+xml MIME body with a <Report> element included in the <location-info> root element; and

b) the <allow-location-info-when-talking> element of the <ruleset> element of the MCPTT user profile document identified by the MCPTT ID of the calling MCPTT user (see the MCPTT user profile document in 3GPP TS 24.484 [50]) is set to a value of "true";

 then shall copy the application/vnd.3gpp.mcptt-location-info+xml MIME body from the received SIP INVITE request into the outgoing SIP INVITE request;

 otherwise:

 if:

a) the participating MCPTT function has available the location of the originating MCPTT client; and

b) the <allow-location-info-when-talking> element of the <ruleset> element of the MCPTT user profile document identified by the MCPTT ID of the calling MCPTT user (see the MCPTT user profile document in 3GPP TS 24.484 [50]) is set to a value of "true";

 then shall include an application/vnd.3gpp.mcptt-location-info+xml MIME body with a <Report> element included in the <location-info> root element; and

22) shall forward the SIP INVITE request, according to 3GPP TS 24.229 [4].

Upon receiving a SIP 180 (Ringing) response, the participating MCPTT function:

1) shall generate a SIP 180 (Ringing) response to the SIP INVITE request as specified in the subclause 6.3.2.1.5.1;

2) shall include the P-Asserted-Identity header field as received in the incoming SIP 180 (Ringing) response;

3) shall include Warning header field(s) received in the incoming SIP 180 (Ringing) response; and

4) shall forward the SIP 180 (Ringing) response to the MCPTT client according to 3GPP TS 24.229 [4].

Upon receiving a SIP 200 (OK) response, the participating MCPTT function:

1) shall generate a SIP 200 (OK) response as specified in the subclause 6.3.2.1.5.2;

2) shall include in the SIP 200 (OK) response an SDP answer as specified in the subclause 6.3.2.1.2.1;

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

4) shall include the P-Asserted-Identity header field received in the incoming SIP 200 (OK) response into the outgoing SIP 200 (OK) response;

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

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

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

8) shall start the SIP session timer according to rules and procedures of IETF RFC 4028 [7].

The participating 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].

\*\*\*\*\* Next change \*\*\*\*\*

###### 11.1.1.3.1.2 Private call and first-to-answer call initiation using pre-established session

Upon receipt of a "SIP REFER request for a pre-established session", with:

1) the Refer-To header field containing a Content-ID ("cid") Uniform Resource Locator (URL) as specified in IETF RFC 2392 [62] that points to an application/resource-lists MIME body as specified in IETF RFC 5366 [20] containing one or more <entry> element(s) with a "uri" attribute containing a SIP URI set to the MCPTT ID of the called user(s);

2) an hname body" parameter in the headers portion of the SIP URI specified above containing an application/vnd.3gpp.mcptt-info MIME body with the <session-type> element set to "private" or "first-to-answer"; and

3) a Content-ID header field set to the "cid" URL;

the participating 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 participating MCPTT function may include a Retry-After header field to the SIP 500 (Server Internal Error) response as specified in IETF RFC 3261 [24] and shall not continue with the rest of the steps;

NOTE 1: If the application/vnd.3gpp.mcptt-info MIME body included in the SIP REFER request as described at the top of the present subclause contains an <emergency-ind> element or <imminentperil-ind> element set to a value of "true", and this is an authorised request for originating a priority call as determined by subclause 6.3.2.1.8.1, the participating MCPTT function can according to local policy choose to accept the request.

2) shall determine the MCPTT ID of the calling user from public user identity in the P-Asserted-Identity header field of the SIP REFER request;

3) if the participating MCPTT function cannot find a binding between the public user identity and an MCPTT ID or if the validity period of an existing binding has expired, then the participating MCPTT function shall reject the SIP REFER request with a SIP 404 (Not Found) response with the warning text set to "141 user unknown to the participating function" in a Warning header field as specified in subclause 4.4, and shall not continue with any of the remaining steps;

4) if the received SIP REFER request does not contain an application/resource-lists MIME body referenced by a "cid" URL in the Refer-To header field, shall reject the "SIP REFER request for pre-established session" 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 subclause 4.4, and shall not continue with the rest of the steps;

5) if the received SIP REFER request contains an application/resource-lists MIME body referenced by a "cid" URL in the Refer-To header field with more than one <entry> element each with an application/vnd.3gpp.mcptt-info MIME body with the <session-type> element:

a) not set to "first-to-answer", shall reject the "SIP REFER request for pre-established session" 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 subclause 4.4, and shall not continue with any of the remaining steps; or

b) set to "first-to-answer", determine that the call is a first-to-answer call;

6) if the received SIP REFER request contains an application/resource-lists MIME body referenced by a "cid" URL in the Refer-To header field with only one <entry> element with an application/vnd.3gpp.mcptt-info MIME body with the <session-type> element:

a) not set to "private", shall reject the "SIP REFER request for pre-established session" 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 subclause 4.4, and shall not continue with any of the remaining steps; or

b) set to "private", determine that the call is a private call;

7) if the call is a:

a) private call, shall determine the public service identity of the controlling MCPTT function for the private call service associated with the originating user's MCPTT ID; or

b) first-to-answer call, shall determine the public service identity of the controlling MCPTT function for the first-to-answer call service associated with the originating user's MCPTT ID;

NOTE 2: How the participating MCPTT server discovers the public service identity of the controlling MCPTT function associated with the private call service or first-to-answer service of the calling user is out of scope of the current document.

8) if the participating MCPTT function is unable to identify the controlling MCPTT function for the private call service or first-to-answer call service associated with the originating user's MCPTT ID, it shall reject the REFER request with a SIP 404 (Not Found) response with the warning text "142 unable to determine the controlling function" in a Warning header field as specified in subclause 4.4, and shall not continue with any of the remaining steps;

9) if the <allow-private-call> element of the <ruleset> element is not present in the MCPTT user profile document (see the MCPTT user profile document in 3GPP TS 24.484 [50]) on the participating MCPTT function or is present with the value "false", indicating that the user identified by the MCPTT ID is not authorised to initiate private calls, shall reject the "SIP REFER request for pre-established session" with a SIP 403 (Forbidden) response to the SIP INVITE request, with warning text set to "107 user not authorised to make private calls" in a Warning header field as specified in subclause 4.4;

10) if the call is a private call:

a) if the received SIP REFER request includes an Answer-Mode header field as specified in IETF RFC 5373 [18] set to "Auto" contained in the headers portion of the SIP URI present in the application/resource-lists MIME body referenced by a "cid" URL in the Refer-To header field, and the <allow-automatic-commencement> element of the <ruleset> element is not present in the MCPTT user profile document (see the MCPTT user profile document in 3GPP TS 24.484 [50]) on the participating MCPTT function or is present with the value "false" (indicating that the user identified by the MCPTT ID is not authorised to initiate private call with automatic commencement), shall reject the "SIP REFER request for pre-established session" with a SIP 403 (Forbidden) response including warning text set to "125 user not authorised to make private call with automatic commencement" in a Warning header field as specified in subclause 4.4, and shall not continue with the rest of the steps;

b) if the received SIP REFER request includes an Answer-Mode header field as specified in IETF RFC 5373 [18] set to "Manual" contained in the headers portion of the SIP URI present in the application/resource-lists MIME body referenced by a "cid" URL in the Refer-To header field, and the <allow-manual-commencement> element of the <ruleset> element is not present in the MCPTT user profile document (see the MCPTT user profile document in 3GPP TS 24.484 [50]) on the participating MCPTT function or is present with the value "false" (indicating that the user identified by the MCPTT ID is not authorised to initiate private call with manual commencement), shall reject the "SIP REFER request for pre-established session" with a SIP 403 (Forbidden) response including warning text set to "126 user not authorised to make private call with manual commencement" in a Warning header field as specified in subclause 4.4 and shall not continue with the rest of the steps;

c) if the <allow-force-auto-answer> element of the <ruleset> element is not present in the MCPTT user profile document (see the MCPTT user profile document in 3GPP TS 24.484 [50]) on the participating MCPTT function or is present with the value "false", and the SIP REFER request contained a Priv-Answer-Mode header field as specified in IETF RFC 5373 [18] set to "Auto" in the headers portion of the SIP URI in the application/resource-lists MIME body referenced by a "cid" URL in the Refer-To header field, shall reject the "SIP INVITE request for originating participating MCPTT function" with a SIP 403 (Forbidden) response including warning text set to "143 not authorised to force auto answer" in a Warning header field as specified in subclause 4.4, and shall not continue with the rest of the steps; and

d) if the <PrivateCall> element exists in the MCPTT user profile document with one more <entry> elements (see the MCPTT user profile document in 3GPP TS 24.484 [50]) and:

i) if the SIP URI in the application/resource-lists MIME body referenced by a "cid" URL in the Refer-To header field not match with one of the <entry> elements of the <PrivateCall> element of the MCPTT user profile document (see the MCPTT user profile document in 3GPP TS 24.484 [50]); and

ii) if configuration is not set in the MCPTT user profile document (see the MCPTT user profile document in 3GPP TS 24.484 [50]) that allows the MCPTT user to make a private call to users not contained within the <entry> elements of the <PrivateCall> element;

then:

i) shall reject the "SIP INVITE request for originating participating MCPTT function" with a SIP 403 (Forbidden) response including warning text set to "144 user not authorised to call this particular user" in a Warning header field as specified in subclause 4.4 and shall not continue with the rest of the steps;

11) if the call is a first-to-answer call and if the <PrivateCall> element exists in the MCPTT user profile document with one or more <entry> elements (see the MCPTT user profile document in 3GPP TS 24.484 [50]) and:

a) the "uri" attribute of each and every <entry> element of the application/resource-lists MIME body referenced by a "cid" URL in the Refer-To header field does not match with any of the <entry> elements of the <PrivateCall> element of the MCPTT user profile document (see the MCPTT user profile document in 3GPP TS 24.484 [50]); and

b) if configuration is not set in the MCPTT user profile document (see the MCPTT user profile document in 3GPP TS 24.484 [50]) that allows the MCPTT user to make a private call to users not contained within the <entry> elements of the <PrivateCall> element;

then:

a) shall reject the "SIP INVITE request for originating participating MCPTT function" with a SIP 403 (Forbidden) response including warning text set to "153 user not authorised to call any of the users requested in the first-to-answer call" in a Warning header field as specified in subclause 4.4 and shall not continue with the rest of the steps;

11a) if the call is a first-to-answer call, the received SIP REFER request contains a <functional-alias-URI> element of the application/vnd.3gpp.mcptt-info+xml MIME body and the <mcpttinfo> element containing the <mcptt-Params> element with the <call-to-functional-alias-ind> element set to "true", the <ListOfAllowedFAsToCall> element exists with one or more <entry> elements within the entry of the FunctionalAliasList element corresponding to the calling <functional-alias-URI> in the MCPTT user profile document (see the MCPTT user profile document in 3GPP TS 24.484 [50]) and:

i) if the "uri" attribute of the <entry> element of the application/resource-lists MIME body referenced by a "cid" URL in the Refer-To header field does not match with one of the <entry> elements of the <ListOfAllowedFAsToCall> element of the entry within the FunctionalAliasList element corresponding to the calling <functional-alias-URI> of the MCPTT user profile document (see the MCPTT user profile document in 3GPP TS 24.484 [50]);

then:

i) shall reject the "SIP INVITE request for originating participating MCPTT function" with a SIP 403 (Forbidden) response including warning text set to "aaa functional alias not allowed to call this particular functional alias" in a Warning header field as specified in subclause 4.4 and shall not continue with the rest of the steps;

12) if the call is a first-to-answer call and:

a) if the <allow-request-first-to-answer-call> element of the <ruleset> element is not present in the MCPTT user profile document (see the MCPTT user profile document in 3GPP TS 24.484 [50]) or is set to a value of "false", (see the MCPTT user profile document in 3GPP TS 24.484 [50]);

then:

a) shall reject the "SIP INVITE request for originating participating MCPTT function" with a SIP 403 (Forbidden) response including warning text set to "156 user not authorised to originate a first-to-answer call" in a Warning header field as specified in subclause 4.4 and shall not continue with the rest of the steps;

13) if the "SIP REFER request for a pre-established session" contained a Refer-Sub header field containing "false" value and a Supported header field containing "norefersub" value, shall handle the SIP REFER request as specified in 3GPP TS 24.229 [4], IETF RFC 3515 [25] as updated by IETF RFC 6665 [26], and IETF RFC 4488 [22] without establishing an implicit subscription;

14) shall generate a final SIP 200 (OK) response to the "SIP REFER request for a pre-established session" according to 3GPP TS 24.229 [4];

NOTE 3: In accordance with IETF RFC 4488 [22], the participating MCPTT function inserts the Refer-Sub header field containing the value "false" in the SIP 200 (OK) response to the SIP REFER request to indicate that it has not created an implicit subscription.

15) shall send the response to the "SIP REFER request for a pre-established session" towards the MCPTT client according to 3GPP TS 24.229 [4];

16) shall generate a SIP INVITE request as specified in subclause 6.3.2.1.4 with the following clarifications:

a) if the conditions in step 11) above were executed and the participating MCPTT function determined that the "uri" attribute of only one of the <entry> elements of the application/resource-lists MIME body matched with an <entry> element of the <PrivateCall> element of the MCPTT user profile document (see the MCPTT user profile document in 3GPP TS 24.484 [50]) then the <session-type> in the application/vnd.3gpp.mcptt-info+xml MIME body of the SIP INVITE request generated in subclause 6.3.2.1.4 is set to "private"; and

b) if the conditions in step 11) above were executed, then only the <entry> element(s) of the application/resource-lists MIME body that have a "uri" attribute that matched with an <entry> elements of the <PrivateCall> element of the MCPTT user profile document (see the MCPTT user profile document in 3GPP TS 24.484 [50]) are included in the application/resource-lists MIME body in the SIP INVITE request generated in subclause 6.3.2.1.4;

17) shall set the Request-URI of the SIP INVITE request to the public service identity of the controlling MCPTT function hosting the private call service or first-to-answer call service for the calling MCPTT user as determined above in step 7);

18) if the call is a private call:

a) if the SIP REFER request contained a Priv-Answer-Mode header field as specified in IETF RFC 5373 [18] set to "Manual" in the headers portion of the SIP URI in the application/resource-lists MIME body referenced by a "cid" URL in the Refer-To header field, shall copy the Priv-Answer-Mode header field from the incoming SIP REFER request to the outgoing SIP INVITE request;

b) if the <allow-force-auto-answer> element of the <ruleset> element is present in the MCPTT user profile document with the value "true" (see the MCPTT user profile document in 3GPP TS 24.484 [50]) on the participating MCPTT function, and the Priv-Answer-Mode header field specified in IETF RFC 5373 [18] was received in the headers portion of the SIP URI in the application/resource-lists MIME body referenced by a "cid" URL in the Refer-To header field, with a value set to "Auto", shall copy the Priv-Answer-Mode header field to the outgoing SIP INVITE request; and

c) if a Priv-Answer-Mode header field containing the value of "Auto" has not been copied to the outgoing SIP INVITE request as specified in step 16) above, and the incoming SIP REFER request contained an Answer-Mode header field in the headers portion of the SIP URI in the application/resource-lists referenced by a "cid" URL in the Refer-To header field, then copy the Answer-Mode header field to the outgoing SIP INVITE request;

19) if the received SIP REFER request contained a Resource-Priority header field, shall include in the outgoing SIP INVITE request a Resource-Priority header field according to rules and procedures of 3GPP TS 24.229 [4] set to the value indicated in the Resource-Priority header field of the received SIP REFER request;

NOTE 4: The participating MCPTT function will leave verification of the Resource-Priority header field to the controlling MCPTT function.

19a) if the call is a private call and if the received SIP REFER request contains a <functional-alias-URI> element of the application/vnd.3gpp.mcptt-info+xml MIME body, then shall check if the status of the functional alias is activated for the MCPTT ID. If the functional alias status is activated, then the participating MCPTT function shall set the <functional-alias-URI> element of the application/vnd.3gpp.mcptt-info+xml MIME body in the outgoing SIP INVITE request to the received value, otherwise shall not include a <functional-alias-URI> element;

19b) if, according to subclause 6.4, the SIP REFER request is regarded as being received with an implicit request to grant the floor to the initiating MCPTT client:

 if:

a) the incoming SIP REFER request contained an application/vnd.3gpp.mcptt-location-info+xml MIME body with a <Report> element included in the <location-info> root element; and

b) the <allow-location-info-when-talking> element of the <ruleset> element of the MCPTT user profile document identified by the MCPTT ID of the calling MCPTT user (see the MCPTT user profile document in 3GPP TS 24.484 [50]) is set to a value of "true";

 then shall copy the application/vnd.3gpp.mcptt-location-info+xml MIME body from the received SIP REFER request into the outgoing SIP INVITE request;

 otherwise:

 if:

a) the participating MCPTT function has available the location of the initiating MCPTT client; and

b) the <allow-location-info-when-talking> element of the <ruleset> element of the MCPTT user profile document identified by the MCPTT ID of the calling MCPTT user (see the MCPTT user profile document in 3GPP TS 24.484 [50]) is set to a value of "true";

 then shall include an application/vnd.3gpp.mcptt-location-info+xml MIME body with a <Report> element included in the <location-info> root element; and

20) shall forward the SIP INVITE request according to 3GPP TS 24.229 [4].

Upon receiving SIP provisional responses for the SIP INVITE request the participating MCPTT function:

1) shall discard the received SIP responses without forwarding them.

Upon receiving a SIP 200 (OK) response for the SIP INVITE request the participating MCPTT function:

1) if:

a) the received SIP 2xx response was in response to a request for an MCPTT private call; or

b) the received SIP 2xx response was in response to a SIP INVITE request for a first-to-answer call which did not include an a=key-mgmt "mikey" attribute value containing a MIKEY-SAKKE I\_MESSAGE in the SDP answer;

then:

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

2) if the received SIP 2xx response was in response to a request for an MCPTT emergency private call and does not contain a Warning header field as specified in subclause 4.4 with the warning text containing the mcptt-warn-code set to "149":

a) shall generate a SIP re-INVITE request to be sent towards the MCPTT client within the pre-established session as specified in subclause 6.3.2.1.8.6;

b) shall send the SIP re-INVITE request towards the MCPTT client within the pre-established session according to 3GPP TS 24.229 [4]; and

c) if the received SIP 2xx response was in response to a request for a first-to-answer call, upon receipt of a SIP 2xx response to the SIP re-INVITE, shall interact with the media plane as specified in 3GPP TS 24.380 [5]; and

3) if the received SIP 2xx response was in response to a SIP INVITE request for a first-to-answer call which was not a request for an MCPTT emergency private call and contains an SDP answer including an a=key-mgmt "mikey" attribute value containing a MIKEY-SAKKE I\_MESSAGE, the participating MCPTT function:

a) shall generate a SIP re-INVITE request as specified in subclause 6.3.2.1.8.7;

b) shall send the SIP re-INVITE request towards the originating MCPTT client according to 3GPP TS 24.229 [4]; and

c) upon receipt of a SIP 2xx response to the SIP re-INVITE, shall interact with the media plane as specified in 3GPP TS 24.380 [5].

Upon receiving a SIP INFO request from the controlling MCPTT function within the dialog of the SIP INVITE request for an MCPTT emergency private call, the participating MCPTT function shall:

1) shall send a SIP 200 (OK) response to the SIP INFO request to the controlling MCPTT function as specified in 3GPP TS 24.229 [4];

2) shall generate a SIP re-INVITE request to be sent towards the MCPTT client within the pre-established session as specified in subclause 6.3.2.1.8.6; and

3) shall send the SIP re-INVITE request the MCPTT client according to 3GPP TS 24.229 [4].

Upon receipt of a SIP 4xx, 5xx or 6xx response to the above SIP INVITE request in step 20) the participating MCPTT function:

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

\*\*\*\*\* Next change \*\*\*\*\*

##### 11.1.1.4.2 Terminating procedures

In the procedures in this subclause:

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 subclause 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 subclause 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 subclause 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 subclause 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 subclause 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 subclause 6.3.3.1.13.2:

a) shall reject the SIP INVITE request with a SIP 403 (Forbidden) response as specified in subclause 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 4 above; or

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

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) if 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 subclause 6.3.3.2.2;

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

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 functional alias by performing the actions specified in subclause 9A.2.2.2.8; and

b) upon receipt of a SIP NOTIFY request generated as specified in subclause 9A.2.2.3.8, for each of MCPTT user(s) listed in the application/pidf+xml MIME body of the SIP NOTIFY request (see the MCPTT user profile document in 3GPP TS 24.484 [50])

i) shall check if the <ListOfAllowedFAsToBeCalledFrom> element with one or more <entry> elements exists within the FunctionalAliasList element entry corresponding to the called functional alias in the MCPTT user profile document and

B) if the <functional-alias-URI> element of the application/vnd.3gpp.mcptt-info+xml MIME body of the incoming SIP INVITE request does not match with one of the <entry> elements of the <ListOfAllowedFAsToBeCalledFrom> element of the entry within the FunctionalAliasList element corresponding to the called functional alias of the MCPTT user profile document (see the MCPTT user profile document in 3GPP TS 24.484 [50]), shall skip this MCPTT user;

otherwise shall invite the MCPTT user as specified in subclause 11.1.1.4.1.

If no MCPTT user is allowed, it shall reject the SIP INVITE request with a SIP 403 (Forbidden) response including warning text set to "qqq functional alias not allowed to be called from this functional alias" in a Warning header field as specified in subclause 4.4 and shall not continue with the rest of the steps;

 otherwise shall invite the MCPTT user(s) listed in the MIME resource-lists body of received SIP INVITE request as specified in subclause 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 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 subclause 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 subclause 6.3.3.2.2;

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 subclause 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 subclause 4.4;

NOTE 1: 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 2: 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 subclause 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 subclause 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 subclause 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 subclause 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.

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

NOTE 4: 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 step 5) by following the procedures in subclause 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 5);

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 subclause 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 6) 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 subclause 4.4 with the warning text containing the mcptt-warn-code set to "149", the controlling MCPTT function shall follow the procedures in subclause 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 subclause 11.1.3.3.1.

##### 11.1.1.3.2 Terminating procedures

This subclause covers both on demand session and pre-established session.

Upon receipt of a "SIP INVITE request for terminating participating MCPTT function", the participating MCPTT 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 for terminating participating MCPTT function" with a SIP 500 (Server Internal Error) response. The participating MCPTT function may include a Retry-After header field to the SIP 500 (Server Internal Error) response as specified in IETF RFC 3261 [24], and shall not continue with the rest of the steps;

NOTE: If the received SIP INVITE request contains an emergency indication set to a value of "true", the participating MCPTT function can choose to accept the request.

2) shall check the presence of the isfocus media feature tag in the Contact header field and if it is not present then the participating MCPTT function shall reject the request with a SIP 403 (Forbidden) response with the warning text set to "104 isfocus not assigned" in a Warning header field as specified in subclause 4.4, and shall not continue with the rest of the steps;

3) if the <session-type> element of the application/vnd.3gpp.mcptt-info+xml MIME body is set to "private" and the Answer-Mode Indication in the application/poc-settings+xml MIME body has not yet been received from the invited MCPTT client as defined in subclause 7.3.3 or subclause 7.3.4, shall reject the request with a SIP 480 (Temporarily Unavailable) response with the warning text set to "146 T-PF unable to determine the service settings for the called user" in a Warning header field as specified in subclause 4.4 and shall not continue with the rest of the steps;

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

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

6) when the called user identified by the MCPTT ID is unable to participate in private calls as identified in the called user's MCPTT user profile document (see the MCPTT user profile document in 3GPP TS 24.484 [50]) on the terminating participating MCPTT function, shall reject the "SIP INVITE request for terminating participating MCPTT function" with a SIP 403 (Forbidden) response including warning text set to "127 user not authorised to be called in private call" in a Warning header field as specified in subclause 4.4;

6a) if the <session-type> element of the application/vnd.3gpp.mcptt-info+xml MIME body is set to "private" and if the <IncomingPrivateCallList> element exists in the MCPTT user profile document with one or more <entry> elements (see the MCPTT user profile document in 3GPP TS 24.484 [50]) and:

i) if the <mcptt-calling-user-id> element of the application/vnd.3gpp.mcptt-info+xml MIME body of the incoming SIP INVITE request does not match with one of the <entry> elements of the <IncomingPrivateCallList> element of the MCPTT user profile document (see the MCPTT user profile document in 3GPP TS 24.484 [50]); and

ii) if configuration is not set in the MCPTT user profile document (see the MCPTT user profile document in 3GPP TS 24.484 [50]) that allows the MCPTT user to receive a private call by users not contained within the <entry> elements of the <IncomingPrivateCallList> element;

 then:

i) shall reject the "SIP INVITE request for terminating participating MCPTT function" with a SIP 403 (Forbidden) response including warning text set to "159 user not authorised to be called by this originating user" in a Warning header field as specified in subclause 4.4 and shall not continue with the rest of the steps;

6b) if the call is a first-to-answer call, the received SIP INVITE request contains a <functional-alias-URI> element of the application/vnd.3gpp.mcptt-info+xml MIME body and the <mcpttinfo> element containing the <mcptt-Params> element with the <call-to-functional-alias-ind> element set to "true", the <ListOfAllowedFAsToBeCalledFrom> element exists in the MCPTT user profile document with one or more <entry> elements (see the MCPTT user profile document in 3GPP TS 24.484 [50]) and:

i) if the <functional-alias-URI> element of the application/vnd.3gpp.mcptt-info+xml MIME body of the incoming SIP INVITE request does not match with one of the <entry> elements of the <ListOfAllowedFAsToBeCalledFrom> element of the entry within the FunctionalAliasList element corresponding to the called functional alias of the MCPTT user profile document (see the MCPTT user profile document in 3GPP TS 24.484 [50]); and

then:

i) shall reject the "SIP INVITE request for originating participating MCPTT function" with a SIP 403 (Forbidden) response including warning text set to "qqq functional alias not allowed to be called from this functional alias" in a Warning header field as specified in subclause 4.4 and shall not continue with the rest of the steps;

7) shall perform the automatic commencement procedures specified in subclause 6.3.2.2.5.1 and according to IETF RFC 5373 [18] if one of the following conditions are met:

a) "SIP INVITE request for terminating participating MCPTT function" contains an Answer-Mode header field with the value "Auto";

b) "SIP INVITE request for terminating participating MCPTT function" does not contain an Answer-Mode header field and the Answer-Mode Indication received in the application/poc-settings+xml MIME body received from the invited MCPTT client as per subclause 7.3.3 or subclause 7.3.4 is set to "auto-answer"; or

c) "SIP INVITE request for terminating participating MCPTT function" contains a Priv-Answer-Mode header field with the value "Auto"; and

8) shall perform the manual commencement procedures specified in subclause 6.3.2.2.6.1 and according to IETF RFC 5373 [18] if either of the following conditions are met:

a) "SIP INVITE request for terminating participating MCPTT function" contains an Answer-Mode header field with the value "Manual";

b) "SIP INVITE request for terminating participating MCPTT function" does not contain an Answer-Mode header field and Answer-Mode Indication received in the application/poc-settings+xml MIME body received from the invited MCPTT client as per subclause 7.3.3 or subclause 7.3.4 is set to "manual-answer"; or

c) "SIP INVITE request for terminating participating MCPTT function" contains a Priv-Answer-Mode header field with the value "Manual".