**3GPP TSG-SA WG6 Meeting #39-e S6-201372**

**e-meeting, 31st August – 8th September 2020 (revision of S6-xxxxxx)**

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| *CR-Form-v12.0* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  |  | **CR** | **0269** | **rev** | **1** | **Current version:** |  |  |
|  | | | | | | | | |
| *For* [***HE******LP***](http://www.3gpp.org/3G_Specs/CRs.htm#_blank)*on using this form: comprehensive instructions can be found at* [*http://www.3gpp.org/Change-Requests*](http://www.3gpp.org/Change-Requests)*.* | | | | | | | | |
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| ***Proposed change affects:*** | UICC apps |  | ME | **X** | Radio Access Network |  | Core Network | **X** |

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|  | | | | | | | | | | |
| ***Title:*** | Individual emergency alert cancel | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | FirstNet | | | | | | | | | |
| ***Source to TSG:*** | S6 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | enh3MCPTT | | | | |  | ***Date:*** | | | 2020-09-4 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **B** |  | | | | | ***Release:*** | | | Rel-17 |
|  | *Use one of the following categories:* ***F*** *(correction)* ***A*** *(mirror corresponding to a change in an earlier release)* ***B*** *(addition of feature),* ***C*** *(functional modification of feature)* ***D*** *(editorial modification)*  Detailed explanations of the above categories can be found in 3GPP [TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm). | | | | | | | | *Use one of the following releases: Rel-8 (Release 8) Rel-9 (Release 9) Rel-10 (Release 10) Rel-11 (Release 11) Rel-12 (Release 12)* *Rel-13 (Release 13) Rel-14 (Release 14) Rel-15 (Release 15) Rel-16 (Release 16)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | TS 23.379 allows an MCPTT UE to transmit an emergency alert associated with an emergency private call (10.7.2.4 MCPTT emergency private call). This individual emergency alert is not associated with a group. Note 3 in 10.7.2.4.1 states:  NOTE 3: The initiating MCPTT user's MCPTT emergency state is  retained by the system until cancelled as in subclause 10.6.2.6.1.3.  The initiating MCPTT user's MCPTT emergency state is also retained  locally by the MCPTT client until explicitly cancelled by the MCPTT user.  Unfortunately, the procedure in 10.6.2.6.1.3 is “MCPTT in-progress emergency **group** state cancel”, and specifying the Group ID is Mandatory.  And in TS 23.280, the Emergency Alert Cancel Request message also has a mandatory Group ID.  Procedures are needed to initiate and cancel an individual emergency alert not associated with a group, and the information flows need to be modified to make the Group ID optional and to add an optional target User ID. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Emergency Alert information flows are modified and two new procedures are added. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | There will continue to be no method to initiate or cancel an individual emergency alert. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 10.1.2.15, 10.1.2.16, 10.1.2.17, 10.1.2.2, 10.10.1.2.1, 10.10.1.2.1.1 (new), 10.10.1.2.1.2, and 10.10.1.2.1.3 (new), 10.10.1.2.2, 10.10.1.2.2.1 (new), 10.10.1.2.2.2, and 10.10.1.2.2.3 (new) | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | |  |  | Other core specifications | | | | TS/TR ... CR ... | | |
| ***affected:*** | |  |  | Test specifications | | | | TS/TR ... CR ... | | |
| ***(show related CRs)*** | |  |  | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

\* \* \* First Change \* \* \* \*

#### 10.1.2.15 MC service emergency alert request

Table 10.1.2.15-1 describes the information flow MC service emergency alert request from the MC service client to the MC service server and from the MC service server to the MC service client.

Table 10.1.2.15-1 MC service emergency alert request information elements

|  |  |  |
| --- | --- | --- |
| Information Element | Status | Description |
| MC service ID | M | The identity of the alerting party |
| Functional alias | O | The functional alias of the alerting party |
| MC service group ID (NOTE 1) | O | The target MC service group ID with which the alert is associated |
| MC service ID (NOTE 2) | O | The target MC service ID with which the alert is associated. |
| Organization name | O | The alerting MC service user's mission critical organization name |
| Location | O | The alerting MC service client's location |
| NOTE 1: This information shall be present if the message is requesting an MC service emergency alert associated with a group.  NOTE 2: This information shall be present if the message is requesting an MC service emergency alert associated with an individual. | | |



#### 10.1.2.16 MC service emergency alert response

Table 10.1.2.16-1 describes the information flow MC service emergency alert response from the MC service client to the MC service server and from the MC service server to the MC service client.

Table 10.1.2.16-1 MC service emergency alert response information elements

|  |  |  |
| --- | --- | --- |
| Information Element | Status | Description |
| MC service ID | M | The identity of the alerting party |
| MC service group ID (NOTE 1) | O | The target MC service group ID with which the alert is associated |
| MC service ID (NOTE 2) | O | The target MC service ID with which the alert is associated. |
| NOTE 1: This information shall be present if the message is requesting a MC service emergency alert associated with a group.  NOTE 2: This information shall be present if the message is requesting an MC service emergency alert associated with an individual. | | |

#### 10.1.2.17 MC service emergency alert cancel request

Table 10.1.2.17-1 describes the information flow MC service emergency alert cancel request from the MC service client to the MC service server and from the MC service server to the MC service client.

Table 10.1.2.17-1 MC service emergency alert cancel request information elements

|  |  |  |
| --- | --- | --- |
| Information Element | Status | Description |
| MC service ID | M | MC service user identity of the cancelling party |
| MC service ID (NOTE 1) | O | MC service user identity whose emergency alert is to be cancelled |
| MC service group ID (NOTE 2) | O | The MC service group ID with which the alert is associated |
| MC service ID (NOTE 3) | O | The target MC service ID with which the alert is associated. |
| Group's in-progress emergency state cancel request | O | Requests cancellation of the in-progress emergency state of the group |
| NOTE 1: This information shall be present if the message is requesting cancellation of another MC service user's alert. If not present, then the alert of the MC service ID of the cancelling party is being cancelled.  NOTE 2: This information shall be present if the message is requesting cancellation of a MC service emergency alert associated with a group.  NOTE 3: This information shall be present if the message is requesting an MC service emergency alert associated with an individual. | | |

#### 10.1.2.2 MC service emergency alert cancel response

Table 10.1.2.18-1 describes the information flow MC service emergency alert cancel response from the MC service client to the MC service server and from the MC service server to the MC service client.

Table 10.1.2.18-1 MC service emergency alert cancel response information elements

|  |  |  |
| --- | --- | --- |
| Information Element | Status | Description |
| MC service ID | M | The identity of the cancelling party |
| MC service group ID (NOTE) | O | The MC service group ID with which the alert is associated |
| NOTE: This information shall be present if the message is requesting cancellation of a MC service emergency alert associated with a group. | | |

\* \* \* End of First Change \* \* \* \*

\* \* \* Second Change \* \* \* \*

#### 10.10.1.2 MC service emergency alert

##### 10.10.1.2.1 MC service emergency alert initiation

###### 10.10.1.2.1.1 General

These procedures describe cases where an MC service client is initiating an MC service emergency alert unicast signalling for communicating the alert with the affiliated MC service group members of an MC service group, or for communicating an alert to another MC service client. An MC service client in the MC service emergency state gains elevated access privilege for all of the MC service user's mission critical applications. These procedures will place the MC service client in the MC service emergency state if the MC service client is not already in that state.

##### 10.10.1.2.1.2 MC service group emergency alert initiation

Figure 10.10.1.2.1.2-1 illustrates the procedure for the MC service client initiating an MC service emergency alert with an MC service group i.e., MC service users on MC service client 1, MC service client 2 and MC service client 3 belong to the same MC service group which is defined on group management server.

NOTE 1: For simplicity, a single MC service server is shown in place of a user home MC service server and a group hosting MC service server.

Pre-conditions:

1. The MC service group to be used for emergency communications by MC service client 1 is previously defined on the group management server and MC service client 2 and MC service client 3 are affiliated to that MC service group.

NOTE 2: Alternatively, the client could have been provisioned for emergency behaviour on the currently selected group.

2. All members of the MC service group belong to the same MC system.

3. The initiating MC service client 1 is affiliated with one or more MC service groups.

4. The initiating MC service client 1 may not have carried out an explicit affiliation procedure with the MC service group designated as the MC service emergency group.

5. Optionally, MC service client 1 may use an activated functional alias for the group communication.

6. The MC service server may have subscribed to the MC service functional alias controlling server within the MC system for functional alias activation/de-activation updates.



Figure 10.10.1.2.1.2-1 MC service group emergency alert

1. The MC service user at the MC service client 1 initiates an MC service emergency alert. MC service client 1 sets its MC service emergency state. The MC service user at MC service client 1 may select a functional alias used for the call. The MC service emergency state is retained by the MC service client 1 until explicitly cancelled.

2. MC service client 1 requests the MC service server to send an MC service emergency alert request to the MC service group designated as the MC service emergency group.

3. MC service server checks whether the MC service user of MC service client 1 is authorized for initiation of MC service emergency alerts for the indicated MC service group. The MC service server checks whether the provided functional alias, if present, can be used and has been activated for the user.

4. MC service server resolves the MC service group ID to determine the members of that MC service group and their affiliation status, based on the information from group management server.

5. The MC service server sends the MC service emergency alert response to the MC service user 1 to confirm the MC service emergency alert request. MC service group calls made by the MC service client 1 will be sent as emergency calls until the emergency state on the MC service client 1 is cancelled.

6. The MC service server sends an MC service emergency alert request towards the MC service clients of each of those affiliated MC service group members. The MC service emergency alert request message shall contain the following information: Location, MC service ID and MC service group ID (i.e., MC service user's selected MC service group or dedicated MC service emergency group, as per user profile configuration) and the MC service user's mission critical organization name. If in step 2, the MC service client 1 does not include the location information in the MC service emergency alert request to the MC service server, the MC service server acquires the location information of the MC service user at the MC service client 1 from the location management server. If the location information is included in step 2, then the MC service server uses the location information from MC service client 1.

7. MC service users are notified of the MC service emergency alert. The functional alias of the group call initiating MC service user may be displayed.

8. The receiving MC service clients send the MC service emergency alert response to the MC service server to acknowledge the MC service emergency alert.

9. The MC service server implicitly affiliates the client to the emergency group if the client is not already affiliated.

NOTE 3: Sending the emergency alert without making a request to also start an emergency call does not put the group into the in-progress emergency state.

NOTE 4: Sending the emergency alert does not put the other UEs in the group into an emergency state.

NOTE 5: The MC service client 1 need not initiate a group call. For example, the MC service client can be configured to only allow alerts or the MC service user can choose not to make an MC service emergency group call.

NOTE 6: It is configured whether MC service client 1 automatically triggers a subsequent MC service emergency group call.

Editor's note: How emergency alert is synchronized between MC services is FFS.

##### 10.10.1.2.1.3 MC service individual emergency alert initiation

Figure 10.10.1.2.1.3-1 illustrates the procedure for the MC service client initiating an MC service individual emergency alert. This emergency alert can be sent at the time of emergency private call initiation as specified in subclause 10.7.2.4.1 of TS 23.379 [16], or it can also be sent standalone as described below.

Pre-conditions:

1. The MC service ID of MC service client 2 is previously defined to be used for emergency communications by MC service client 1.

2. Optionally, MC service client 1 may use an activated functional alias for individual communication.

3. The MC service server may have subscribed to the MC service functional alias controlling server within the MC system for functional alias activation/de-activation updates.



Figure 10.10.1.2.1.3-1 MC service individual emergency alert

1. The MC service user at the MC service client 1 initiates an MC service emergency alert. MC service client 1 sets its MC service emergency state. The MC service user at MC service client 1 may select a functional alias used for the call. MCPTT client 1 retains the MC service emergency state until explicitly cancelled by the user of MC service client 1.

2. MC service client 1 requests the MC service server to send an MC service emergency alert request to MC service client 2 that has been designated as the target of MC service emergency communication by MC service client 1.

3. MC service server checks whether the MC service user of MC service client 1 is authorized for initiation of an MC service individual emergency alerts. The MC service server checks whether the provided functional alias, if present, can be used and has been activated for the user.

4. The MC service server sends the MC service emergency alert response to the MC service user 1 to confirm the MC service emergency alert request.

NOTE 1: While MC service client 1 is in the emergency state, all MC service group and private calls initiated by MC service client 1 are initiated as MC service emergency calls.

5. The MC service server sends an MC service emergency alert request toward MC service client 2. The MC service emergency alert request message shall contain the following information: Location, MC service ID, and the MC service user's mission critical organization name. If in step 2, the MC service client 1 does not include the location information in the MC service emergency alert request to the MC service server, the MC service server acquires the location information of the MC service user at the MC service client 1 from the location management server. If the location information is included in step 2, then the MC service server uses the location information from MC service client 1.

6. MC service user of MC service client 2 is notified of the MC service emergency alert. The functional alias of the initiating MC service user may be displayed.

NOTE 2: MCPTT client 2 does not set its emergency state as a result of receiving the MC service emergency alert.

7. The receiving MC service client sends the MC service emergency alert response to the MC service server to acknowledge the MC service emergency alert.

NOTE 3: The MC service client 1 need not initiate a private call to MC service client 2.

NOTE 4: The initiating MC service user's MC service emergency state is retained by the system until cancelled as specified in subclause 10.10.1.2.2.3.

##### 10.10.1.2.2 MC service emergency alert cancel

###### 10.10.1.2.2.1 General

These procedures describe cases where an MC service client has initiated an MC service emergency alert and entered the emergency state, and wishes to cancel the alert. For group-based alerts the cancellation informs the MC service server and other group members of this cancellation. By doing so, the MC service client may also request the cancellation of the in-progress emergency state of the group. For individual-based alerts the cancellation only informs the MC service server.

In both cases the cancellation of the MC service emergency alert clears the emergency state of the MC service client.

For group-based emergency alerts, the emergency state of the MC service user can alternatively be cancelled using the MC service in-progress emergency group state cancellation procedures in 3GPP TS 23.379 [16], TS 23.281[12], and TS 23.282 [13].

###### 10.10.1.2.2.2 MC service group emergency alert cancel

Figure 10.10.1.2.2.2-1 illustrates the procedure for the MC service client cancelling an MC service emergency alert with an MC service group i.e., MC service users on MC service client 1, MC service client 2 and MC service client 3 belong to the same MC service group which is defined on MC service group management server.

NOTE 1: For simplicity, a single MC service server is shown in place of a user home MC service server and a group hosting MC service server.

Pre-conditions:

1. The MC service client 1 had previously successfully initiated an MC service emergency alert targeted to a group.

2. The MC service client 1 is still in the emergency state.

3. The initiating MC service client 1 has affiliated with the MC service group designated as the MC service emergency group.



Figure 10.10.1.2.2.2-1 MC service group emergency alert cancel

1. The MC service user at the MC service client 1 initiates an MC service emergency alert cancel to inform the server and the group that MC service client 1 is no longer in the emergency state.

NOTE 2: The MC service emergency alert cancel request carries an indication to also request that the in-progress emergency of the group is to be cancelled. The MC service server can accept or deny the request to cancel the in-progress emergency state of the group as a whole, separately from accepting or denying the request to cancel the emergency alert at MC service client 1. Additionally, an authorized user can cancel either or both the in-progress emergency state of the group and the initiator's MC service emergency alert.

2. MC service client 1 requests the MC service server to send an MC service emergency alert cancel to the MC service group to which MC service client 1 had previously sent the emergency alert.

3. MC service server resolves the MC service group ID to determine the members of that MC service group and their affiliation status, based on the information from group management server.

4. The MC service server sends the MC service emergency alert cancel response to the MC service client 1 to confirm the MC service emergency alert cancel request. MC service client 1 clears its emergency state.

5. The MC service server sends an MC service emergency alert cancel request towards the MC service clients of each of those affiliated MC service group members.

6. MC service users are notified of the MC service emergency alert cancellation of MC service client 1.

7. For a unicast MC service emergency alert cancel, the receiving MC service clients send the MC service emergency alert cancel response to the MC service server to acknowledge the MC service emergency alert cancel. For a multicast MC service emergency alert cancel, these acknowledgements are not sent unless the MC service clients have been configured to do so.

###### 10.10.1.2.2.3 MC service individual emergency alert cancel

Figure 10.10.1.2.2.3-1 illustrates the procedure for the MC service client cancelling an individual MC service emergency alert (i.e. without an associated MC service group).

Pre-conditions:

1. The MC service client 1 had previously successfully initiated an individual MC service emergency alert targeted to MC service client 2.

2. The MC service client 1 is still in the emergency state.



Figure 10.10.1.2.2.3-1 MC service individual emergency alert cancel

1. The MC service user at the MC service client 1 initiates an MC service emergency alert cancel for an individual emergency alert.

2. MC service client 1 sends the MC service emergency alert cancel request to the MC service server to inform the server that MC service client 1 is no longer in the emergency state. The emergency alert cancel request contains the MC service ID of MC service client 2.

3. The MC service server sends the MC service emergency alert cancel response to the MC service client 1 to confirm the MC service emergency alert cancel request. MC service client 1 clears its emergency state.

4. The MC service server sends an MC service emergency alert cancel request towards MC service client 2.

5. The MC service user of MC service client 2 is notified of the MC service emergency alert cancellation of MC service client 1.

6. MC service client 2 sends the MC service emergency alert cancel response to the MC service server to acknowledge the MC service emergency alert cancel.NOTE 1: The initiating MC service user's MC service emergency state is no longer retained by the system.

\* \* \* End of Second Change \* \* \* \*

\* \* \* End of Changes \* \* \* \*