**3GPP TSG- Meeting # *445***

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| *CR-Form-v12.3* |
| **CHANGE REQUEST** |
|  |
|  |  | **CR** |  | **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:***  | Adding information elements to adhoc group emergency alert |
|  |  |
| ***Source to WG:*** | Kontron Transportation France, Nokia, UIC |
| ***Source to TSG:*** | SA6 |
|  |  |
| ***Work item code:*** |  |  | ***Date:*** |  |
|  |  |  |  |  |
| ***Category:*** | **C** |  | ***Release:*** |  |
|  | *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-17 (Release 17)Rel-18 (Release 18)Rel-19 (Release 19) Rel-20 (Release 20)* |
|  |  |
| ***Reason for change:*** | Some information flows of ad hoc group emergency alert do not contain all information elements required by FRMCS. In FRMCS the criteria contain for example the type of ad hoc group emergency alert and the area in which the ad hoc group emergency alert is happening. This Information is essential for railway operation and was also available in the legacy system. This CR adds them to provide the same functionality as available in the legacy system. |
|  |  |
| ***Summary of change:*** | Adding criteria to information flows originating from the MC service server where necessary. Adding text to procedures to further clarify handling of criteria. |
|  |  |
| ***Consequences if not approved:*** | Essential information for FRMCS is missing |
|  |  |
| ***Clauses affected:*** | 10.10.3.2.2, 10.10.3.2.3, 10.10.3.2.6, 10.10.3.2.13, 10.10.3.3.1, 10.10.3.3.3 |
|  |  |
|  | **Y** | **N** |  |  |
| ***Other specs*** |  | **x** |  Other core specifications  | TS/TR ... CR ...  |
| ***affected:*** |  | **x** |  Test specifications | TS/TR ... CR ...  |
| ***(show related CRs)*** |  | **x** |  O&M Specifications | TS/TR ... CR ...  |
|  |  |
| ***Other comments:*** |  |
|  |  |
| ***This CR's revision history:*** |  |

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

##### 10.10.3.2.2 Ad hoc group emergency alert request (MC service server – MC service client)

Table 10.10.3.2.2-1 describes the information flow ad hoc group emergency alert request from the MC service server to the MC service client.

Table 10.10.3.2.2-1 Ad hoc group 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 |
| Ad hoc group ID | M | The target group ID associated with the alert |
| Organization name | O | The alerting MC service user's mission critical organization name |
| Location information | O | The alerting MC service client's location |
| Additional information | O | The alerting party may provide additional information related to the alert, e.g., medical help needed or reason for the alert |
| Call resulting criteria for determining the participants | O | Carries the details of criteria or meaningful label identifying the criteria or the combination of both that the MC service server used for determining the participants e.g., it can be a location-based criteria to invite participants in a particular area |

\* \* \* Next Change \* \* \* \*

##### 10.10.3.2.3 Ad hoc group emergency alert response

Table 10.10.3.2.3-1 describes the information flow ad hoc group 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 10.10.3.2.3-1 Ad hoc group emergency alert response information elements

|  |  |  |
| --- | --- | --- |
| **Information Element** | **Status** | **Description** |
| MC service ID | M | The identity of the target party |
| Functional alias | O | The functional alias of the target party |
| Ad hoc group ID | M | The target group ID associated with the alert |
| Call resulting criteria for determining the participants | O | Carries the details of criteria or meaningful label identifying the criteria or the combination of both that the MC service server used for determining the participants e.g., it can be a location-based criteria to invite participants in a particular area |

\* \* \* Next Change \* \* \* \*

##### 10.10.3.2.6 Ad hoc group emergency alert participants list notification

Table 10.10.3.2.6-1 describes the information flow ad hoc group emergency alert participants list notification from the MC service server to the MC service client.

Table 10.10.3.2.6-1: Ad hoc group emergency alert participants list notification information elements

|  |  |  |
| --- | --- | --- |
| Information Element | Status | Description |
| MC service ID | M | The identity of the notified participant |
| Functional alias | O | The functional alias of the notified participant |
| Ad hoc group ID | M | The group ID associated with the ad hoc group emergency alert |
| MC service user ID list | O | The total list of MC service users who belong to the ad hoc group irrespective of having acknowledged the ad hoc group emergency alert or not |
| MC service user ID list | O | The list of MC service users who belong to the ad hoc group but have not acknowledged the ad hoc group emergency alert |
| Call resulting criteria for determining the participants | O | Carries the details of criteria or meaningful label identifying the criteria or the combination of both which may be used by the authorized users to modify it. |

\* \* \* Next Change \* \* \* \*

##### 10.10.3.2.13 Ad hoc group emergency alert modify response

Table 10.10.3.2.13-1 describes the information flow ad hoc group emergency alert modify response from the MC service server to the MC service client and from the MC service server to the MC service server.

Table 10.10.3.2.13-1: Ad hoc group emergency alert modify response information elements

|  |  |  |
| --- | --- | --- |
| Information Element | Status | Description |
| MC service ID | M | The identity of the requesting MC service user who is authorised to modify the ad hoc group criteria |
| Functional alias | O | The functional alias of the requesting MC service user who is authorised to modify the ad hoc group criteria |
| MC service server Ad hoc group ID | M | The MC service server group ID of the ad hoc group whose criterion for determining the participants is modified |
| Result | M | Indicates the success or failure for the result |
| Call resulting criteria for determining the participants | O | Carries the details of criteria or meaningful label identifying the criteria or the combination of both that the MC service server used for determining the participants e.g., it can be a location-based criteria to invite participants in a particular area |

\* \* \* Next Change \* \* \* \*

##### 10.10.3.3.1 Ad hoc group emergency alert initiation

Figure 10.10.3.3.1-1 illustrates the procedure for the MC service client initiating an ad hoc group emergency alert initiated by an authorized MC service user.

Pre-conditions:

1. The MC service user at MC service client 1 wants to send an ad hoc group emergency alert to the MC service users who are satisfying certain criteria.

2. All MC service clients belong to the same MC system.

3. The MC service user on MC service client 3 is authorized to receive ad hoc group participants information.



Figure 10.10.3.3.1-1: Ad hoc group emergency alert initiation

1. The MC service user at the MC service client 1 initiates an ad hoc group emergency alert to an ad hoc group with participants satisfying specific criteria. The MC service user may add additional information describing the reason for sending the alert.

2. MC service client 1 initiates the ad hoc group emergency alert by sending the ad hoc group emergency alert request containing the details of the criteria to be applied by the MC service server for determining the participants list or the list of participants. MC service client 1 may set its MC service emergency state. The MC service user at MC service client 1 may select a functional alias used for the MC service group emergency alert. If MC service client 1 is in MC service emergency state, the MC service emergency state is retained by the MC service client 1 until explicitly cancelled.

3. MC service server checks whether the MC service user of MC service client 1 is authorized for initiation of ad hoc group emergency alerts and whether the request is supported. 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 ad hoc group emergency alert request return to the MC service user 1 containing the result of whether the ad hoc group call is authorized or not. If the ad hoc group emergency alert request is not authorized, the MC service server and the MC service client 1 shall not proceed with the rest of the steps.

5. The MC service server determines the list of participants to be invited for the ad hoc group emergency alert based on the information present in the information element Criteria for determining the participants. This information element could carry either criteria or indicator identifying the criteria or combination of both. The MC service server stores the ad hoc group ID together with the list of participants for the duration of the ad hoc group emergency alert. The MC service server considers the alerted participants as implicitly affiliated to the ad hoc group. Depending on the criteria provided and based on local policy, the MC service server may modify the content of the criteria received in step 1 to determine the list of participants.

6. The MC service server sends an ad hoc group emergency alert request including the ad hoc group ID, and the call resulting criteria towards the MC service clients 2 and 3.

7. MC service users are notified of the ad hoc group emergency alert. The functional alias of the MC service user initiating the ad hoc group emergency alert and additional information related to the alert may be displayed.

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

9. The MC service server sends the ad hoc group emergency alert response to MC service client 1 to inform about successful alert establishment, containing the ad hoc group ID (generated by the MC service server in the case where the MC service ad hoc group ID created by the MC service client 1 is not acceptable or the case where the MC service ad hoc group ID was not provided by MC service client 1) and the call resulting criteria.

10. The authorized user on MC service client 3 is notified with the total list of MC service IDs of those MC service users who belong to the ad hoc group and a separate list of MC service IDs of MC service users who belong to the ad hoc group that have not acknowledged the ad hoc group emergency alert, and the call resulting criteria.

11. If configured, an MC service client may setup a subsequent ad hoc group emergency communication, using the ad hoc group ID from the ad hoc group emergency alert, according to 3GPP TS 23.379 [16], 3GPP TS 23.281 [12] or 3GPP TS 23.282 [13].

NOTE 1: MC service client 1 may start the subsequent ad hoc group emergency communication after step 5.

NOTE 2: Sending the ad hoc group emergency alert without making a request to also start an ad hoc group emergency communication does not put the group into the in-progress emergency state.

NOTE 3: Sending the ad hoc group emergency alert does not put the other participants in the group into an MC service emergency state.

The MC service server shall resend an ad hoc group emergency alert request towards MC service client(s) who still satisfy the criteria but did not acknowledge the ad hoc group emergency alert.

The MC service server continuously checks whether other MC service clients meet or if participating MC service clients no longer meet the criteria for the ad hoc group emergency alert.

\* \* \* Next Change \* \* \* \*

##### 10.10.3.3.3 Entering an ongoing ad hoc group emergency alert

During an ongoing ad hoc group emergency alert, the MC service server continuously checks if additional MC service users meet the conditions of the ad hoc group emergency alert.

As illustrated in Figure 10.10.3.3.3-1 MC service client is added to the ad hoc group as the MC service client meets the criteria for receiving an ongoing ad hoc group emergency alert.

Pre-conditions:

1. An ad hoc group emergency alert has been initiated and the related ad hoc group exists.

2. The criteria for entering an ad hoc group emergency alert are known to the MC service server.

3. The MC service user on MC service client 2 is authorized to receive ad hoc group participants information.



Figure 10.10.3.3.3-1: Entering an ongoing ad hoc group emergency alert

1. MC service server acquires the latest information of the MC service user at the MC service client and checks whether the criteria for initiating an ad hoc group emergency alert to the MC service client are met. The MC service server considers the MC service client 1 to be implicitly affiliated to the ad hoc group associated to the emergency alert.

2. The MC service server sends an ad hoc group emergency alert request including the ad hoc group ID, and the call resulting criteria towards the MC service client 1 to notify that it has moved into potential danger. The MC service client 1 is added to the emergency ad hoc group.

3. MC service client 1 notifies the MC service user about the ad hoc group emergency alert.

4. The receiving MC service client 1 sends the ad hoc group emergency alert response to the MC service server to acknowledge the ad hoc group emergency alert.

5. The authorized user on MC service client 2 is notified with the total list of MC service IDs of those MC service users who belong to the ad hoc group including the newly added MC service client 1, and a separate list of MC service IDs of MC service users who belong to the ad hoc group that have not acknowledged the ad hoc group emergency alert, and the call resulting criteria.

6. If there is an ongoing ad hoc group emergency communication ongoing, the MC service server adds the MC service client to the list of ad hoc group emergency communication participants according to 3GPP TS 23.379 [16], 3GPP TS 23.281 [12] or 3GPP TS 23.282 [13].

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