**3GPP TSG-CT1 Meeting #134-e *C1-221690***

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

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| *CR-Form-v12.2* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  | **24.282** | **CR** | **0314** | **rev** | 1 | **Current version:** | **17.5.0** |  |
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| *For* [***HE******LP***](http://www.3gpp.org/3G_Specs/CRs.htm#_blank)*on using this form: comprehensive instructions can be found at* [*http://www.3gpp.org/Change-Requests*](http://www.3gpp.org/Change-Requests)*.* | | | | | | | | |
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| ***Proposed change affects:*** | UICC apps |  | ME | **X** | Radio Access Network |  | Core Network | **X** |

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| ***Title:*** | MCData Notification on emergency alert/group area | | | | | | | | | |
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| ***Source to WG:*** | Nokia, Nokia Shanghai Bell,Kontron Transportation France, UIC | | | | | | | | | |
| ***Source to TSG:*** | C1 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | MCProtoc17, eMONASTERY2 | | | | |  | ***Date:*** | | | 2022-02-10 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **F** |  | | | | | ***Release:*** | | | Rel-17 |
|  | *Use one of the following categories:* ***F*** *(correction)* ***A*** *(mirror corresponding to a change in an earlier release)* ***B*** *(addition of feature),* ***C*** *(functional modification of feature)* ***D*** *(editorial modification)*  Detailed explanations of the above categories can be found in 3GPP [TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm). | | | | | | | | *Use one of the following releases: Rel-8 (Release 8) Rel-9 (Release 9) Rel-10 (Release 10) Rel-11 (Release 11) … Rel-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18) Rel-19 (Release 19)* | |
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| ***Reason for change:*** | | TS 22.280 specifies the stage-1 requirements [R-6.6.4.2-002]-[R-6.6.4.2-002b] for **dynamic creation of groups based on** either provided parameters or **certain criteria**. Stage 2 and stage-3 have implemented those requirements as **user-initiated procedures based on user profile configuration** (see solution 3 of TR23.796).  Existing stage-2 solution assumes that affiliation is client-triggered and based on the user profile stored at the client (MC UE). **Modifying the conditions of a user participating in an emergency group would require an update of the user profile configuration**. This solution has been indicated by the FRMCS FIS Working Group as inadequate for the railway requirements.  It is proposed to enable the server to manage the participants in the group by taking into account local criteria,( e.g. activated functional alias, conditions of position, heading, etc ) by reusing the existing mechanism of notification for a user entering and exiting from the pre-defined emergency alert area. (Ref: R-5.1.9-001 and R-5.1.9-002 of 22.280).  For details please consider the accompanying discussion paper in C1-221701. | | | | | | | | |
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| ***Summary of change:*** | | 1) Clarify that the server may consider additional criteria (e.g.as those specified in [R-6.6.4.2-002a]) for notification of entry into or exit from an emergency alert area or group area.  2) Enable the server to provide the group to be used for affiliation upon entry (or for de-affiliation upon exit).  3) Clause 16.2.1.4 is moved out of clause 16 (emergency) to clause 6.2.4.x as a common clause, as it applies to any type of group call. | | | | | | | | |
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| ***Consequences if not approved:*** | | The emergency alert/group mechanism cannot meet the dynamic requirements of railways scenarios and limitation of a single predefined emergency alert area remains. | | | | | | | | |
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| ***Clauses affected:*** | | new 6.2.4.x, 6.3.7.1.6, 6.3.7.1.7, 16.2.1.1, new 16.2.1.4, 16.2.1.5 | | | | | | | | |
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|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | |  | **X** | Other core specifications | | | | TS/TR ... CR ... | | |
| ***affected:*** | |  | **X** | Test specifications | | | | TS/TR ... CR ... | | |
| ***(show related CRs)*** | |  | **X** | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

1st change

#### 6.2.4.x Receiving notification of entry into or exit from a group geographic area

Upon receipt of a "SIP MESSAGE request for notification of entry into or exit from a group geographic area", the MCData client:

1) shall send a SIP 200 (OK) to the participating MCData function that sent the SIP MESSAGE request; and

2) if the <group-geo-area-ind> element of the application/vnd.3gpp.mcdata-info+xml MIME body is:

a) set to "true":

i) may display to the MCData user an indication that a group geographic area has been entered; and

ii) shall execute the procedure in clause 8.2.2 to affiliate to the group indicated by the participating MCData function; and

b) set to "false":

i) may display to the MCData user an indication that a group geographic area has been exited; and

ii) shall execute the procedure in clause 8.2.2 to de-affiliate from the group indicated by the participating MCData function.

2nd change

##### 6.3.7.1.6 Generating a SIP MESSAGE request for notification of entry into or exit from an emergency alert area

This clause describes the procedures for generating a SIP MESSAGE request to notify an MCData client that it has entered a pre-defined emergency alert area or exited from a pre-defined emergency alert area. The procedure is initiated by the participating MCData function when the participating MCData function determines that the MCData client has entered a pre-defined emergency alert area or exited from a pre-defined emergency alert area.

NOTE: The participating MCData function can use additional implementation-specific selection criteria to decide the recipients of the notification, i.e., whether and when an entry/exit notification is sent. The additional criteria can be the activated functional alias, ongoing emergency or conditions related to position such as speed, heading etc.. The determination of the specific region is left to implementation.

The participating MCData function:

1) shall generate a SIP MESSAGE request in accordance with 3GPP TS 24.229 [5] and IETF RFC 3428 [6];

2) shall include an Accept-Contact header field containing the g.3gpp.mcdata media feature tag along with the "require" and "explicit" header field parameters according to IETF RFC 3841 [8];

3) shall include an Accept-Contact header field with the media feature tag g.3gpp.icsi-ref with the value of "urn:urn-7:3gpp-service.ims.icsi.mcdata" along with parameters "require" and "explicit" according to IETF RFC 3841 [8];

4) shall set the Request-URI to the public user identity associated to the MCData ID of the targeted MCData user;

5) shall include a P-Asserted-Identity header field set to the public service identity of the participating MCData function;

6) shall include the ICSI value "urn:urn-7:3gpp-service.ims.icsi.mcdata" (coded as specified in 3GPP TS 24.229 [5]), in a P-Asserted-Service-Id header field according to IETF RFC 6050 [7];

7) shall include an application/vnd.3gpp.mcdata-info+xml MIME body with the <mcdatainfo> element containing the <mcdata-Params> element with:

a) the <mcdata-request-uri> element set to the value of the MCData ID of the targeted MCData user; and

b) optionally an <associated-group-id> element set to the MCData group ID of the group for which a pre-defined emergency alert area has been entered or exited;

8) shall include in the application/vnd.3gpp.mcdata-info+xml MIME body an <emergency-alert-area-ind> element:

a) set to a value of "true", if the MCData client has entered a pre-defined emergency alert area; or

b) set to a value of "false", if the MCData client has exited from a pre-defined emergency alert area; and

9) shall send the SIP MESSAGE request towards the MCData client according to the rules and procedures of 3GPP TS 24.229 [5].

Upon receiving a SIP 200 (OK) response to the SIP MESSAGE request, if the <emergency-alert-area-ind> element of the application/vnd.3gpp.mcdata-info+xml MIME body in the SIP MESSAGE request was:

1) set to a value of "true", shall record that the MCData client has received the notification that it has entered the pre-defined emergency alert area; and

2) set to a value of "false", shall record that the MCData client has received the notification that it has exited the pre-defined emergency alert area.

3rd change

##### 6.3.7.1.7 Generating a SIP MESSAGE request for notification of entry into or exit from a group geographic area

This clause describes the procedures for generating a SIP MESSAGE request to notify an MCData client that it has entered a pre-defined group geographic area or exited from a pre-defined group geographic area requiring affiliation to or de-affiliation from a group. The procedure is initiated by the participating MCData function when the participating MCData function determines that the MCData client has entered a pre-defined group geographic area or exited from a pre-defined group geographic area.

NOTE: The participating MCData function can use additional implementation-specific selection criteria to decide the recipients of the notification, i.e., whether and when an entry/exit notification is sent. The additional criteria can be the activated functional alias, ongoing emergency or conditions related to position such as speed, heading etc.. The determination of the specific region is left to implementation.

The participating MCData function:

1) shall generate a SIP MESSAGE request in accordance with 3GPP TS 24.229 [5] and IETF RFC 3428 [6];

2) shall include an Accept-Contact header field containing the g.3gpp.mcdata media feature tag along with the "require" and "explicit" header field parameters according to IETF RFC 3841 [8];

3) shall include an Accept-Contact header field with the media feature tag g.3gpp.icsi-ref with the value of "urn:urn-7:3gpp-service.ims.icsi.mcdata" along with parameters "require" and "explicit" according to IETF RFC 3841 [8];

4) shall set the Request-URI to the public user identity associated to the MCData ID of the targeted MCData user;

5) shall include a P-Asserted-Identity header field set to the public service identity of the participating MCData function;

6) shall include the ICSI value "urn:urn-7:3gpp-service.ims.icsi.mcdata" (coded as specified in 3GPP TS 24.229 [5]), in a P-Asserted-Service-Id header field according to IETF RFC 6050 [7];

7) void;

8) shall include an application/vnd.3gpp.mcdata-info+xml MIME body with an <mcdatainfo> element containing the <mcdata-Params> element with

a) an <mcdata-request-uri> element set to the value of the MCData ID of the targeted MCData user;

b) an <associated-group-id> element set to the MCData group ID of the group for which a pre-defined group geographic area has been entered or exited; and

c) a <group-geo-area-ind> element:

i) set to a value of "true", if the MCData client has entered a pre-defined group geographic area; or

ii) set to a value of "false", if the MCData client has exited from a pre-defined group geographic area; and

9) shall send the SIP MESSAGE request towards the MCData client according to the rules and procedures of 3GPP TS 24.229 [5].

Upon receiving a SIP 200 (OK) response to the SIP MESSAGE request, if the <group-geo-area-ind> element of the application/vnd.3gpp.mcdata-info+xml MIME body in the SIP MESSAGE request was:

1) set to a value of "true", shall record that the MCData client has received the notification that it has entered the pre-defined group geographic area; and

2) set to a value of "false", shall record that the MCData client has received the notification that it has exited the pre-defined group geographic area.

4th change

#### 16.2.1.1 Emergency alert origination

As the result of an action in clause 16.2.1.5 or upon receiving a request from the MCData user to send an MCData emergency alert, the MCData client shall determine whether or not it is authorised to originate an emergency alert, by following the procedures in clause 6.2.8.1.6.

If the MCData emergency alert origination request is considered an unauthorised request for an MCData emergency alert, the MCData client shall indicate to the MCData user that an MCData emergency alert is not allowed on this group and shall terminate this procedure.

If the request was authorised, but the MCData user has not indicated the identity of the MCData group to receive the emergency alert, the MCData client shall use, in descending order of preference, one of the following: the value of the <uri-entry> element of the <entry> element of the <GroupEmergencyAlert> element of the <Common> element in the MCData user profile, if present; if not, the identity of the MCData group to which the most recent communication or affiliation request was made by the MCData client since last acquiring the MCData service. If an MCData group identity cannot be determined, the MCData client shall indicate the fact to the MCData user and shall terminate this procedure.

The MCData client shall generate a SIP MESSAGE as an out-of-dialog request, in accordance with 3GPP TS 24.229 [5] and IETF RFC 3428 [6], and:

1) shall include the ICSI value "urn:urn-7:3gpp-service.ims.icsi.mcdata" (coded as specified in 3GPP TS 24.229 [5]), in a P-Preferred-Service header field according to IETF RFC 6050 [7] in the SIP MESSAGE request;

2) shall include an Accept-Contact header field with the g.3gpp.icsi-ref media feature tag containing the value of "urn:urn-7:3gpp-service.ims.icsi.mcdata" along with the "require" and "explicit" header field parameters according to IETF RFC 3841 [8];

3) may include a P-Preferred-Identity header field in the SIP MESSAGE request containing a public user identity as specified in 3GPP TS 24.229 [5];

4) shall include an application/vnd.3gpp.mcdata-info+xml MIME body with the <mcdatainfo> element containing the <mcdata-Params> element (see clause D.1) with:

a) the <mcdata-request-uri> element set to the MCData group identity;

b) the <alert-ind> element set to a value of "true";

c) the <mcdata-client-id> element set to the MCData client ID of the originating MCData client; and

d) if the MCData client is aware of active functional aliases and if an active functional alias is to be included in the SIP MESSAGE request, the <functional-alias-URI> element set to the URI of the used functional alias;

5) shall include an application/vnd.3gpp.mcdata-location-info+xml MIME body with a <Report> element included in the <location-info> root element (see clause D.4);

6) shall include in the <Report> element the specific location information configured for the MCData emergency alert location trigger;

7) shall set the MCData emergency state if not already set;

8) shall set the MCData emergency alert state to "MDEA 2: emergency-alert-confirm-pending";

9) shall set the Request-URI to the public service identity identifying the participating MCData function serving the group identity; and

10) shall send the SIP MESSAGE request according to rules and procedures of 3GPP 24.229 [5];

On receiving a SIP 2xx response to the SIP MESSAGE request, the MCData client shall set the MCData emergency alert state to "MDEA 3: emergency-alert-initiated" and shall give the MCData user an indication of success.

On receiving a SIP 4xx response a SIP 5xx response or a SIP 6xx response to the SIP MESSAGE request, the MCData client shall set the MCData emergency alert state to "MDEA 1: no-alert" and shall indicate the failure to the MCData user.

NOTE: If no response is received after an implementation dependent amount of time or if there is an indication of communication failure, the MCData client can inform the user, and can clear the MCData emergency alert state or can retry sending the emergency alert to the MCData participating server. The MCData emergency state is left unchanged, as the MCData user presumably is in the best position to determine whether or not there still is an emergency situation and can use manual clearing, as necessary.

5th change

#### 16.2.1.4 Void

6th change

#### 16.2.1.5 MCData client receives notification of entry into or exit from an emergency alert area

Upon receipt of a "SIP MESSAGE request for notification of entry into or exit from an emergency alert area", the MCData client:

1) if the received SIP MESSAGE request contains an application/vnd.3gpp.mcdata-info+xml MIME body with the <emergency-alert-area-ind> element of the value:

a) set to "true":

i) may display to the MCData user an indication that MCData client has entered a pre-defined emergency alert area; and

ii) shall initiate the emergency alert origination procedure as specified in clause 16.2.1.1 with the clarification that the <mcdata-request-uri> element is set to the group identity value of the <associated-group-id> element if received in the SIP MESSAGE request; or

b) set to "false":

i) may display to the MCData user an indication that MCData client has exited a pre-defined emergency alert area.

NOTE: In this case, the MCData emergency state remains set, as the MCData user is in the best position to determine whether or not they are in a life-threatening condition. The MCData user can clear the MCData emergency state manually, if needed.

2) shall generate a SIP 200 (OK) response according to rules and procedures of 3GPP TS 24.229 [5]; and

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

End of changes