**3GPP TSG-SA WG6 Meeting #63 S6-244450**

**Hyderabad, India, 14th – 18th October 2024 (revision of S6-244279)**

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| *CR-Form-v12.2* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  | **2** | **CR** | **0373** | **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:*** | Update the ad-hoc group call modify procedures | | | | | | | | | |
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| ***Source to WG:*** | Huawei, Hisilicon | | | | | | | | | |
| ***Source to TSG:*** | SA6 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | FRMCS\_Ph5 | | | | |  | ***Date:*** | | | 2024-08-06 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **F** |  | | | | | ***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 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:*** | | In SA6#59, a CR0342 was agreed to allow the authorized MC service user to add/remove participant to an ad hoc group call which is initially setup with the criteria provided by a initiating user, and those added/removed participant will not further being removed/added by the call criteria.  However, in 7.17.3.1.5 and 7.17.3.1.6, there is no such description which may cause the participant added/removed by the authorized user is removed/added by the MC service server based on the call critera. | | | | | | | | |
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| ***Summary of change:*** | | 1. Add new text in 7.17.3.1.4 to capture the MC service server should mark the added/removed participant by the authorized user. 2. Add new text in 7.17.3.1.5 and 7.17.3.1.6 to capture that the participant added/removed by the authorized user SHALL NOT removed/added by the MC service server based on the call critera. | | | | | | | | |
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| ***Consequences if not approved:*** | | The participant added/removed by the authorized user to the ad hoc group call is removed/added by the MC service server based on the call critera. | | | | | | | | |
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| ***Clauses affected:*** | | 7.17.3.1.4, 7.17.3.1.5, 7.17.3.1.6 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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 changes \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

##### 7.17.3.1.4 Modification of ad hoc group data communication participants by an authorized user

Figure 7.17.3.1.4-1 below illustrates the modification of ad hoc group data communication participants procedure by an authorized user.

Pre-conditions:

1. An MCData ad hoc group data communication is already in progress the participants list is provided by the originating MCData user while initiating the MCData ad hoc group data communication.

2. The participants of the MCData ad hoc group call belong to the single MCData system.

3. The MCData users on MCData client 1, MCData client 3 to MCData client n are on an ongoing ad hoc group data communication.

4. The MCData user at MCData client 1 determines to remove the user of MCData client 3 from the ad hoc group data communication and add user of MCData client 2 into the on-going ad hoc group data communication.



Figure 7.17.3.1.4-1: Modification of ad hoc group data communication participants by an authorized user

1. The MCData user at the MCData client 1 is authorized and requests to modify ad hoc group data communication participants. The MCData client 1 sends the modify ad hoc group data session participants request to the MCData server in order to remove MCData client 3 from the ongoing ad hoc group data communication and add MCData client 2 into it.

2. The MCData server verifies whether the MCData client 1 is authorized to add or remove (modify) the participants of the on-going ad hoc group data communication regardless of the original group call setup parameters. When the group participants were initially determined by the MCData server with criteria and MCData users are to be removed, the MCData server removes MCData clients and marks them so that the MCData server will not add them back to the ad hoc group call based on the criteria. Participants to be added shall be marked and kept in the ad hoc group call and shall not be removed by the MCData server even if they do not meet the call criteria.

NOTE 1: In the above case participants being removed can be added back and the participants being added can be removed by the authorized user via the modify ad hoc group call participants request.

3. The MCData server sends modify ad hoc group data session participants response to the MCData client 1.

4. The MCData server sends the ad hoc group data session leave request to the MCData client 3 in order to remove it from the on-going ad hoc group data communication.

5. The MCData client 3 notifies the user of the ad hoc group data session leave request.

6. The MCData client 3 sends the ad hoc group data session leave response to the MCData server.

7. The MCData server sends the ad hoc group data session request towards MCData client 2.

NOTE 2: Steps 8 to 10 can occur at any time following step 3.

8. The receiving MCData client 2 notifies the user about the incoming ad hoc group data communication.

9. The MCData client 2 accepts the ad hoc group data session request and send ad hoc group data session responses to the MCData server. The response may also contain a functional alias of the responding MCData user, which is verified (valid and activated for the user) by the MCData server. The MCData server considers the MCData user as implicitly affiliated to the ad hoc group.

10. The MCData server may notify the initiating MCData user of all the users who are added to the on-going ad hoc group data communication. This notification may be sent to the initiating MCData user by the MCData server more than once during the data communication when MCData users join or leave the ad hoc group data communication.

11. The MCData server may notify the participants about the change in the participants of on-going ad hoc group data communication.

##### 7.17.3.1.5 Modification of ad hoc group data communication participants by the MCData server

Figure 7.17.3.1.5-1 below illustrates the modification of ad hoc group data communication participants procedure by the MCData server.

Pre-conditions:

1. The MCData client 1 is the initiator of the ad hoc group data communication.

2. MCData server determined the participants for the ad hoc group data communication based on the criteria specified by the MCData client 1 while initiating the ad hoc group data communication.

3. MCData server continuously evaluates the criteria to monitor the list of users who meets or not meets the criteria for participating in the on-going ad hoc group data communication.

4. The MCData server detects that the MCData client 5 satisfies the criteria and MCData client 4 stops to meet the criteria specified by the MCData client 1.



Figure 7.17.3.1.5-1: Modification of ad hoc group data communication participants by the MCData server

1. The ad hoc group data communication is established and on-going with the participants MCData client 1, MCData client 2, MCData client 3 and MCData client 4. The participants list is determined by the MCData server based on the criteria specified by the MCData client 1 while initiating the data communication.

2. The MCData server detects that the MCData client 5 satisfies the criteria specified by the MCData client 1 and checks whether it has been previously removed by an authroized user as described in clause 7.17.3.1.4. If MCData client 5 has already been removed by an authroized user, the MCData server does not add it back to the ad hoc group call and it skips step 3 to step 6. If MCData client 5 has not been already removed by an authroized user, the procedure continues with step 3.

3. The MCData server sends the ad hoc group data session request to the MCData client 5.

4. The MCData client 5 notifies the user about the incoming ad hoc group data communication.

5. The MCData client 5 accepts the ad hoc group data session request and sends the ad hoc group data session response to the MCData server.

6. The on-going ad hoc group data communication is updated by adding MCData client 5 which satisfies the criteria specified by the MCData client 1.

7. The MCData server detects that the MCData client 4 is no more satisfying the criteria to be the participant of the ad hoc group data communication and checks whether it has been previously added by an authorized user as described clause 10.17.3.1.4. If MCData client 4 has already been added by an authroized user, the MCData server does not remove it from the ad hoc group call and skips step 8 to step 11. If MCData client 4 has not been already added by an authroized user, the procedure continues with step 8.

8. The MCData server sends the ad hoc group data communication leave request to the MCData client 4 and removes it from the on-going ad hoc group data communication.

9. The MCData client 4 notifies the user of the ad hoc group data session leave request.

10. The MCData client 4 sends the ad hoc group data session leave response to the MCData server.

11. The on-going ad hoc group data communication is updated by removing MCData client 4, which no more satisfies the criteria specified by the MCData client 1.

##### 7.17.3.1.6 Modification of ad hoc group data communication criteria by an authorized user

Figure 7.17.3.1.6-1 below illustrates the modification of ad hoc group data communication criteria procedure by an authorized user.

Pre-conditions:

1. The MCData user 1 at the MCData client 1 is authorized to modify the criteria.

2. Both the MCData server and the MCData client 1 are aware of the criteria related to the ongoing ad hoc group data communication.



Figure 7.17.3.1.6-1: Modification of ad hoc group data communication criteria by an authorized user

1. The MCData user at the MCData client 1 is authorized and requests to modify the criteria for determining the list of participants. The MCData client 1 sends the modify ad hoc group data session criteria request to the MCData server which contains an updated criteria to determine the list of participants.

2. The MCData server verifies whether the MCData client 1 is authorized to modify the criteria which determines the list of participants during on-going ad hoc group data communication. The MCData server determines the list of ad hoc group call participants based on the criteria provided and the added/removed participant by the authorized user as marked in clause 7.17.3.1.4.

If MCData client 3 satisfies the new criteria to be removed and

* has already been added by an authorized user, the MCData server does not remove it from the call and skips the step 4 to step 6.
* has not been alaredy added by an authorized user, the procedure continues with step 4.

If MCData client 2 satisfies the new criteria to be added and

* is the removed participant from the authorized user, the MCData server does not add it back to the call and skips the step 7 to step 9.
* is not the the removed participant from the authorized user, the procedure continues with step 4.

3. The MCData server sends modify ad hoc group data session criteria response to the MCData client 1.

4. The MCData server sends the ad hoc group data session leave request to the MCData client 3 in order to remove it from the on-going ad hoc group data communication.

5. The MCData client 3 notifies the user of the ad hoc group data session leave request.

6. The MCData client 3 sends the ad hoc group data session leave response to the MCData server.

7. The MCData server sends the ad hoc group data session request towards MCData client 2.

NOTE 1: Steps 7 to 9 can occur at any time following step 3.

8. The receiving MCData client 2 notifies the user about the incoming ad hoc group data communication. The MCData server considers the MCData user as implicitly affiliated to the ad hoc group.

9. The MCData client 2 accepts the ad hoc group data session request and send ad hoc group data session responses to the MCData server. The response may also contain a functional alias of the responding MCData user, which is verified (valid and activated for the user) by the MCData server.

10. The MCData server may notify the initiating MCData user of all the users who are added to the on-going ad hoc group data communication. This notification may be sent to the initiating MCData user by the MCData server more than once during the data communication when MCData users join or leave the ad hoc group data communication.

11. The MCData server may notify the authorized participants about the change in the participants list of on-going ad hoc group data communication.

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

NOTE 2: If the ad hoc group call is associated with an ad hoc group emergency alert and the change of criteria caused the modification of ad hoc group call participant list then the ongoing ad hoc group emergency alert is modified accordingly.