**3GPP TSG-SA WG6 Meeting #35 S6-200212**

**Hyderabad, India, 13th - 17th Jan 2020 (revision of S6-200180)**

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| *CR-Form-v12.0* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  | **23.281** | **CR** | **0140** | **rev** | **2** | **Current version:** | **17.1.0** |  |
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| *For* ***[HE](http://www.3gpp.org/3G_Specs/CRs.htm" \l "_blank)******[LP](http://www.3gpp.org/3G_Specs/CRs.htm" \l "_blank)*** *on using this form: comprehensive instructions can be found at  <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:*** | Alignment of functional alias to group binding handling in MCVideo | | | | | | | | | |
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| ***Source to WG:*** | ZTE Trunking, Motorola Solutions | | | | | | | | | |
| ***Source to TSG:*** | S6 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | eMONASTERY2 | | | | |  | ***Date:*** | | | 2020-01-03 |
|  |  | | | |  | |  | | |  |
| ***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-12 (Release 12)* *Rel-13 (Release 13) Rel-14 (Release 14) Rel-15 (Release 15) Rel-16 (Release 16)* | |
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| ***Reason for change:*** | | In last meeting the handling related to functional alias to group binding in MCPTT call procedures are agreed, but the corresponding handling in MCVideo is still missing. | | | | | | | | |
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| ***Summary of change:*** | | Add a reference in call procedures to clarify how functional alias to group binding is achieved beforehand. | | | | | | | | |
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| ***Consequences if not approved:*** | | Misunderstanding that functional alias to group binding is achieved through preconfiguration before call procedures, which may cause confusion in stage 3. | | | | | | | | |
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| ***Clauses affected:*** | | 7.1.2.3.1.1.2, 7.1.2.3.1.2.2, 7.1.2.3.1.2.5 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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 \* \* \* \*

7.1.2.3.1.1.2 Pre-arranged group call setup

The procedure enables the scenario where an MCVideo client is initiating an MCVideo group call with unicast signalling for communicating with the affiliated members of that group.

Procedures in figure 7.1.2.3.1.1.2-1 are the signalling control plane procedures for the MCVideo client initiating establishment of an MCVideo group call with a pre-arranged group i.e., MCVideo users on client 1, client 2 and client 3 belong to the same group which is defined in the group management server.

Pre-conditions:

1. A pre-arranged group is an MCVideo group that is pre-defined with MCVideo group ID and member list in the group management server. All members of the group belong to the same MC system.

2. It is assumed that MCVideo users on MCVideo client 1, MCVideo client 2 and MCVideo client 3 are already registered for receiving MCVideo service and affiliated.

3. The MCVideo client 1 may have an activated functional alias to be used.

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

5. The MCVideo user on MCVideo client 1 may have bound a functional alias to the MCVideo group ID (3GPP TS 23.280 [6]).



Figure 7.1.2.3.1.1.2-1: Pre-arranged group call setup

1. User at MCVideo client 1 would like to initiate an MCVideo group call with a selected group (identified by MCVideo group ID). The MCVideo user at MCVideo client 1 may include a functional alias used within the MCVideo group call.

NOTE 1: The selected functional alias is not changed during the group call, i.e. a MCVideo client uses the same functional alias until the group call is released or the MCVideo client has left the group call.

2. MCVideo client 1 sends a group call request towards the MCVideo server via the SIP core, which hosts the group selected by the user and identified by MCVideo group ID. The group call request also contains the MCVideo group ID and an SDP offer containing the MCVideo client media parameters. If the MC service user of MCVideo client 1 has selected a functional alias, then the group call request contains that functional alias. If there is a transmit media request, then the group call request contains an indication for the implicit transmit media request.

3. MCVideo server checks whether the user of MCVideo client 1 is authorized to initiate a group call for the selected group. If a functional alias is present, the MCVideo server checks whether it is allowed to be used and if it has been activated for the user. If authorized and the group call is ongoing for that MCVideo group ID, the MCVideo server adds the requesting MCVideo client 1 to the existing MCVideo group call and notifies the MCVideo client 1 that the MCVideo group call is already in progress. Otherwise, MCVideo server resolves the MCVideo group ID to determine the members of that group and their affiliation status, based on the information from the group management server.

If the functional alias is provided only in the group call request, or via binding, the MCVideo server proceeds with the value that is provided. If the functional alias is provided in both the group call request and via binding, it is up to the MCVideo server implementation to determine a value for the functional alias to be used.

NOTE 2: MCVideo server can have already retrieved the user/group configuration data and locally cached. If the user/group configuration data is not locally cached on the MCVideo server then MCVideo server requests the user/group configuration data from the MCVideo user database/group management server.

4. MCVideo server includes information that it communicates using MCVideo service, offers the same media parameters or a subset of the media parameters contained in the initial received request and sends the corresponding group call request via the SIP core towards the MCVideo clients of each of those affiliated group members. MCVideo users are notified about the incoming group call and, if present, the functional alias of the initiating MC service user is displayed. The MCVideo server indicates whether acknowledgement is required for the call.

5. The receiving MCVideo clients accept the group call request, and a group call response is sent to the group host MCVideo server. This response may contain an acknowledgement. The conditions for sending acknowledgement may be based on configuration.

6. MCVideo server sends the group call response including the selected media parameters to the MCVideo client 1 through the signalling path to inform about successful call establishment.

NOTE 3: Step 6 can occur at any time following step 4b, and prior to step 7 depending on the conditions to proceed with the call.

7. If the initiating MCVideo user requires the acknowledgement from affiliated MCVideo group members, and the required MCVideo group members do not acknowledge the call setup within a configured time (the "acknowledged call setup timeout"), then the MCVideo server may proceed with or abandon the call and then notify the initiating MCVideo user that the acknowledgements did not include all required members according to group policy. This notification may be sent to the initiating MCVideo user by the MCVideo server more than once during the call when MCVideo users join or leave the MCVideo group call.

8. MCVideo client 1, client 2 and client 3 have successfully established media plane and transmission control for communication.

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

7.1.2.3.1.2.2 Chat group call setup

MCVideo client 1, client 2, and client 3 are served by the home MCVideo service provider in figure 7.1.2.3.1.2.2-1.

Pre-conditions:

1. MCVideo user 2 and MCVideo user 3 have previously joined (affiliated) to the group call. MCVideo client 1, client 2, and client 3 are registered and all users (MCVideo user 1, user 2, and user 3) have been authenticated and authorized to use the MCVideo service.

2. MCVideo client 1, MCVideo client 2 and MCVideo client 3 may have activated functional alias(es) configured to be used during the group call communication. No call is currently in progress for the group.

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

4. The MCVideo user on MCVideo client 1 may have bound a functional alias to the MCVideo group ID (3GPP TS 23.280 [6]).



Figure 7.1.2.3.1.2.2-1: MCVideo chat group call

1. MCVideo user 1 indicates to join the group communication for the group. This may include a transmit media request.

1a. MCVideo client 1 sends a group join request with the MCVideo group ID of the desired group. It contains the MCVideo user's MCVideo ID and the MCVideo client media parameters. The MCVideo user at MCVideo client 1 may include a functional alias used within the MCVideo group join request. If there is a request for media transmission, then the group join request contains an indication of an implicit transmit media request.

1b. The MCVideo server receives the group join request. MCVideo server generates an implicit affiliation (if the MCVideo user is not already affiliated to the group) and verifies that MCVideo user 1 is authorized to affiliate to the group by following the affiliation procedure for MCVideo. If a functional alias is present, the MCVideo server checks whether it is allowed to be used and if it has been activated for the user.

If the functional alias is provided only in the group join request, or via binding, the MCVideo server proceeds with the value that is provided. If the functional alias is provided in both the group join request and via binding, it is up to the MCVideo server implementation to determine a value for the functional alias to be used.

1c. The MCVideo server replies with a group join response indicating the acceptance of the group join request and also returns the MCVideo server selected media parameters for the group call in the group join response.

2. If MCVideo user 1 requests to transmit media by sending transmit media request to MCVideo server, the MCVideo server establishes the media plane (if not already established) for the call.

3. Transmission control will continue to be used by the transmission control participants associated with MCVideo client 1, MCVideo client 2 and MCVideo client 3 for the duration of the call. .If present, the functional alias of MCVideo client 1, MCVideo client 2 and MCVideo client 3 are displayed where appropriate.

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

7.1.2.3.1.2.5 Late entry chat group call, newly joined group member

Procedures in figure 7.1.2.3.1.2.5-1 are those for a group member entering an ongoing MCVideo group call, i.e. performing a late entry.

Pre-conditions:

1. MCVideo user 2 and MCVideo user 3 have previously joined to the group. MCVideo client 1, client 2, and client 3 are registered and all users (MCVideo user 1, user 2, and user 3) have been authenticated and authorized to use the MCVideo service.

2. MCVideo user 1 indicates to join the group communication for the group.

3. MCVideo users using MCVideo client 1 to MCVideo client n may have activated functional alias(es) configured to be used during the group call communication.

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

5. The MCVideo user on MCVideo client 1 may have bound a functional alias to the MCVideo group ID (3GPP TS 23.280 [6]).



Figure 7.1.2.3.1.2.5-1: Late entry of a newly joined group member

1. MCVideo client 1 sends a group join request with the MCVideo group ID of the desired group. It contains the MCVideo user's MCVideo ID and the MCVideo client media parameters. The MCVideo user at MCVideo client 1 may include a functional alias used within the MCVideo group join request. If there is a request to transmit, then the group join request contains an indication of an implicit transmit media request.

2. The MCVideo server receives the group join request. MCVideo server generates an implicit affiliation (if the MCVideo user is not already affiliated to the group) and verifies that MCVideo user 1 is authorized to affiliate to the group. If a functional alias is present, the MCVideo server checks whether it is allowed to be used and if it has been activated for the user.

If the functional alias is provided only in the group join request, or via binding, the MCVideo server proceeds with the value that is provided. If the functional alias is provided in both the group join request and via binding, it is up to the MCVideo server implementation to determine a value for the functional alias to be used.

3. The MCVideo server replies with a group join response indicating the acceptance of the group join request.

4. Media plane between MCVideo client 1 and MCVideo server is established using media plane control signalling.

5. MCVideo users at MCVideo client 2 and MCVideo client 3 may be notified about the MCVideo client 1 joining the group call, and the functional alias of MCVideo client 1 may be displayed.

6. The MCVideo server may send (6a) Media transmission notification to MCVideo client 1, indicating the current transmitter. Alternatively the MCVideo server may send (6b) Transmit media granted, (6b) Transmit media rejected or (6d) Queue position info.

7. Transmission control will continue to be used by the transmission control participants associated with MCVideo client 1, MCVideo client 2 and MCVideo client 3. If present, the functional alias of MCVideo client 1, MCVideo client 2 and MCVideo client 3 are displayed where appropriate.

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