**3GPP TSG-SA WG6 Meeting #37e S6-200651**

**E-meeting, 14th – 26th May 2020 (revision of S6-200555)**

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| *CR-Form-v12.0* |
| **CHANGE REQUEST** |
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|  | **23.281** | **CR** | **0142** | **rev** | **5** | **Current version:** |  |  |
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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:***  | Introducing a functional alias as target address for private video calls |
|  |  |
| ***Source to WG:*** | Nokia, Nokia Shanghai Bell |
| ***Source to TSG:*** | S6 |
|  |  |
| ***Work item code:*** | eMONASTERY2 |  | ***Date:*** | 2020-05-11 |
|  |  |  |  |  |
| ***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 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-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:*** | Introduction of functional alias as target address for private video calls. |
|  |  |
| ***Summary of change:*** | Adding function alias as target address to the information flows and describe the handling of the functional alias within the procedures.Missing information element MCVideo progress indication is added. |
|  |  |
| ***Consequences if not approved:*** | Functional alias not supported for private video calls |
|  |  |
| ***Clauses affected:*** | 7.2.2.2.1, 7.2.2.2.10 (new), 7.2.2.2.11 (new), 7.2.2.3.1, 7.2.2.3.2 |
|  |  |
|  | **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 \* \* \* \*

7.2.2.2.1 MCVideo private call request (MCVideo client – MCVideo server)

Table 7.2.2.2.1-1 describes the information flow MCVideo private call request from the MCVideo client to the MCVideo server.

**Table 7.2.2.2.1-1: MCVideo private call request (MCVideo client – MCVideo server)**

|  |  |  |
| --- | --- | --- |
| **Information Element** | **Status** | **Description** |
| MCVideo ID | M | The MCVideo ID of the calling party |
| Functional alias | O | The functional alias of the calling party |
| MCVideo ID (see NOTE) | O | The MCVideo ID of the called party |
| Functional alias (see NOTE) | O | The functional alias of the called party |
| Transmit media request indication | M | This element indicates whether transmission control will be used for the private call. |
| SDP offer | M | Media parameters of MCVideo client.  |
| Requested commencement mode | O | An indication that is included if the user is requesting a particular commencement mode |
| Implicit transmit media request | O | An indication that the user is also requesting the permission to transmit video |
| Push indication | O | Indicates that the private call request is for a one-to-one push call |
| Pull indication | O | Indicates that the private call request is for a one-to-one pull call |
| Requested priority | O | Application priority level requested for this call |
| NOTE: Either an MCVideo ID or a functional alias shall be present, but not both. |

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

##### 7.2.2.2.10 MCVideo progress indication

Table 7.2.2.2.10-1 describes the information flow MCVideo progress indication from the MCVideo server to the MCVideo client.

Table 7.2.2.2.10-1: MCVideo progress indication information elements

|  |  |  |
| --- | --- | --- |
| Information Element | Status | Description |
| MCVideo ID | M | The MCVideo ID of the calling party |
| MCVideo ID | M | The MCVideo ID of the called party |
| Progress indication | O | Indication to the caller. |

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

##### 7.2.2.2.11 MCVideo functional alias resolution response

Table 7.2.2.2.11-1 describes the information flow MCVideo functional alias resolution response from the MCVideo server to the MCVideo client.

Table 7.2.2.2.11-1: MCVideo functional alias resolution response information elements

|  |  |  |
| --- | --- | --- |
| Information Element | Status | Description |
| MCVideo ID | M | The MCVideo ID of the calling party |
| MCVideo ID | M | The corresponding MCVideo ID of the called functional alias |

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

##### 7.2.2.3.1 Private call setup in automatic commencement mode

The procedure describes the scenario where an MCVideo user is initiating an MCVideo private call for communicating with another MCVideo user, with or without transmission control enabled, in an automatic commencement mode.

Procedures in figure 7.2.2.3.1-1 are the basic signalling control plane procedures for the MCVideo client initiating establishment of MCVideo private call with the chosen MCVideo user.

Pre-conditions:

1. MCVideo users on MCVideo client 1 and MCVideo client 2 are already registered for receiving MCVideo service.

2. The calling MCVideo user has selected automatic commencement mode for the call; or

3. The called MCVideo client is set to automatic commencement mode.

4. Optionally, the MCVideo client 1 may have a functional alias activated to be used.

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

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Figure 7.2.2.3.1-1: Private call setup in automatic commencement mode– MCVideo users in the same MC system

1. User at MCVideo client 1 would like to initiate an MCVideo private call for the chosen MCVideo user. The MCVideo user at MCVideo client 1 may include a functional alias used within the MCVideo private call.

2. MCVideo client 1 sends an MCVideo private call request towards the MCVideo server (via SIP core) using a service identifier as defined in 3GPP TS 23.228 [5] for MCVideo, for establishing a private call with the chosen MCVideo user. The MCVideo private call request contains the MCVideo ID or the functional alias of invited user, an SDP offer containing one or more media types. The MCVideo client 1 may include a Requested commencement mode that indicates that the call is to be established in automatic commencement mode if automatic commencement mode is requested by the initiating user.NOTE 1: As part of this step, MCVideo client 1 and MCVideo client 2 set up a security association (when no functional alias is present), if end-to-end encryption is used for this call.

3. MCVideo server checks whether the MCVideo user at MCVideo client 1 is authorized to initiate the private call, and that MCVideo user at MCVideo client 2 is authorized to receive the private call. MCVideo server verifies whether the provided functional alias, if present, can be used and has been activated for the user. If the MCVideo private call request requested automatic commencement mode then the MCVideo server also checks whether the MCVideo user at MCVideo client 1 is authorized to initiate a private call in automatic commencement mode.

4a. If the MCVideo private call request contains only the functional alias instead of an MCVideo ID for the called party and if end-to-end encryption shall be applied for this call, the MCVideo server shall resolve the functional alias to the corresponding MCVideo ID for which the functional alias is active and responds back the resolved MCVideo ID to MCVideo client 1.

NOTE 2: When a functional alias is shared among multiple MCVideo users, only one target MCVideo user can be target of the private call request. The MCVideo server resolves the associated MCVideo IDs of the functional alias and determines a MCVideo ID by help of criteria not defined here (e.g. location, time etc). This determination can include rejection of the call, if no suitable MCVideo ID is selected.

4b. If the MCVideo server replies with a MCVideo functional alias resolution response message, the MCVideo client 1 sends a new MCVideo private call request towards the resolved MCVideo ID.

NOTE 3: MCVideo client 1 and MCVideo client 2 set up a security association for the media, if end-to-end encryption is used for this call.

5. MCVideo server may provide a progress indication to MCVideo client 1 to indicate progress in the call setup process.

NOTE 4: Step 5 can occur at any time following step 4b, and prior to step 9.

6. If authorized, MCVideo server includes information that it communicates using MCVideo service, offers the same media types or a subset of the media types contained in the initial received request, includes the requested automatic commencement mode indication based on a requested automatic commencement mode by the calling user or based upon the setting of the called MCVideo client and sends the corresponding MCVideo private call request towards the MCVideo client 2, including the MC service ID and, if available the functional alias of the calling MCVideo user 1. If the called MCVideo user has registered to the MCVideo service with multiple MCVideo UEs and has designated the MCVideo UE for receiving the private calls, then the incoming MCVideo private call request is delivered only to the designated MCVideo UE.

7. The receiving MCVideo client 2 notifies the user about the incoming private call. If the functional alias of the calling user is included it is displayed.

8. The receiving MCVideo client 2 accepts the private call automatically, and an MCVideo private call response is sent to the MCVideo server (via SIP core).

9. Upon receiving the MCVideo private call response from MCVideo client 2 accepting the private call request, the MCVideo server informs the MCVideo client 1 about successful call establishment.

10. MCVideo client 1 and MCVideo client 2 have successfully established media plane and transmission control for communication and both users can transmit media.

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

##### 7.2.2.3.2 Private call setup in manual commencement mode

###### 7.2.2.3.2.1 Description

Figure 7.2.2.3.2.2-1 describes the basic procedure for the MCVideo client initiating an MCVideo private call that uses manual commencement mode. The flow may use a transmit media request in the MCVideo private call request indicating that the originator will be granted permission to transmit when the call starts and eliminates the need for a separate initial transmit media request message during media plane establishment. Alternatively the call initiation may be sent without the transmit media request, which allows the called party to transmit media request first.

###### 7.2.2.3.2.2 Procedure

Both clients are served by the primary MC service provider in figure 7.2.2.3.2.2-1.

Pre-conditions:

1. MCVideo client 1 and MCVideo client 2 are both registered and their respective users, MCVideo user 1 and MCVideo user 2, are authenticated and authorized to use the MCVideo service.

2. The calling MCVideo user has selected manual commencement mode or has not specified a commencement mode for the call; and

3. The called MCVideo client is set to manual commencement mode.

4. Optionally, the MCVideo client 1 may have a functional alias activated to be used.

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



Figure 7.2.2.3.2.2-1: MCVideo private call in manual commencement mode– MCVideo users in the same MC system

1. MCVideo user at MCVideo client 1 would like to initiate an MCVideo private call for the selected MCVideo user. The MCVideo user at MCVideo client 1 may include a functional alias used within the MCVideo private call.

2. MCVideo client 1 sends an MCVideo private call request addressed to the MC service ID of MCVideo user 2 using an MCVideo service identifier as defined in 3GPP TS 23.228 [5] (possible for the SIP core to route the request to the MCVideo server). The MCVideo private call request contains the MC service ID or the functional alias of invited user and an SDP offer containing one or more media types. The MCVideo client 1 may include a requested commencement mode that indicates that the call is to be established in manual commencement mode if manual commencement mode is requested by the initiating user.

NOTE 1: As part of this step, MCVideo client 1 and MCVideo client 2 set up a security association (when no functional alias is present), if end-to-end encryption is used for this call.

3. The MCVideo server confirms that both MCVideo users are authorized for the private call. MCVideo server verifies whether the provided functional alias, if present, can be used and has been activated for the user. The MCVideo server checks the commencement mode setting of the called MCVideo client and also checks whether the MCVideo user at MCVideo client 1 is authorized to initiate a call in manual commencement mode.

4a. If the MCVideo private call request contains only the functional alias instead of an MCVideo ID for the called party and if end-to-end encryption shall be applied for this call, the MCVideo server shall resolve the functional alias to the corresponding MCVideo ID for which the functional alias is active and responds back the resolved MCVideo ID to MCVideo client 1.NOTE 2: When a functional alias is shared among multiple MCVideo users, only one target MCVideo user can be target of the private call request. The MCVideo server resolves the associated MCVideo IDs of the functional alias and determines a MCVideo ID by help of criteria not defined here (e.g. location, time etc). This determination can include rejection of the call, if no suitable MCVideo ID is selected.

4b. If the MCVideo server provided the corresponding MCVideo ID, the MCVideo client 1 sends a new MCVideo private call request containing the resolved MCVideo ID.

NOTE 3: MCVideo client 1 and MCVideo client 2 set up a security association for the media, if end-to-end encryption is used for this call.

5. The MCVideo server includes information that it communicates using MCVideo service, offers the same media types or a subset of the media types contained in the initial received request and sends an MCVideo private call request for the call to MCVideo client 2, including the MC service ID, and, if available the functional alias of the calling MCVideo user 1. If the called MCVideo user has registered to the MCVideo service with multiple MCVideo UEs and has designated the MCVideo UE for receiving the private calls, then the incoming MCVideo private call request is delivered only to the designated MCVideo UE.

6. MCVideo server may provide a progress indication to MCVideo client 1 to indicate progress in the call setup process.

NOTE 4: Step 6 can occur at any time following step 4b, and prior to step 7b.

7a. The MCVideo user is alerted. MCVideo client 2 sends an MCVideo ringing to the MCVideo server.

7b. The MCVideo server sends an MCVideo ringing to MCVideo client 1, indicating that MCVideo client 2 is being alerted. If the functional alias of the calling user is included it is displayed.

8. MCVideo user 2 is notified and has accepted the call using manual commencement mode (i.e., has taken some action to accept via the user interface).

9. The MCVideo client 2 sends an MCVideo private call response to the MCVideo server. If MCVideo user 2 has not accepted the incoming call, the MCVideo client 2 sends a call failure response to the MCVideo server without adding reason for call failure.

10. The MCVideo server sends an MCVideo private call response to MCVideo client 1 indicating that MCVideo user 2 has accepted the call, including the accepted media parameters.

11. The media plane and transmission control for communication is established.

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