**3GPP TSG-SA WG6 Meeting #38-e S6-201072**

**e-meeting, 20th – 31st July 2020 (revision of S6-xxxxxx)**

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| *CR-Form-v12.0* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  |  | **CR** |  | **rev** |  | **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:*** | Unicast Media Resume Indication from floor control server to floor participant | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Samsung, FirstNet, Airbus | | | | | | | | | |
| ***Source to TSG:*** | S6 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | enh3MCPTT | | | | |  | ***Date:*** | | | 2020-07-15 |
|  |  | | | |  | |  | | |  |
| ***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 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)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | Currently the MCPTT UE has capability to indicate that the unicast media flow of an ongoing MCPTT group call shall be stopped or shall be resumed.  But as per requirement [R-5.4.2-007] from TS 22.280, the MCX User automatically hears/displays the MCX service emergency group communication.  [R-5.4.2-007] The MCX Service shall ensure that if there is an MCX Service Emergency Group Communication on one of the MCX Service Groups that an MCX User is affiliated to, but that user is already in a lower priority MCX Service Group Communication or Private Communication, that the MCX User automatically hears/displays the MCX Service Emergency Group Communication.  If user has stopped unicast media for an ongoing group call and if the call is upgraded to emergency call – it is required for the MCPTT user to listent to the media. To meet such requirement, it is required for floor control server to indicate floor participant of the MCPTT UE about unicast media resume and also send unicast media for the group call which has been upgraded to emergency call. | | | | | | | | |
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| ***Summary of change:*** | | This contribution brings in new information elements for the unicast media resume indication and procedures for the same. There should be an indication to the floor participant that its request to stop the media is being overridden. | | | | | | | | |
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| ***Consequences if not approved:*** | | The floor participant will not be able to listen unicast media for emergency call which may lead to fatal situation for the person who is in emergency. | | | | | | | | |
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| ***Clauses affected:*** | | 10.9.1.2.17(new), 10.9.1.6 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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:*** | |  | | | | | | | | |

\* \* \* \* \* \* \* FIRST CHANGE \* \* \* \* \* \* \*

##### 10.9.1.2.17 Unicast media resume indication

Table 10.9.1.2.17-1 describes the information flow unicast media resume indication from the floor control server to the floor participant, which is used by the floor control server to indicate to floor participant that the unicast media flow of the designated communication is being resumed.

Table 10.9.1.2.17-1: Unicast media resume indication

|  |  |  |
| --- | --- | --- |
| Information element | Status | Description |
| MCPTT ID | M | MCPTT user identity to whom media is being resumed |
| Source identifier | O | Identifies the communication whose media flow is to be resumed, e.g. by identifying the media flow within a media multiplex, present only if media multiplexing |
| Acknowledgement required | O | Indicates if acknowledgement from the floor participant is required |
| Resume reason | O | This element indicates the reason for media resume by the floor control server |

\* \* \* \* \* \* \* SECOND CHANGE \* \* \* \* \* \* \*

#### 10.9.1.6 Unicast media stop and resume requests

Figure 10.9.1.6-1 shows the procedure for a floor participant to indicate to the floor control server that the unicast media flow of an active MCPTT group call can be stopped.

Pre-condition:

1. An MCPTT session is established between MCPTT client A and MCPTT server for an MCPTT group call. Other participants to the call are not shown in the figure for simplicity.

2. The floor control is established between the floor participant and the floor control server.



Figure 10.9.1.6-1: Unicast media stop request during an MCPTT session

1. Another floor participant has requested and has been granted the floor. The floor control server sends a floor taken message to floor participant A. The floor taken message may include an identifier of the associated media flow.

2. Floor control server sends the voice media flow to floor participant A over unicast.

3. Floor participant A gets the information, e.g. from the user, that media for the call is not needed.

4. Floor participant A sends a unicast media stop request to floor control server, identifying the media flow to be stopped.

5. Floor control server stops sending that unicast media flow to floor participant A. Associated bearer resources may be de-allocated by the MCPTT server.

Figure 10.9.1.6-2 shows the procedure for a floor participant to request from the floor control server that the unicast media flow of an active MCPTT group call be restarted.

Pre-condition:

1. An MCPTT session is established between MCPTT client A and MCPTT server for an MCPTT group call. Other participants to the call are not shown in the figure for simplicity

2. The floor control is established between the floor participant and the floor control server.

3. Floor participant A has previously indicated to the floor control server that unicast media flow for that call should be stopped, using the procedure described in Figure 10.9.1.6-1.



Figure 10.9.1.6-2: Unicast media resume request during an MCPTT session

1. Another floor participant has requested and has been granted the floor. The floor control server sends a floor taken message to floor participant A. The floor taken message may include an identifier of the associated media flow.

2. Floor participant A gets the information, e.g. from the user, that media for the call is needed again.

3. Floor participant A sends a unicast media resume request to floor control server, identifying the media flow to be re-started.

4. Floor control server starts sending that unicast media flow to floor participant A. This may need new bearer resources to be allocated.

Figure 10.9.1.6-3 shows the procedure for a floor control server to indicate the resumption of the unicast media flow towards floor participants in case the MCPTT session between MCPTT client A and MCPTT server is upgraded to emergency.

Pre-condition:

1. An MCPTT session is established between MCPTT client A and MCPTT server for an MCPTT group call. Other participants to the call are not shown in the figure for simplicity

2. The floor control is established between the floor participant and the floor control server.

3. Floor participant A has previously indicated to the floor control server that unicast media flow for that call should be stopped, using the procedure described in Figure 10.9.1.6-1.



Figure 10.9.1.6-3: Unicast media resume indication by Floor control server during an MCPTT session

1. The floor control server decides to resume unicast media transmission to floor participant A. The decision of the floor control to resume the media transmission could be based on implementation specific logic (e.g. another floor participant in the MCPTT session has requested to upgrade the session to an emergency session).

2. Floor control server sends a unicast media resume indication to floor participant A identifying the media flow to be re-started.

3. Floor participant A sends a floor acknowledgement if indicated to do so by the unicast media resume indication message.

4. Floor control server starts sending that unicast media flow to floor participant A. This may need new bearer resources to be allocated.

NOTE 1: The identifier of the flow to be stopped or resumed is known by the floor participant from the floor control information flows associated with that MCPTT session.

NOTE 2: Stopping a media flow is not leaving the session and subsequent floor control messages will still be sent by the floor control server to the floor participant which has requested a unicast media stop.

NOTE 3: Both requests have no effect on a possible ongoing transmission of the media flow over MBMS. In particular, they are not interpreted by the MCPTT server as MBMS listening status reports.