**3GPP TSG-SA WG6 Meeting #38-e S6-201179**

**e-meeting, 20th – 31st July 2020 (revision of S6-201099)**

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| *CR-Form-v12.0* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  | **23.283** | **CR** | **0054** | **rev** | **1** | **Current version:** | **17.1.0** |  |
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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 |  | Radio Access Network |  | Core Network | **X** |

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| ***Title:*** | Interworking private call floor control | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Motorola Solutions | | | | | | | | | |
| ***Source to TSG:*** | S6 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | eMCCI | | | | |  | ***Date:*** | | | 2020-07-15 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **A** |  | | | | | ***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:*** | | Interworking floor control does not explicitly cover private call, and all references and scenarios describe group call only. It is necessary to explicitly extend coverage to private call to ensure that private call scenarios are specified in stage 3, and to allow LMR standards organizations to develop compatible interworking standards that include private call as well as group call.  Requirements for floor control filtering in a private call need to be described.  An error in the description of information flows is misleading and needs to be corrected. | | | | | | | | |
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| ***Summary of change:*** | | Expand floor control descriptive sections to include private call, and correct errored descriptive text. Add two example procedures of floor control in private call. | | | | | | | | |
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| ***Consequences if not approved:*** | | Specification does not explicitly cover floor control in interworking private calls, leading to risk of omission in stage 3 specifications, and blocking other standards bodies developing equivalent LMR interworking standards. | | | | | | | | |
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| ***Clauses affected:*** | | 10.5.1, 10.5.3, 10.5.x (new), 10.5.y (new) | | | | | | | | |
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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 is the Rel-17 mirror CR to TS 23.283 CR 0053 (Rel-16) | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

\* \* \* First Change \* \* \*

## 10.5 Floor control

### 10.5.1 General

Floor control for interworking applies to both private call and group call.

Floor control involving a single MCPTT server is described in 3GPP TS 23.379 [7]. Floor control involving multiple MCPTT servers is also described in 3GPP TS 23.379 [7] in that a primary MCPTT server is interconnected to a partner MCPTT server. Subclause 10.5.2 describes information flows for floor control between an MCPTT server and an IWF, and are based on those defined for interconnection in 3GPP TS 23.379 [7]. Subclause 10.5.3 describes aspects of floor control that apply to interworking groups and interworking private calls. Subclauses 10.5.4/10.5.6 and 10.5.5/10.5.7 describe general cases of floor control on an interworking group defined in the LMR system and in the MCPTT system respectively, where the partner system has been configured to apply/not apply local filtering of floor control requests before communicating with the primary system. Subclauses 10.5.x and 10.5.y describe general cases of floor control in a private call, where the controlling role is taken by the LMR system and the MCPTT system respectively.

\* \* \* Second Change \* \* \*

### 10.5.3 Interworking floor control

3GPP TS 23.379 [7], subclause 10.9.1.4.1 describes floor control involving groups in multiple MCPTT systems where floor control arbitration resides with the primary MCPTT server and all floor control messages are routed to that primary MCPTT server. The group is homed on the primary MCPTT server.

An interworking group can be homed on the MCPTT server or on the LMR system. When the group is homed on the MCPTT server the floor control server is on this MCPTT server. When the group is homed on the LMR system the floor control server is represented by the IWF.

The primary MCPTT system of an MCPTT group is defined by configuration and identified by the MC service group ID.

3GPP TS 23.379 [7], subclause 10.9.1.4.2 describes floor control involving groups in multiple MCPTT systems where the partner MCPTT system filters its MCPTT users' floor requests before communicating with the floor control server of the primary MCPTT system. When an MCPTT system is interworking with an IWF, depending on where the group is homed the MCPTT server, or the IWF can filter floor control requests in the same way as an interconnected MCPTT system.

In a private call, one of the IWF or MCPTT server acts as the controlling floor control server within the call, and manages arbitration of floor control requests received from both users in the call. The entity (MCPTT server or IWF) that does not fulfil the controlling role shall send all floor control requests from its served call participant to the controlling floor control server without filtering.

NOTE: Allocation of controlling floor control server functionality to the MCPTT server or IWF may be according to the system within which the call originated, or by some other means.

\* \* \* Third Change \* \* \*

### 10.5.x Floor control in private call controlled by the LMR system

Figure 10.5.x‑1 shows a procedure for a private call with floor control where the LMR system controls the floor. A request for transmission by the MCPTT user while the LMR user has the floor is rejected by the IWF, to show various aspects of interworking floor control.

Pre-conditions:

1. A private call has been set up between an LMR user and MCPTT client 1.

2. The LMR system is controlling the floor, via the IWF.

3. MCPTT client 1 has the floor.



Figure 10.5.x-1: Floor control with control by the LMR system

1. The user of MCPTT Client 1 finishes transmission and MCPTT client 1 releases the floor.

2. The MCPTT server informs the IWF of the floor release.

3. The IWF indicates that the floor is now idle.

4. MCPTT client 1 is informed that the floor is idle.

5. The IWF indicates that the floor has been taken by the LMR user.

6. The MCPTT server informs MCPTT client 1 that the floor has been taken by the LMR user.

7. Media flows from the LMR user to the IWF (7a) and on to MCPTT client 1 (7b).

8. The user of MCPTT client 1 decides to interrupt the transmission from the LMR user.

9. MCPTT Client 1 sends a floor request with an appropriate priority to request interruption of the transmission from the LMR user.

10. The MCPTT server forwards the floor request to the IWF.

11. The LMR system rejects the request, and the IWF informs the MCPTT server of the rejection.

NOTE: The reason that the request is rejected is outside the scope of the present document.

12. The MCPTT server informs MCPTT client 1 that the request for interruption has been rejected.

\* \* \* Fourth Change \* \* \*

### 10.5.y Floor control in private call controlled by the MCPTT system

Figure 10.5.y‑1 shows a procedure for a private call with floor control where the MCPTT system controls the floor. A request for transmission by the LMR user while the MCPTT user has the floor is accepted by the MCPTT server, to show various aspects of interworking floor control.

Pre-conditions:

1. A private call has been set up between the LMR user and MCPTT client 1.

2. The MCPTT server is controlling the floor.

3. The floor is idle.



Figure 10.5.y-1: Floor control with control by the MCPTT system

1. MCPTT Client 1 requests the floor.

2. The MCPTT server grants the floor to MCPTT Client 1.

3. The MCPTT server informs the IWF that the floor has been granted to MCPTT client 1.

NOTE 1: Step 3 may occur before or after step 2.

4. MCPTT client 1 sends voice media to the MCPTT server (4a) which forwards the voice media to the IWF (4b).

5. The LMR user decides to interrupt the transmission from MCPTT client 1, and the IWF is informed.

6. The IWF sends a floor request to the MCPTT server with sufficient priority to interrupt MCPTT client 1.

7. The MCPTT server decides to allow the interruption from the LMR user, based on the priority of the request and on configuration.

8. The MCPTT server informs MCPTT Client 1 that the transmission permission has been revoked.

9. The floor is granted to the LMR user via the IWF.

NOTE 2: Step 9 may occur before or after step 8.

10. Voice media is sent from the LMR user via the IWF to the MCPTT server (10a) and on to MCPTT client 1 (10b).