**3GPP TSG-SA WG6 Meeting #38-e S6-201015**

**Online, 20th – 31st July 2020**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.0* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **23.379** | **CR** | **0263** | **rev** |  | **Current version:** | **17.3.2** |  |
|  | | | | | | | | |
| *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)*.* | | | | | | | | |
|  | | | | | | | | |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Proposed change affects:*** | UICC apps |  | ME | **x** | Radio Access Network |  | Core Network | **x** |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | |
| ***Title:*** | MCPTT private call transfer to a functional alias as a target | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Kontron Transportation France | | | | | | | | | |
| ***Source to TSG:*** | S6 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | eMONASTERY2 | | | | | e | ***Date:*** | | | 2020-07-14 |
|  |  | | | |  | |  | | |  |
| ***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:*** | | The current specification for call transfer does not support functional alias as target | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Information flows related to call transfer of MCPTT private calls are enhanced to support a functional alias as target of the call transfer, as well as the existing MCCPT ID. The procedures for MCPTT private call transfer are changed so that they perform the translation of a functional alias to the corresponding MCPTT ID if the target of the call transfer is a functional alias. Additionally the naming got changed from redirection to transfer. The changes required to support call transfer with functional alias as a target in table A.3-2 are included in CR 0262. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | No support for functional alias as target for MCPTT private call transfer. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 10.7.2.1.1, 10.7.6.1.1, 10.7.6.2.1, 10.7.6.2.2 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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 \* \* \* \*

##### 10.7.2.1.1 MCPTT private call request (MCPTT client to MCPTT server)

Table 10.7.2.1.1-1 describes the information flow MCPTT private call request from the MCPTT client to the MCPTT server.

Table 10.7.2.1.1-1: MCPTT private call request (MCPTT client to MCPTT server) information elements

|  |  |  |
| --- | --- | --- |
| Information Element | Status | Description |
| MCPTT ID | M | The MCPTT ID of the calling party |
| Functional alias | O | The functional alias of the calling party |
| MCPTT ID (see NOTE) | O | The MCPTT ID of the called party |
| Functional alias (see NOTE) | O | The functional alias of the called party |
| Use floor control indication | M | This element indicates whether floor control will be used for the private call. |
| SDP offer | O | Media parameters of MCPTT client. |
| Requested commencement mode | O | An indication that is included if the user is requesting a particular commencement mode |
| Implicit floor request | O | An indication that the user is also requesting the floor. |
| Location information | O | Location of the calling party |
| Requested priority | O | Application priority level requested for this call |
| Transfer indicator | O | Indicates that the MCPTT private call request is a result of a call transfer (true/false) |
| Forwarding indicator | O | Indicates that the MCPTT private call request is a result of a call forwarding.(true/false) |
| NOTE: At least one identity must be present. | | |

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

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

##### 10.7.6.1.1 MCPTT private call transfer request (MCPTT client – MCPTT server)

Table 10.7.6.1.1-1 describes the information flow MCPTT private call transfer request from the MCPTT client to the MCPTT server.

Table 10.7.6.1.1-1: MCPTT private call transfer request (MCPTT client to MCPTT server) information elements

|  |  |  |
| --- | --- | --- |
| Information Element | Status | Description |
| MCPTT ID | M | The MCPTT ID of the party requesting the transfer |
| MCPTT ID (see NOTE) | O | The MCPTT ID of the target of the transfer |
| Functional alias (see NOTE) | O | The functional alias of the target of the transfer |
| NOTE: One identity shall be present | | |

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

##### 10.7.6.2.1 MCPTT private call unannounced transfer

The procedure for MCPTT private call unannounced transfer covers the case where an MCPTT client requests an ongoing MCPTT private call (with or without floor control) to be transferred to another MCPTT user without prior announcement.

Figure 10.7.6.2.1-1 below illustrates the procedure for MCPTT private call unannounced transfer.

Pre-conditions:

1. MCPTT client 2 is authorized to use call transfer.

2. MCPTT client 1 is authorized to make private calls to client 2.

3. MCPTT client 2 is authorized to transfer private calls to MCPTT client 3.

4. MCPTT client 1 has the necessary security information to initiate a private call with MCPTT client 2 and MCPTT client 3 if end2end encryption is required for the private call.



Figure 10.7.6.2.1-1: MCPTT private call unannounced transfer

1. MCPTT client 1 initiates an MCPTT private call to MCPTT client 2 using the normal MCPTT call establishment procedures (10.7.2.2). The user at MCPTT client 1 can talk with the user at MCPTT client 2.

2. Now the MCPTT user at MCPTT client 2 decides to perform a call transfer.

3. The MCPTT client 2 sends an MCPTT call transfer request to the MCPTT server.

4. The MCPTT server verifies that MCPTT client 2 is authorized to transfer the MCPTT private call to MCPTT client 3. If the target of the MCPTT private call transfer is a functional alias instead of an MCPTT ID the MCPTT server resolves the functional alias to the corresponding MCPTT ID for which the functional alias is active.

NOTE 1: If the MCPTT server detects that the functional alias used as the target of the MCPTT private call transfer is simultaneously active for multiple MCPTT users, then the MCPTT server can proceed by selecting an appropriate MCPTT ID based on some selection criteria. The selection of an appropriate MCPTT ID is left to implementation. The selection criteria can include rejection of the call, if no suitable MCPTT ID is selected.

NOTE 2: The authorization check in step 4 verifies that the MCPTT user at MCPTT client 2 is allowed to transfer private calls to the MCPTT user at MCPTT client 3.

5. If the authorization check fails, or the target of the forwarding is a functional alias that is not active, or the the target of the forwarding is a functional alias that is simultaneously active active by multiple users and the outcome of the selection is a rejection, the MCPTT private call transfer is cancelled, and the MCPTT server sends an MCPTT private call transfer response with result “fail” back to MCPTT client 2. The MCPTT private call between MCPTT client 1 and MCPTT client 2 remains up. Otherwise the MCPTT server sends an MCPTT private call transfer response with result “success” back to MCPTT client 2, and the procedure continues..

6. If authorized, the MCPTT server performs a server initiated private call release of the call between MCPTT client 1 and MCPTT client 2 (10.7.2.2.3.2).

7. The MCPTT server sends an MCPTT call transfer request towards the MCPTT client 1.

8. The user at MCPTT client 1 is notified that a call transfer is in progress.

9. MCPTT client 1 sends an MCPTT call transfer response back to the MCPTT server.

10. MCPTT client 1 sends an MCPTT private call request towards the MCPTT server that includes a call transfer indication set to true.

11. The MCPTT server verifies that client 1 is authorized to perform the MCPTT private call as a result of the MCPTT private call transfer request based on the fact that the transfer indication is present and set to true in the MCPTT private call request.

NOTE 3: For call transfer the MCPTT server does not check if the initial originating MCPTT user at MCPTT client 1 is authorized to make an MCPTT private call to the final target MCPTT user at MCPTT client 3.

12. The MCPTT server sends an MCPTT call request to MCPTT client 3.

13. The user at MCPTT client 3 is notified about the incoming call.

14. MCPTT client 3 sends an MCPTT private call response back to the MCPTT server.

15. The MCPTT server forwards the MCPTT private call response towards client 1.

16. The media plane for communication between client 1 and 3 is established.

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

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

##### 10.7.6.2.2 MCPTT private call announced transfer

The procedure for MCPTT private call announced transfer covers the case where an MCPTT client requests an ongoing MCPTT private call (with or without floor control) to be transferred to another MCPTT user with prior announcement.

Figure 10.7.6.2.2-1 below illustrates the procedure for MCPTT private call announcedtransfer.

Pre-conditions:

1. MCPTT client 2 is authorized to use calltransfer.

2. MCPTT client 1 is authorized to make private calls to client 2.

3. MCPTT client 2 is authorized to make private calls to client 3.

4. MCPTT client 2 is authorized to transfer private calls to MCPTT client 3.

5. MCPTT client 2 supports simultaneous sessions for MCPTT calls (10.8).

6. MCPTT client 1 has the necessary security information to initiate a private call with MCPTT client 2 and MCPTT client 3, and MCPTT client 2 has the necessary security information to initiate a private call with MCPTT client 3 if end2end encryption is required for the private call.



Figure 10.7.6.2.2-1: MCPTT private call announced transfer

1. MCPTT client 1 initiates an MCPTT private call to MCPTT client 2 using the normal MCPTT call establishment procedures (10.7.2.2). The user at MCPTT client 1 can talk with the user at MCPTT client 2. The user at MCPTT client 2 decides to transfer the call.

2. The MCPTT user at MCPTT client 2 puts the call locally on hold.

3. MCPTT client 2 initiates an MCPTT private call to MCPTT client 3 using the normal MCPTT call establishment procedures (10.7.2.2).

4. The user at MCPTT client 2 can talk with the user at MCPTT client 3 and announce the call transfer.

5. The MCPTT client 2 releases the MCPTT private call with MCPTT client 3 using the normal MCPTT call release procedure (10.7.2.2.3.1).

6. Optionally the MCPTT user at MCPTT client 2 puts the call with client 1 locally off hold and confirms that the call will be transferred.

7. Now the MCPTT user at MCPTT client 2 decides to perform a call transfer.

8. The MCPTT client 2 sends an MCPTT call transfer request to the MCPTT server.

9. The MCPTT server verifies that MCPTT client 2 is authorized to transfer the MCPTT private call to MCPTT client 3. If the target of the MCPTT private call transfer is a functional alias instead of an MCPTT ID the MCPTT server resolves the functional alias to the corresponding MCPTT ID for which the functional alias is active.

NOTE 1: If the MCPTT server detects that the functional alias used as the target of the MCPTT private call transfer is simultaneously active for multiple MCPTT users, then the MCPTT server can proceed by selecting an appropriate MCPTT ID based on some selection criteria. The selection of an appropriate MCPTT ID is left to implementation. The selection criteria can include rejection of the call, if no suitable MCPTT ID is selected.

NOTE 2: The authorization check in step 9 verifies that the MCPTT user at MCPTT client 2 is allowed to transfer private calls to the MCPTT user at MCPTT client 3.

10. The MCPTT server sends an MCPTT private call transfer response back to MCPTT client 2 indicating the outcome of the verification.

11. If authorized, the MCPTT server performs a server initiated private call release of the call between MCPTT client 1 and MCPTT client 2 (10.7.2.2.3.2).

12. The MCPTT server sends an MCPTT call transfer request towards the MCPTT client 1.

13. The user at MCPTT client 1 is notified that a call transfer is in progress.

14. MCPTT client 1 sends an MCPTT call transfer response back to the MCPTT server.

15. MCPTT client 1 sends an MCPTT private call request towards the MCPTT server that includes a call transfer indication set to true.

16. The MCPTT server verifies that client 1 is authorized to perform the MCPTT private call as a result of the MCPTT private call transfer request based on the fact that the transfer indication is present and set to true in the MCPTT private call request.

NOTE 3: For call transfer the MCPTT server does not check if the initial originating MCPTT user at MCPTT client 1 is authorized to make an MCPTT private call to the final target MCPTT user at MCPTT client 3.

17. The MCPTT server sends an MCPTT call request to MCPTT client 3.

18. The user at MCPTT client 3 is notified about the incoming call.

19. MCPTT client 3 sends an MCPTT private call response back to the MCPTT server.

20. The MCPTT server forwards the MCPTT private call response towards client 1.

21. The media plane for communication between client 1 and 3 is established.

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

\* \* \* End of Changes \* \* \* \*