**3GPP TSG-SA WG6 Meeting #68S6-253477**

**Gothenburg, Sweden 25th – 29th August 2025 (revision of S6-253016)**

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| *CR-Form-v12.3* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **23.379** | **CR** | **0473** | **rev** | **1** | **Current version:** | **19.7.0** |  |
|  | | | | | | | | |
| *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:*** | Adding functional alias to the ad hoc group call request and ad hoc group call notification | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Kontron Transportation France, Nokia | | | | | | | | | |
| ***Source to TSG:*** | SA6 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | FRMCS\_Ph5 | | | | |  | ***Date:*** | | | 2025-07-30 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **F** |  | | | | | ***Release:*** | | | Rel-19 |
|  | *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-17 (Release 17) Rel-18 (Release 18) Rel-19 (Release 19)  Rel-20 (Release 20)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | The requirement [R-6.15.5.2-001c] from 3GPP TS 22.280 is currently not covered correctly by stage 2 in 3GPP TS 23.379:  [R-6.15.5.2-001c] The MCX Service shall provide a mechanism for the participant of an Ad hoc Group Communication to determine the Functional Alias, through which this participant is addressed by the communication.  This CR addresses the case when criteria is used by the MCPTT server to select the ad hoc group participants for the ad hoc group call and, in addition, the MCPTT server selects those participants by their activated functional alias.  Additionally, it adds the functional alias to the Ad hoc group call notify information flow, and in the affected procedures as this is highly important information for FRMCS. Depending on local policy the value of the the functional alias sent in the notify is the value of the functional alias sent in the outgoing call request message (called functional alias), or the one received in the incoming call response (connected functional alias).  This CR adds the missing functionality to cover the stage 1 requirements | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | 10.19.2.4: Add optionally the functional alias of the MCPTT user towards which the request is sent  10.19.2.10: Add optionally the functional alias of the list of MCPTT IDs  10.19.2.19: Add optionally the functional alias of the list of MCPTT IDs  10.19.3.1.3: Add that the MCPTT server determines the list of MCPTT IDs, and if applicable the corresponding functional aliases of these users  10.19.3.2.3: Add that the MCPTT server determines the list of MCPTT IDs, and if applicable the corresponding functional aliases of these users | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Stage 1 requirement to provide a mechanism for the participant of an ad hoc group communication to determine the functional alias, through which this participant is addressed by the communication is not fulfilled. Information sent in the notification to authorized users is incomplete | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 10.19.2.4, 10.19.2.10, 10.19.2.19, 10.19.3.1.3, 10.19.3.2.3 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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 \* \* \* \*

#### 10.19.2.4 Ad hoc group call request (MCPTT server – MCPTT client)

Table 10.19.2.4-1 describes the information flow ad hoc group call request from the MCPTT server to the MCPTT client.

Table 10.19.2.4-1: Ad hoc group call request information elements

|  |  |  |
| --- | --- | --- |
| Information Element | Status | Description |
| MCPTT ID | M | The MCPTT ID of the calling party |
| MCPTT ID | M | The identity of the MCPTT user towards which the request is sent |
| Functional alias | O | The functional alias of the calling party |
| Functional alias | O | The functional alias of the MCPTT user towards which the request is sent |
| MCPTT ad hoc group ID | M | The MCPTT group ID to be associated with the ad hoc group call |
| SDP offer | M | Offered Media parameters of MCPTT server |
| Broadcast indicator  (see NOTE 1) | O | Indicates that the ad hoc group call request is for a broadcast ad hoc group call |
| Imminent peril indicator (see NOTE 1) | O | Indicates that the ad hoc group call request is an MCPTT imminent peril ad hoc group call |
| Emergency Indicator (see NOTE 1) | O | Indicates that the ad hoc group call request is an MCPTT emergency ad hoc group call |
| Preconfigured MCPTT group ID | O | Group identity whose configuration is to be applied for this ad hoc group call. |
| Location information  (see NOTE 2) | O | Location of the calling party |
| Call resulting criteria for determining the participants | O | Carries the details of criteria or meaningful label identifying the criteria or the combination of both that the MCPTT server used for determining the participants e.g., it can be a location based criteria to invite participants in a particular area |
| NOTE 1: If used, only one of these information elements is present.  NOTE 2: This information element can be used if either the imminent peril or the emergency indicator is set. | | |

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

#### 10.19.2.10 Ad hoc group call notify (MCPTT server – MCPTT client)

Table 10.19.2.10-1 describes the information flow ad hoc group call notify from MCPTT server to MCPTT client.

Table 10.19.2.10-1: Ad hoc group call notify

|  |  |  |
| --- | --- | --- |
| Information element | Status | Description |
| MCPTT ID | M | The MCPTT ID of ad hoc group call participant |
| Functional alias | O | The associated functional alias of the MCPTT user of the ad hoc group call participant |
| MCPTT ad hoc group ID | M | The MCPTT group ID associated with the ad hoc group call |
| MCPTT ID list | O | The list of the invited MCPTT users who did not acknowledge the ad hoc group call request within a configured time or the list of the invited MCPTT users who acknowledged the ad hoc group call request and joined or the list of the MCPTT users who joined or left the ongoing MCPTT ad hoc group call. |
| List of functional aliases (see NOTE) | O | The list of functional aliases corresponding to each MCPTT user listed in the MCPTT ID list. |
| Call resulting criteria for determining the participants | O | Carries the details of criteria or meaningful label identifying the criteria or the combination of both that the MCPTT server used for determining the participants e.g., it can be a location based criteria to invite participants in a particular area. |
| NOTE: This information element is only present if the MCPTT ID list is present | | |

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

#### 10.19.2.19 Ad hoc group call get userlist response (MCPTT server – MCPTT server)

Table 10.19.2.19-1 describes the information flow ad hoc group call get userlist response between MCPTT servers.

Table 10.19.2.19-1: Ad hoc group call get userlist response

|  |  |  |
| --- | --- | --- |
| Information element | Status | Description |
| MCPTT ad hoc group ID | M | The associated MCPTT group ID of the ad hoc group call |
| MCPTT ID list | M | List of MCPTT IDs meeting the criteria specified in the ad hoc group call get userlist |
| List of functional aliases | O | The list of functional aliases corresponding to each MCPTT user listed in the MCPTT ID list as determined by the MCPTT server |

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

##### 10.19.3.1.3 Ad hoc group call setup with MCPTT server determining the participants lists

Figure 10.19.3.1.3-1 below illustrates the ad hoc group call setup procedure initiated by the MCPTT user and MCPTT client 1 wherein the list of participants is determined by the MCPTT server based on the criteria received from the MCPTT client.

Pre-conditions:

1. The MCPTT user at MCPTT client 1 is authorized to initiate ad hoc group call.

2. The MCPTT user at MCPTT client 1 wants to invite MCPTT users who are satisfying certain criteria for the ad hoc group call.



Figure 10.19.3.1.3-1: Ad hoc group call participants determined by MCPTT server

1. User at MCPTT client 1 would like to initiate an ad hoc group call in-order to invite the participants satisfying specific criteria. The MCPTT client 1 initiates the ad hoc group call by sending the ad hoc group call request containing the details of the criteria to be applied by the MCPTT server for determining the participant list. If end-to-end encryption is supported, the Encryption supported information element shall be set to true and pre-configured MCPTT group whose configuration is to be applied is included. An SDP offer containing the MCPTT client media parameters is included. If there is a floor request to transmit, then the ad hoc group call request contains an indication of an implicit floor request. If the MCPTT user of MCPTT client 1 has selected a functional alias, then the ad hoc group call request contains that functional alias. If the ad hoc group call request contains an implicit floor request it may also include location information.

If the MCPTT user at MCPTT client 1 initiates an MCPTT emergency ad hoc group call or the MCPTT emergency state is already set for the MCPTT client 1 (due to a previously triggered MCPTT emergency alert):

i. the MCPTT ad hoc group call request shall contain an emergency indicator;

ii. if the MCPTT emergency state is not set already, MCPTT client 1 sets its MCPTT emergency state. The MCPTT emergency state of MCPTT client 1 is retained until explicitly cancelled by the user of MCPTT client 1.

2. If the ad hoc group call is supported, the MCPTT server verifies whether the user at MCPTT client 1 is authorized to initiate an ad hoc group call. If not authorized, the MCPTT server rejects the ad hoc group call request as specified in the step 3. The MCPTT server accepts the ad hoc group call request if the ad hoc group call is supported and authorized.

If functional alias is present, the MCPTT server checks whether the provided functional alias is allowed to be used and has been activated for the user.

If location information was included in the ad hoc group call request, the MCPTT server checks the privacy policy of the MCPTT user to decide if the location information of MCPTT client 1 can be provided to other users on the call (refer to Annex A.3 "Authorisation to provide location information to other MCPTT users on a call when talking").

If an emergency indicator is present in the received MCPTT ad hoc group call request, the MCPTT ad hoc group is considered to be in the in-progress emergency state until this ad hoc group call is terminated; and

If an imminent peril indicator is present in the received MCPTT ad hoc group call request, the MCPTT ad hoc group is considered to be in the in-progress imminent peril state until this ad hoc group call is terminated.

If the information received in the request in step 1 does not contain an ad hoc group ID from an ad hoc group emergency alert, the MCPTT server forms the ad hoc group by using received information, and determines the preconfigured group to be used for the configuration of the ad hoc group. The MCPTT server assigns a MCPTT group ID for the newly formed ad hoc group. Further, the ad hoc group participants are included to ad hoc group once determined as specified in the step 4.

3. The MCPTT server shall send the ad hoc group call request return message to MCPTT client 1 containing the below:

i. The MCPTT ad hoc group ID, either generated by the MCPTT server, if not included in the ad hoc group call request of step 1, or if the provided MCPTT ad hoc group ID is not accepted by the MCPTT server, or provided by the MCPTT client 1 if the ad hoc group ID is from an ad hoc group emergency alert;

ii. The group ID of the pre-configured group to be used for the ad hoc group communication (only included when the ad hoc group data session is authorized); and

iii. Result of whether the ad hoc group call is authorized or not

If the ad hoc group call request is not authorized, the MCPTT server and MCPTT client 1 shall not proceed with the rest of the steps.

4. The MCPTT server determines the list of MCPTT IDs and, if applicable the corresponding functional aliases of the participants to be invited for the ad hoc group call based on the information present in the information element Criteria for determining the participants. This information element could carry either criteria or indicator identifying pre-defined criteria or a combination of both. Depending on the criteria provided and based on local policy, the MCPTT server may modify the content of the criteria received in step 1 to determine the list of participants.

NOTE 1: The content of the Criteria information element, the details of the pre-defined criteria, and the way how the MCPTT server determines the list of participants, and their corresponding functional aliases are left to implementation.

5. The MCPTT server sends the ad hoc group call requests towards the MCPTT clients 2 and 3. While sending the ad hoc group call requests, the MCPTT server shall remove the information elements that are not required to be conveyed to the target MCPTT clients. This request carries the pre-configured group ID whose configuration is to be applied for this ad hoc group call if end-to-end encryption is requested. The MCPTT server considers the ad hoc group call participants as implicitly affiliated to the ad hoc group.

6. The receiving MCPTT clients notify their corresponding MCPTT user about the incoming ad hoc group call request with the information of the MCPTT group ID for the ad hoc group.

7. The receiving MCPTT clients may accept or reject the ad hoc group call requests and send ad hoc group call responses to the MCPTT server. The response may also contain a functional alias of the responding MCPTT user, which is verified (valid and activated for the user) by the MCPTT server.

NOTE 2: For emergency ad hoc group calls the receiving MCPTT client shall always accept the request.

8. The MCPTT server sends the ad hoc group call response to MCPTT client 1 through the signalling path to inform about successful call establishment. The ad hoc group call response contains the call resulting criteria used by the MCPTT server from step 4 to determine the list of participants to be invited.

9. The MCPTT server may notify the initiating MCPTT user by sending the MCPTT IDs and the corresponding functional aliases of all MCPTT users who acknowledged the ad hoc group call request and joined the ad hoc group call. Depending on local policy the functional alias is the one determined in step 4, or the one returned from the receiving MCPTT clients. This notification may be sent to the initiating MCPTT user by the MCPTT server more than once during the call when MCPTT users join or leave the MCPTT ad hoc group call. The authorized users (not shown in figure), who are configured to receive the participants information of ad hoc group call, are notified to receive the MCPTT IDs and the corresponding functional aliases of the MCPTT users who acknowledged the ad hoc group call request and joined the ad hoc group call, when the MCPTT users joins late or leave the MCPTT ad hoc group call. Depending on local policy the functional alias is the one determined in step 4, or the one returned by the receiving MCPTT clients. All ad hoc group call notify messages contain the call resulting criteria used by the MCPTT server from step 4 to determine the list of participants to be invited.

10. MCPTT client 1, MCPTT client 2 and MCPTT client 3 establish media plane and floor control resources.

The MCPTT server continuously checks whether other MCPTT users meet the criteria in order to add them to the ongoing ad hoc group call, or whether any of the participating MCPTT users no longer meet the criteria in order to remove them from the ongoing ad hoc group call, according to clause 10.19.3.1.5.

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

##### 10.19.3.2.3 Ad hoc group call setup – Participants list determined by the MCPTT server

Figure 10.19.3.2.3-1 below illustrates the ad hoc group call setup procedure initiated by an authorized user wherein the list of participants is determined by the MCPTT server based on the criteria received from the MCPTT client and determined MCPTT users are from multiple MCPTT systems.

Pre-conditions:

1. The security aspects of sharing the user information between primary and partner MC systems shall be governed as per the service provider agreement between them. In this case, it is considered that the partner MC system share their users' information to the primary MC system.

2. The authorized MCPTT user/dispatcher belongs to the primary MC system.

3. The MCPTT server 1 of the primary MC system is where the authorized MCPTT user/dispatcher creates the ad hoc group.

4. Some users of the ad hoc group belong to MCPTT server 2 of the partner MC systems.

5. The pre-configured group identity and pre-configured group configuration to be used for an ad hoc group have been preconfigured in MCPTT client and other participants of ad hoc group have also received the relevant security related information to allow them to communicate in an ad hoc group communication.



Figure 10.19.3.2.3-1: Ad hoc group call setup involving multiple MCPTT systems

1-3. Same as described in subclause 10.19.3.1.3.

4. The MCPTT server 1 determines the list of MCPTT IDs and, if applicable the corresponding functional aliases of the participants from the primary MC system and determines the partner MC system to be involved in the ad hoc group call based on the information present in the information element Criteria for determining the participants. This information element carries the criteria, indicator identifying pre-defined criteria, or a combination of both.

NOTE 1: The content of the Criteria information element, the details of the pre-defined criteria, and the way how the MCPTT server determines the list of participants, and their corresponding functional aliases are left to implementation.

5. If the MCPTT server 1 needs to involve the partner system based on the agreement and based on the criteria for determining the participant list, it sends the ad hoc group call get userlist request to the MCPTT server 2. This request carries the criteria to be used by the partner MC system and is equal or derived from the criteria received in the step 1. Depending on the criteria provided and based on local policy, the MCPTT server may modify the content of the criteria received in step 1 to determine the list of participants.

6. MCPTT server 2 evaluates the criteria and determines the MCPTT IDs and, if applicable the corresponding functional aliases of the participants satisfying the criteria (i.e., MCPTT client 3 and MCPTT client 4) and sends the response containing the list MCPTT IDs and, if applicable the corresponding functional aliases of MCPTT users satisfying the criteria. The partner MCPTT server may apply local policies if any while determining the participants satisfying the criteria.

NOTE 2: The content of the Criteria information element, the details of the pre-defined criteria, and the way how the MCPTT server determines the list of participants, and their corresponding functional aliases are left to implementation.

7. The MCPTT server 1 compiles the list of participants to be invited for the ad hoc group call including the participants from both primary and partner MC system.

8a-8b. The MCPTT server 1 sends the ad hoc group call request towards the MCPTT client 3 and MCPTT client 4. While sending the ad hoc group call request, the MCPTT server shall remove the information elements that are not required to be conveyed to the target MCPTT clients. This request carries the pre-configured group ID whose configuration is to be applied for this ad hoc group call if end-to-end encryption is requested. The MCPTT server 1 considers the ad hoc group call participants as implicitly affiliated to the ad hoc group.

9. The MCPTT server 1 sends the ad hoc group call requests towards the MCPTT client 2. While sending the ad hoc group call request, the MCPTT server shall remove the information elements that are not required to be conveyed to the target MCPTT clients. This request carries the pre-configured group ID whose configuration is to be applied for this ad hoc group call if end-to-end encryption is requested. The MCPTT server 1 considers the ad hoc group call participants as implicitly affiliated to the ad hoc group.

10a-10c. The receiving MCPTT clients notify their corresponding MCPTT user about the incoming ad hoc group call request with the information of the MCPTT group ID for the ad hoc group.

11. The MCPTT client 2 may accept or reject the ad hoc group call request and send ad hoc group call response to the MCPTT server 1.

12. The MCPTT client 3 may accept or reject the ad hoc group call request, and sends ad hoc group call response to the MCPTT server 1.

13. The MCPTT client 4 may accept or reject the ad hoc group call request, and sends ad hoc group call response to the MCPTT server 1.

14. The MCPTT server 1 sends the ad hoc group call response to MCPTT client 1 through the signalling path to inform about successful call establishment. The ad hoc group call response contains the call resulting criteria used by the MCPTT server to determine the list of participants to be invited.

15. The MCPTT server 1 may notify the initiating MCPTT user by sending the MCPTT IDs and the corresponding functional aliases of all MCPTT users who acknowledged the ad hoc group call request and joined the ad hoc group call. Depending on local policy the functional alias is the one determined in step 4, or the one returned by the receiving MCPTT clients. The MCPTT server 1 more than once during the call may send this notification to the initiating MCPTT user whenever an MCPTT user joins or leaves the MCPTT ad hoc group call. The authorized users (not shown in figure), who are configured to receive the participants information of ad hoc group call, are notified to receive the MCPTT IDs of the MCPTT users who acknowledged the ad hoc group call request and joined the ad hoc group call, when the MCPTT users joins late or leave the MCPTT ad hoc group call. Depending on local policy the functional alias is the one determined in step 4, or the one returned by the receiving MCPTT clients. All ad hoc group call notify messages contain the call resulting criteria used by the MCPTT server to determine the list of participants to be invited.

16. The MCPTT client 1, MCPTT client 2, MCPTT client 3 and MCPTT client 4 establish media plane and floor control resources.

NOTE 3: The ad hoc group call request and response exchanged between MCPTT server 1 of primary MC system and MCPTT client 3/MCPTT client 4 will always traversal through the MCPTT server 2.

The MCPTT server at the primary MC system and MCPTT server at the partner MC system continuously check whether other MCPTT users in the primary MC system and partner MC system, respectively, meet the criteria in order to add them to the ongoing ad hoc group communication, or whether any of the participating MCPTT users in the primary MC system and MCPTT users in the partner MC system, respectively, no longer meet the criteria in order to remove them from the ongoing ad hoc group communication, according to clause 10.19.3.2.4.

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