**3GPP TSG-SA WG6 Meeting #63 S6-244439**

**Hyderabad, India, 14th – 18th October 2024 (revision of S6-244335)**

**Source: Motorola Solutions, FirstNet**

**Title: Pseudo-CR on Generic IOPS – Section 10.5.3.3**

**Spec: 3GPP TR 23.700-09**

**Agenda item: 8.8**

**Document for: Approval**

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**1. Introduction**

In Rel-17 work on Mission critical services support in the Isolated Operation for Public Safety (IOPS) mode of operation has led to solutions described in 3GPP TS 23.180.

This original IOPS technical specification (3GPP TS 23.180) was defined to support 4G networks, but as other mission critical services it was described rather agnostic to the type of network access.

This pCR is related to KI#1 to make the existing IOPS section 10.5.3.3, described in 3GPP TS 23.180, access generic. The original text has been copied from TS 23.180, i.e. it is not new text, and the change marks highlight suggested required modifications.

**2. Reason for Change**

Study work is continued.

**3. Conclusions**

<Conclusion part (optional)>

**4. Proposal**

It is proposed to agree the following changes to 3GPP TR 23.700-09, v0.2.0.

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

### 6.x Solution #x: Clause 10.5.3.3 (IOPS floor control during silence) of TS 23.180

#### 6.x.1 General

This clause is related to KI#1 addresses section 10.5.3.3 of 3GPP TS 23.180. It describes which changes are needed to make the section 10.5.3.3 (IOPS floor control during silence) of 3GPP TS 23.180 applicable for all supported 3GPP access methods.

#### 6.x.2 Solution

Note: The original clause has been copied from TS 23.180. The change marks highlight the required modifications for an access generic IOPS solution.

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

#### 10.5.3.3 IOPS floor control during silence

If a floor arbitrator does not exist, figure 10.5.3.3-1 shows the successful high level floor control procedure during periods when there is no detectable talker in an IOPS group call based on the IP connectivity functionality.

NOTE 1: The description also applies to IOPS private calls.

Pre-conditions:

- MCPTT user profile used for the IOPS mode of operation is pre-provisioned in the MCPTT UEs.

- MCPTT users have an active Data Networkconnection to the IOPS MC connectivity function for the communication based on the IP connectivity functionality

- The IOPS MCPTT group ID and its associated IOPS group IP multicast address are pre-configured in the MCPTT clients (for the case of an IOPS group call)

- The IOPC MC connectivity function may have established a multicast session and announced it to the MCPTT clients

- The MCPTT users are discovered by the IOPS MC connectivity function supporting the IP connectivity functionality.

- MCPTT clients has retrieved connectivity information from the target MCPTT user (for the case of an IOPS private call).

- An IOPS private call or IOPS group call based on the IP connectivity functionality has been established. No participant is currently talking (i.e. the floor is idle) and no floor arbitrator is identified.



Figure 10.5.3.3-1: Successful floor taken flow in an IOPS group call based on the IP connectivity functionality (no floor contention)

1. The MCPTT client 1 sends the IOPS floor request message to the target IOPS MCPTT group. The MCPTT client 1 transmits the group session packets carrying the IOPS floor request message to the IOPS MC connectivity function for distribution to the corresponding IOPS group IP multicast address.

2. The IOPS MC connectivity function determines that the received packets correspond to a group session targeting a specific IOPS MCPTT group. The IOPS MC connectivity function decides distributing the received group session packets to the target MCPTT clients over multicast and/or unicast transmissions.

3. The IOPS MC connectivity function distributes the group session packets carrying the IOPS floor request to the MCPTT clients from the target IOPS MCPTT group.

4. The MCPTT client 1 does not detect any floor contention. Floor contention occurs when multiple floor requests may exist simultaneously.

NOTE 2: The mechanism for detecting floor contention in the IOPS mode of operation is out of scope of the present document.

5. The MCPTT client 1 sends the IOPS floor taken message to the IOPS MCPTT group. The MCPTT client 1 transmits the group session packets carrying the IOPS floor taken message to the IOPS MC connectivity function for distribution to the corresponding IOPS group IP multicast address.

6. The IOPS MC connectivity function determines that the received packets correspond to a group session targeting a specific IOPS MCPTT group. The IOPS MC connectivity function decides distributing the received group session packets to the target MCPTT clients over multicast and/or unicast transmissions.

7. The IOPS MC connectivity function distributes the group session packets carrying the IOPS floor taken message to the MCPTT clients from the target IOPS MCPTT group.

8. The MC user at MCPTT client 1 gets a notification that the IOPS floor request was successful (the floor has been granted).

NOTE 3: Step 8 can also occur prior to steps 6 and 7.

9. The MCPTT client 1 begins voice transmission with the target IOPS MCPTT group based on the IP connectivity functionality.

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