**3GPP TSG-CT WG1 Meeting #146C1-24xxxx**

**Online, 22– 26 January 2024 Revision of C1-240111**

**Source: China Mobile, China Southern Power Grid Co**

**Title: Clarification on IMS AS handling of IMS data channel media description**

**Spec: 3GPP TS 24.186 v1.0.0**

**Agenda item: 18.3.8**

**Document for: Decision**

**1. Introduction**

This p-CR proposes to clarify the IMS AS handling of IMS data channel media description in 9.3.2.2.

**2. Reason for Change**

TS 23.228 specifies:

*AC.7.1 Bootstrap Data Channel Setup Signalling procedure*

*The steps in the call flow are as follows:*

*1. UE#1 sends the SIP INVITE request with an initial SDP to the IMS AS, through P-CSCF and S-CSCF in the originating network. The initial SDP contains offers for the bootstrap data channel establishment request with bootstrap DC stream ID. In this example procedure, the SDP contains both bootstrap data channel offers for originating side and terminating side.*

*...*

*20-23: The bootstrap data channels have been established between originating MF or MRF and UE#1/UE#2. The UEs send application request messages to MF or MRF to request a data channel application or an application list if multiple DC applications are available, via the established bootstrap data channel with its data channel capabilities. The MF or MRF replaces the root URL with the replacement URL received in steps 8 and forwards the message to received media point of DCSF. The DCSF provides the application list and proper data channel applications further to UE#1 and UE#2 based on their data channel capabilities and their choices through MF or MRF.*

*The bootstrap data channels have also been established between terminating MF or MRF and UE#1/UE#2. The data channel application is requested and downloaded to UE#1 and UE#2 from terminating DCSF*

TS 26.114 specifies:

*6.2.10 Data channel*

*6.2.10.1 General*

*For simplicity, there’s no data channel server and data channel application repository depicted for UE B in Figure 6.2.10.1-1, but those could be present in a more general case. Seen from the perspective of a single UE, there are then at least four possible data channel application providers:*

*1. The local UE user.*

*2. Other authorized parties associated with the local network (e.g. the local operator).*

*3. The remote UE user.*

*4. Other authorized parties associated with the remote network (e.g. the remote operator).*

Considering that:

1. there could be 4 bootstrap data channels in a P2P use case:

-BDC1 between the originating network and the originating UE;

-BDC2 between the originating network and the terminating UE;

-BDC3 between terminating network and the originating UE;

-BDC4 between terminating network and the terminating UE;

1. although the originating UE is not authorized to use IMS data channel in originating network, it should not be restricted to use data channel application provided by terminating network when the terminating UE has IMS data channel subscription;
2. the media description sent from IMS AS to S-CSCF for the BDC between the originating network and the terminating UE is not generated by the originating UE but the IMS AS;
3. the media description sent from the originating UE for the BDC between the originating network and the originating UE isn’t sent to the terminating side.

it is suggested to clarify the detailed handling of SDP offer for IMS AS in stage 3 requirement.

**3. Proposal**

It is proposed to agree the following changes to 3GPP TS 24.186 v1.0.0.

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

#### 9.3.2.2 Procedure at the IMS AS

Based on served user service specific data which is enhanced with IMS data channel specific service details, if the served user is not authorized to use IMS data channel, the IMS AS may delete the received data channel media information from INVITE or re-INVITE message, e.g. m=application line with "webrtc-datachannel", and send the INVITE or re-INVITE message to the S-CSCF.If the operator policy does not indicates removal of media lines related to the IMS data channels, the IMS AS may forward media line describing the bootstrap data channel with "dcmap" attribute lines containing a subprotocol parameter set to "http" and "stream-id" parameter set to values 100 and 110, and send the INVITE or re-INVITE message to the S-CSCF.

Based on served user service specific data which is enhanced with IMS data channel specific service details, if the served user is authorized to use IMS data channel and the required data channel media resources is reserved, The IMS AS will trigger the DC media resource reservation according to 3GPP TS 23.228 [3], the IMS AS shall send the INVITE or re-INVITE request with audio, video and modified data channel SDP offer to the S-CSCF.

Upon receipt the 183 or 200 OK response on the INVITE or re-INVITE message including the SDP answer which includes the data channel media description, the IMS AS will notify to DCSF. The IMS AS shall include the SDP answer for data channel to the originating UE in the 183 or 200 OK response and send 183 or 200 OK response to S-CSCF.

Upon receipt of a 2xx response for a BYE request matching an existing IMS session of application data channel, the IMS AS shall follow the call release procedure as per 3GPP TS 24.229 [9].

Additionally, IMS AS will notify session release event to DCSF and as per media instruction request from DCSF, IMS AS will send media resource management request to MRF to release the allocated data channel media resources for this IMS Session. IMS AS will notify DCSF about the DC media release as part of media instruction response.

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