GSMA and 3GPP defines IMS Data Channel solution in IMS network. The IMS Data Channel is to add data channel to exchange application data in addition to audio/video call. The IMS Data Channel leverages the WebRTC data channel. The 3GPP spec: [26.114](https://www.3gpp.org/ftp/specs/archive/26_series/26.114/26114-i40.zip), [23.228](https://www.3gpp.org/ftp/specs/archive/23_series/23.228/23228-i30.zip). GSMA IMS Data Channel white paper: [NG.129](https://www.gsma.com/newsroom/wp-content/uploads/NG.129-v1.0-2.pdf). The IMS Data Channel is a very hot topic in telecom and significant change in IMS, which can be used in 4G/5G and later 6G core network.

The following is the IMS Data Channel architecture from 3GPP [23.228](https://www.3gpp.org/ftp/specs/archive/23_series/23.228/23228-i30.zip).



There are two places for IMS data channel media connection:

1. UE and IMS AGW. It’s for access network.
2. IMS AGW and DCMF. It’s for IMS core network.

For #1, as 3GPP 26.114 mentioned, the ICE is kept to ease data channel media implementation and interworking with UE.

*To ease data channel media implementation and ease interworking with WebRTC data channels, DCMTSI clients shall support ICE Lite and may support full ICE [184], for data channel media.*

For #2, the ICE is NOT required because there is NO NAT in IMS Core network.

We’re implementing the DC Media Function by using Pion. To comply with 3GPP standard and avoid interworking issue with others vendor, it’s mandatory to implement DCMF w/o ICE.

We can contribute our change on Pion to support no-ICE use case based on configuration/input. Then Pion can support both ICE and no-ICE use cases, which shall make Pion more attractive in telecom.