draft-singh-avtcore-mprtp-03

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Updates since -02

- Updates based on comments from MMUSIC
- MPRTP interface advertisements in SDP
  - Without ICE
  - With ICE
- Clarified in-band vs out-of-band interface advertisements (Sec 7.1.3.)
Re-cap

• Advertise Candidates
• RTP header extension for Subflow ID and Subflow sequence numbers
• Subflow RTCP for reporting path characteristics
SDP vs RTCP Interface Advertisement

• Sec 7.1.3. In-band vs. Out-of-band Signaling
  – In-band: RTCP or suitable STUN extension
  – Out-band: in SDP

• Out-of-band signaling for session setup and initial interface negotiation

• In-band signaling to deal with frequent changes in interface state.

• The endpoint SHOULD always respond using the same mechanism

• If a mismatch in type of advertisements occurs then SDP MUST be used.
Interface advertisement in SDP

mprtpt-interface = "interface" "::" counter SP unicast-address "::" rtp_port "/" rtcp_port *(SP interface-description-extension)

Example

v=0
o=alice 2890844526 2890844527 IN IP4 192.0.2.1
s=
c=IN IP4 192.0.2.1
t=0 0
m=video 49170 RTP/AVP 98
a=rtpmap:98 H264/90000
a=fmtp:98 profile-level-id=42A01E;
a=extmap:1 urn:ietf:params:rtp-hdrext:mprtpt
a=mprtpt interface:1 195.148.127.42:49170/49171
a=mprtpt interface:2 130.233.154.105:51372/51373
MPRTP using ICE

1. Advertise ICE candidates (initial offer): the endpoints run connectivity checks.


• When adding an interface in mid-session, should the endpoints also send the ICE candidates for the connections in use?
ICE SDP Example

INITIAL OFFER:

m=video 49170 RTP/AVP 98
a=rtpmap:98 H264/90000
a=fmtp:98 profile-level-id=42A01E;
a=candidate:1 1 UDP 2130706431 195.148.127.42 49170 typ host
a=candidate:2 1 UDP 1694498815 130.233.154.105 51372 typ host

ANSWER:

m=video 4000 RTP/AVP 98
a=rtpmap:98 H264/90000
a=fmtp:98 profile-level-id=42A01E;
a=candidate:1 1 UDP 2130706431 195.148.127.36 4000 typ host

(after enough connectivity checks succeed)

UPDATED OFFER (with MPRTP interfaces):

a=mprtp interface:1 195.148.127.42:49170/49171
a=mprtp interface:2 130.233.154.105:51372/51373

ANSWER:

a=mprtp interface:1 195.148.127.36:4000/4001
Open Issues

• Multiplex RTCP and RTP on one port
• Using STUN instead of RTCP for interface advertisement
• In-band vs Out-of-band
  – Both or do only one?
• Keep the basic SDP but move the complex cases to another document?
Next Steps

- Turn this into WG item
- Finish IANA considerations
- Add security considerations
- Double-check with MMUSIC.