

Guidelines to support RTCP end-to-end in Back-to-Back User Agents (B2BUAs)

draft-ietf-straw-b2bua-rtcp-00

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STRAW RTCP Deliverable

Deliverable

A document defining the requirements for B2BUAs to support RTCP end-to-end submitted to the IESG as PS

- ▶ Work motivated by a real use-case scenario
 - ▶ WebRTC gateway in front of a telco IMS network
- ▶ First version published as an individual contribution
 - ▶ [draft-miniero-straw-b2bua-rtcp-00](#)
- ▶ Recently accepted as a WG item
 - ▶ [draft-ietf-straw-b2bua-rtcp-00](#)
 - ▶ Pretty much unchanged, waiting for feedback (more on that later)

What's in there?

Pretty basic, right now

- ▶ Addresses B2BUAs taxonomies ([RFC7092](#))
 - ▶ Signaling/Media Plane B2BUA Roles
 - ▶ Media Relay
 - ▶ Media Aware
 - ▶ Media Termination
 - ▶ Terminology needs to be updated (pre-RFC one still used)
- ▶ Addresses simple call between two users through a B2BUA
 - ▶ Single flow for each media
 - ▶ What needs to be done for each role
- ▶ Addresses commonly used RTCP packet types
 - ▶ [RFC3550](#), [RFC4585](#), [RFC5104](#)
 - ▶ ... and [REMB](#) draft too (WebRTC tests)

A (overly) simple scenario

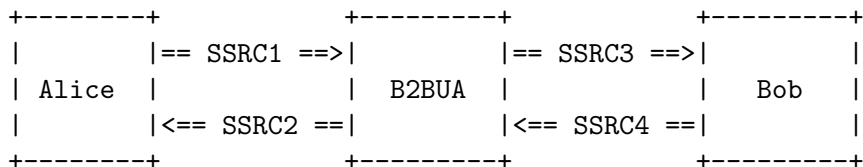


Figure : B2BUA modifying RTP headers

A live example

- ▶ WebRTC audio/video call through a media-terminating gateway
- ▶ <http://janus.conf.meetecho.com/videocalltest.html>

Guidelines (1)

Media Relay (RTP/RTCP just blindly forwarded)

- ▶ No issue with SSRCs/CSRCs...
 - ▶ ... as long as the SDP is coherent!
- ▶ Pay attention to the SDP
 - ▶ SSRC attributes should match the RTP ones
 - ▶ RTCP features should only be forwarded/negotiated if the peer put them there
 - ▶ e.g., Bob and the relay support NACK, but Alice doesn't
 - ▶ What about SDP attributes that should NOT be forwarded?
 - ▶ e.g., ICE or DTLS in case the relay is terminating them

Guidelines (2)

Media Aware (Aware of RTP/RTCP, may inspect/modify stuff)

- ▶ If RTP is modified (e.g., SSRC), modify RTCP accordingly
 - ▶ Different RTCP packet types require different care
 - ▶ SSRC, timestamps, sequence numbers, etc.
- ▶ Pay attention to the SDP anyway!

Media Terminator (Terminating RTP/RTCP)

- ▶ If RTP is terminated, RTCP is probably too
 - ▶ Messages originated/re-created by the B2BUA itself
- ▶ If RTCP needs to be forwarded, modify it accordingly (as before)

Mailing list comments (1)

Colin Perkins

<http://www.ietf.org/mail-archive/web/avt/current/msg16183.html>

- ▶ What about multiparty calls with multiple flows?
- ▶ CSRC list should be rewritten too
- ▶ Add more RTP packet types (e.g., RTCP XR)
 - ▶ Other RTCP packet types registered with IANA too?
- ▶ Clarify what *“properly replace” a changed sequence number* means
 - ▶ e.g., forwarding vs. discarding/combining/splitting RTP packets
- ▶ Mention topologies draft
- ▶ Discuss impact of media path security (SRTP, etc.), keying, etc.

Mailing list comments (2)

Bernard Aboba

<http://www.ietf.org/mail-archive/web/avt/current/msg16184.html>

- ▶ Too focused on single use case (two-person voice call)
- ▶ Should address video cases too
 - ▶ MANE or Selective Forwarding Unit (SFU)
 - ▶ Forwarding vs. addressing the feedback directly

Mailing list comments (3)

Albrecht Schwarz

<http://www.ietf.org/mail-archive/web/avt/current/msg16190.html>

- ▶ Update terminology
- ▶ Media plane B2BUA vs. **RTP topologies**
 - ▶ “RTCP handling” is (loosely/tightly) coupled to “RTP topologies”
- ▶ 2-party vs. multiparty
 - ▶ Inherently addressed if referring to RTP topologies
- ▶ B2BUAs in integrated and decomposed SBCs
 - ▶ Useful reference: *Gateway control protocol: RTP topology dependent RTCP handling by ITU-T H.248 media gateways with IP terminations*
- ▶ Introduce a “RTCP service”

Questions? Comments?

