RTP Congestion Control Feedback

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Reporting on draft-ietf-avtcore-cc-feedback-message-04, which is is co-authored with Zahed Sarker, Varun Singh, and Michael A. Ramalho

Document Status

- Implementation experience during hackathon in Prague – results discussed in AVTCORE and RMCAT at IETF 104

- Submitted -04 to reflect those experiences

  - Several clarifications – no changes to the packet format

- Discussed in AVTCORE earlier this week

- Two changes need review from RMCAT:

  - Feedback on FEC/retransmission packets

  - Congestion response to lost feedback

Feedback on FEC/Retransmission Packets

- Clarify that, if FEC and retransmission have been negotiated, then congestion control feedback is sent for those packets

Response to Lost Feedback

- Add section on congestion response when congestion control feedback packets are lost:

> Like all RTCP packets, RTCP congestion control feedback packets might be lost. All RTP congestion control algorithms MUST specify how they respond to the loss of feedback packets.
>
> If only a single congestion control feedback packet is lost, an appropriate response is to assume that the level of congestion has remained roughly the same as the previous report. However, if multiple consecutive congestion control feedback packets are lost, the sender SHOULD rapidly reduce its sending rate towards zero, as this likely indicates a path failure. The RTP circuit breaker [RFC8083] provides further guidance.

Open Issues

- Known open issues:

  - Add comparison to Holmer draft, to explain design rationale, costs & benefits

  - Add discussion on conversion between per-SSRC sequence numbers and unified sequence numbers carried in header extension

- Hope to address these and have draft ready for WG last call before Singapore meeting