



University  
of Glasgow

# RTP Congestion Control Feedback

Colin Perkins

Reporting on draft-ietf-avtcore-cc-feedback-message-05, which is co-authored with Zahed Sarker, Varun Singh, and Michael A. Ramalho

# Changes since Montréal meeting

- Expand Design Rationale section:
  - Mention REMB
  - Discuss relation to draft-holmer-rmcat-transport-wide-cc-extensions

Transport-wide Congestion Control: The format defined in this memo provides individual feedback on each SSRC. An alternative is to add a header extension to each RTP packet, containing a single, transport-wide, packet sequence number, then have the receiver send RTCP reports giving feedback on these additional sequence numbers [I-D.holmer-rmcat-transport-wide-cc-extensions]. Such an approach adds the per-packet overhead of the header extension (8 octets per packet in the referenced format), but reduces the size of the feedback packets, and can simplify the rate calculation at the sender if it maintains a single rate limit that applies to all RTP packets sent irrespective of their SSRC. Equally, the use of transport-wide feedback makes it more difficult to adapt the sending rate, or respond to lost packets, based on the reception and/or loss patterns observed on a per-SSRC basis (for example, to perform differential rate control and repair for audio and video flows, based on knowledge of what packets from each flow were lost). Transport-wide feedback is also a less natural fit with the wider RTP framework, which makes extensive use of per-SSRC sequence numbers and feedback.

- Update references and author contact details

# Next Steps

- Will be discussed in AVTCORE later this week – hope to go to WG last call