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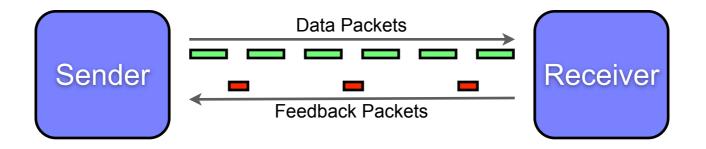of Glasgow | Computing Science
VIA VERITAS VITA

Using RTCP Feedback for Unicast Multimedia Congestion Control

draft-perkins-rmcat-rtp-cc-feedback-01

Colin Perkins

Motivation

- Transport protocol provides a feedback loop

- Dynamics of congestion control depend on rate of feedback, and type of information returned

- RTCP provides a feedback channel for RTP-based applications – what sort of feedback can it provide?

Summary of Draft

- Questions to ask regarding congestion feedback:

  - How often is feedback needed?

  - How much overhead is acceptable?

  - How much, and what, data does each report contain?

- How often can feedback be sent in RTCP?

  - Per-packet – probably not

  - Per-video frame – yes, with reasonable assumptions

  - Per-RTT – yes in many cases, provided RTT is not too low

  - Conclusion: if configured correctly, RTCP can support congestion control without extension

  - Rough draft, to illustrate the point – more details will need to be added if adopted

Status and Next Steps

- Draft was originally not intended to progress

  - Presented at IETF 86 to inform discussion

- Working group has rtcp-requirements milestone:

  - "Determine if extensions to RTP/RTCP are needed for carrying congestion control feedback, using DCCP as a model. If so, provide the requirements for such extensions to the AVTCORE working group for standardization there."

  - Chairs suggested this draft might be suitable for that milestone – is there interest in developing it for that purpose?