Agenda

- Introduction: The RTCWEB effort, and the traffic we expect to generate (10 min)
- Nice behaviour for RTP-based services - Varun Singh, Colin Perkins (10 min)
- A delay based congestion control candidate - Stefan Holmer (15 min)
- Feedback mechanisms that might be useful (5 min)
- A possible WG charter: RMCAT (15 min)
- Summary, conclusions, next steps (5 min)
RTCWEB: The Context

- Browser to Browser Media
- <200 ms RTT
- Any network
- Media over SRTP over UDP
- Data over SCTP over UDP
- Deploys in 2012

We want to make generally applicable mechanisms if at all possible - CLUE and others see the same need
Desirable properties of RTCWEB

● Should not break the Internet
  ○ May result in significant traffic
  ○ Deployment will be "in the wild"

● Allow low delay, high quality communication
  ○ Multisecond delays are not acceptable
  ○ Use the bandwidth if it exists

● Degrade well under congestion
  ○ Consider the application as a whole
  ○ Application-level prioritization necessary

● Play nicely with others
  ○ Not crowd out TCP
  ○ Not get crowded out by TCP
Not a new area

- Has been investigated since Day One
  - Poster child for network reservation schemes
- Commercial deployments exist
  - Vendor-specific algorithms
- TFRC has been specified, but not deployed
  - Some variants have been deployed
  - Not that much experience shared
<Other presentations>

- Circuit-breakers
- Delay-based congestion control
A Feedback Mechanism

Approaches to compute nexus in CC:

● **Compute at Sender**
  ○ Requires all observations to be relayed back
  ○ Algorithm and sender decisions at same node

● **Compute at Receiver**
  ○ Allows feedback only when change is needed
  ○ Sender must obey instructions
  ○ Application can adapt within requirements
  ○ Sender must react appropriately to lost feedback
  ○ Needs a communication format

draft-alvesstrand-rmcat-remb-00
REMB - Receiver Estimated Max Bitrate

- Reports on a set of SSRCs that make sense to report together
- Gives a total bitrate constraint across all the SSRCs
- Pre-standard format - useful for experimentation
REMB comments?
RMCAT charter
Problem area

- UDP media traffic with RTCP feedback
- Delay sensitive traffic
- Sharing congestion info across flows
Working method

- Requirements documentation
- Experimental mechanism publication
- Result evaluation
- Standards publication

Desire to have requirements and experiments by end of 2012 (may be optimistic by now)
Interested in working in this area?