RMCAT @ IETF-86

RTP Media
Congestion Avoidance Techniques

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Administrativa

• **Today’s slides**
  – [http://datatracker.ietf.org/meeting/86/materials.html#session.group-rmcat](http://datatracker.ietf.org/meeting/86/materials.html#session.group-rmcat)

• **Remote participation**

• **Jabber chat**
  – xmpp:rmcat@jabber.ietf.org?join

• **Mailing list**
Agenda

9:00  Chairs’ Intro

9:15  Congestion Control Requirements
      Randell Jesup

9:25  Evaluating Congestion Control for Interactive Real-time Media
      Varun Singh

10:05 Coupled Congestion Control for RTP Media
      Michael Welzl

10:35 RTCP Feedback for Unicast Multimedia Congestion Control
      Colin Perkins

10:50 If Time Permits:
      NADA: A Unified Congestion Control Scheme for Real-Time Media
      Rong Pan
      A Google Congestion Control Algorithm for Real-Time Communication on the World Wide Web
      Harald Alvestrand
REMINDER ABOUT INITIAL MILESTONES
## cc-requirements

<table>
<thead>
<tr>
<th>Charter title</th>
<th>Requirements for congestion control algorithms for interactive real time media</th>
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<tbody>
<tr>
<td>Intended status</td>
<td>Informational RFC</td>
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<tr>
<td>Goals</td>
<td>Adopt Dec 2012, Submit Mar 2013</td>
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Develop a clear understanding of the congestion control requirements for RTP flows, and document efficiencies of existing mechanisms such as TFRC with regards to these requirements. This must be completed prior to finishing any Experimental algorithm specifications (#cc-cand). The set of requirements for such an algorithm includes, but is not limited to:

- Low delay and low jitter for the case where there is no competing traffic using other algorithms
- Reasonable share of bandwidth when competing with RMCAT traffic, other real-time media protocols, and ideally also TCP and other protocols. A 'reasonable share' means that no flow has a significantly negative impact [RFC5033] on other flows and at minimum that no flow starves.
- Effective use of signals like packet loss and ECN markings to adapt to congestion

The work will be guided by the advice laid out in RFC 5405 (UDP Usage Guidelines), RFC 2914 (congestion control principles), and RFC5033 (Specifying New Congestion Control Algorithms).
eval-criteria

Charter title  Evaluation criteria for congestion control algorithms for interactive real time media

Intended status  Informational RFC

Goals  Adopt Dec 2012, Submit Mar 2013

Define evaluation criteria for proposed congestion control mechanisms, and publish these as an Informational RFC. This must be completed prior to finishing any Proposed Standard algorithm specifications (#cc-rec).
Development of a mechanism for identifying shared bottlenecks between groups of flows, and means to flexibly allocate their rates within the aggregate hitting the shared bottleneck. *(Probably needs to wait until #cc-cand are described in sufficient detail.)*

The work will be guided by the advice laid out in RFC 5405 (UDP Usage Guidelines), RFC 2914 (congestion control principles), and RFC 5033 (Specifying New Congestion Control Algorithms).
rtcp-requirements

<table>
<thead>
<tr>
<th>Charter title</th>
<th>Requirements for RTCP extensions for use with congestion control algorithms</th>
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<td><em>If needed:</em> Adopt Dec 2012, Submit Mar 2013</td>
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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.

*Only a work item if the WG in consultation with AVTCORE decides on the need.*
app-interactions

Charter title  Interactions between applications and RTP flows
Intended status  Informational RFC
Goals  If needed: Adopt ?, Submit May 2013

Identify interactions between applications and RTP flows to enable conveying helpful cross-layer information such as per-packet priorities, flow elasticity, etc. This information might be used to populate an API, but the WG will not define a specific API itself.
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<th>Candidate IDs</th>
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WG adoption?

IPR
Heads Up

• We missed some milestone deadlines
• We are probably going to miss others still
• **Will start discussion with our ADs to bring the milestones in line with reality**
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