

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>
- **Remote participation**
 - <http://www.ietf.org/meeting/86/remote-participation.html>
- **Jabber chat**
 - xmpp:rmcat@jabber.ietf.org?join
- **Mailing list**
 - <http://www.ietf.org/mailman/listinfo/rmcat>

Agenda

9:00	Chairs' Intro	Chairs
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

- Charter title** **Requirements for congestion control algorithms for interactive real time media**
- Intended status** **Informational RFC**
- Goals** **Adopt Dec 2012, Submit Mar 2013**

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).

group-cc

Charter title **Identifying and controlling groups of flows**

Intended status **Proposed Standard**

Goals **Adopt Jan 2013, Submit Jul 2013**

Develop 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 RFC5033 (Specifying New Congestion Control Algorithms).

rtcp-requirements

Charter title	Requirements for RTCP extensions for use with congestion control algorithms
Intended status	?
Goals	<i>If needed: Adopt Dec 2012, Submit Mar 2013</i>

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.

ID Status

Milestone

cc-requirements

eval-criteria

group-cc

-requirements

app-interactions

-failures

-X

Candidate IDs

rmcat-reqs

-coupled-cc

—

—

—

rmcat-congestion

draft-zhu-rmcat-nada

draft-ohanlon-rmcat-dflow

ID Status

Milestone

Candidate IDs

cc-requirements

draft-jesup-rmcat-reqs

eval-criteria

draft-singh-rmcat-cc-eval

WG
adoption?

group-cc

draft-welzl-rmcat-coupled-cc

rtcp-requirements

—

app-interactions

—

detect-sched-failures

—

cc-cand-X

draft-alvestrand-rmcat-congestion

draft-zhu-rmcat-nada

draft-ohanlon-rmcat-dflow

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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