

To <insert name>:

Over the last few years, the Internet has seen tremendous change. On the web, advances in browser technologies - including AJAX and HTML5 - has led to rich web experiences which equal or surpass desktop applications. The classic Doom video game can now be played in the browser; video streaming at sites like YouTube is commonplace; documents can be created and edited with user interfaces as snappy as their desktop equivalents.

At the same time, real-time interactive communications has seen explosive growth on the Internet - especially video. Skype reports that its traffic represents 12% of all international long distance communications (including circuit calls), over a third of which is video. Instant messaging has seen tremendous growth - much of it on the web, through services like Facebook and Meebo.

Yet, for the most part, the web and real-time interactive communications (voice and video in particular), have been separate. The browser, even today, cannot natively support real-time interactive communications. Indeed, interactive real-time communications remains the last category of desktop applications which, fundamentally, cannot yet run within the browser.

It is time for this to change.

With the increasing adoption of HTML5, the arrival of high quality, royalty free codecs, and the increasing usage of the browser for non-voice and video communications, the time has now arrived to drive the standardization of the APIs and protocols necessary to make real-time interactive voice and video in the browser a reality.

We would like to invite you to attend an invitation-only workshop, to be held **October 6 in Mountain View, California**, where experts like yourselves will gather to discuss and debate the key technical and standardization issues that need to be addressed. These issues include:

- What are the security and privacy concerns involved in allowing browsers to be used for point-to-point real-time interactive communication?
  - How do we make sure users are aware and approve the fact that their camera and microphone is being used?
  - How do we ensure the browser cannot be used to stream media to unwilling correspondents?
  - What are the impacts on user privacy?
  - How do existing security mechanisms such as the same origin policy apply?
- What are the right set of codecs for doing real-time interactive voice and video in the browser?
- How does firewall and NAT traversal work within the context of the browser?
- How do we enable application providers to innovate in areas like bandwidth estimation and rate control (an area which has purposefully been left to implementers to innovate on), while still enabling interoperability?
- What protocols need to be built-into the browser? Is there a role for the Session Initiation Protocol (SIP), or XMPP/Jabber?

- What is the right layer of abstraction for a Javascript API for doing real-time communications? Are multiple layers of API needed?
- What kinds of notification technologies are necessary? Are they specific to communications or is a more generic facility appropriate?
- What are the right fora for standardization of the necessary technologies?
- Desired IPR policy for the outcomes of this work?

The goal of the workshop is to come to a common understanding of the technologies which require standardization to enable interactive real-time communications in the browser, and the appropriate next steps to take.

All attendees will be required to author a brief paper in advance of the workshop (at least 1 - 4 pages), providing a perspective on one or many of the issues above, or other topics relevant to real-time interactive communications in the browser. A single paper can have multiple authors, however we request that the authors of the paper be real contributors and limited to no more than four. **Papers are due September 20, 2010**, and must be submitted by emailing it to [rtc-web-papers@alvestrand.no](mailto:rtc-web-papers@alvestrand.no).

The workshop will be structured as a series of technical discussions, each covering a key topic and lasting one to two hours. The topics are likely to mirror the questions above, but will be finalized once the program committee has received and reviewed the papers. Each technical discussion will be led by one of the participants, selected by the program committee based on the content of the papers. The discussion leader will start with a presentation of their perspective for 10 minutes or so, and after that, the leader will facilitate an open discussion amongst participants. We will attempt to capture points of agreement and points of disconnect in each area.

At the end of the day, we will dedicate thirty minutes to a discussion on next steps, focusing primarily on how to bring these discussions into the appropriate open standards forums.

The discussions from the workshop will be written up into a summary document, and distributed to all attendees after the meeting. We will be asking one or more participants to be note-takers during the workshop, and to help prepare the writeup afterwards.

Please note that the conference will be recorded, and remote participation will not be possible. The conference will also be operated under the Intellectual Property umbrella of the Internet Engineering Task Force (IETF). Please see <http://www.ietf.org/ipr/policy.html> for details.

The logistics for the workshop are as follows:

|           |                                                                           |
|-----------|---------------------------------------------------------------------------|
| Where     | Google Mountain View, CA Headquarters<br>(specifics on room coming later) |
| Hosted By | Google                                                                    |
|           |                                                                           |

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|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| When                | 830am - 5pm PST Wednesday October 6, 2010                                                                                                                                                                                                                                  |
| Costs               | <del>Google has graciously agreed to host the venue and pay for lunch</del> and beverages throughout the day. Attendees will be responsible for their own travel, including car, air, and hotel.                                                                           |
| RSVP                | Please send an email to the chairs by September 20, 2010 if you plan to attend.                                                                                                                                                                                            |
| Program Chairs      | Harald Alvestrand, Google<br><hta@google.com><br><br>Cullen Jennings, Cisco<br><fluffy@cisco.com><br><br>Jonathan Rosenberg, Skype<br><jdrosen@skype.net><br><br>Christopher Blizzard, Mozilla<br><christopher.blizzard@mozilla.org>                                       |
| Social Event        | For attendees arriving by Tuesday, we will have an informal dinner at a nearby restaurant at 730pm PST.                                                                                                                                                                    |
| Recommended Hotels  | There are no hotel rooms reserved; however we recommend that people stay at the Avante ( <a href="http://www.jdvhotels.com/hotels/siliconvalley/avante">http://www.jdvhotels.com/hotels/siliconvalley/avante</a> ) so that we can see each other in the bar and socialize. |
| Recommended Airport | San Jose is the nearest airport, though you may have better luck finding flights with San Francisco International (SFO).                                                                                                                                                   |

We look forward to the workshop and hope you can attend. We expect this to be a lively and exciting discussion that includes the world's leading experts in browsers and real-time communications, all together in one room.

Thanks,

Harald Alvestrand  
Cullen Jennings  
Jonathan Rosenberg  
Christopher Blizzard