Use-case document

Stefan Håkansson

Topics

- Recent changes to the document
- Describe things not added (for discussion)
- Discuss some things

Recently added

- Changed text to make reqs apply to data as well
- New use case “Simple video com with file share”
- New text in “Simple video comm service” use-case”
  - Enable check of source of data (through separate ch.)
  - Browser reject modified/inserted data
  - Enable app to not expose IP address
- Priority added to “hockey” and “game” use-cases
  - Hockey: game showing video more important
  - Game: data more important

New reqs

- F33: reliable data
- F34: support prioritization (related to A23)
- F35: enable verification that no MITM is present
- F36: reject stream/data modified/inserted by 3rd party
- A23: app can set priority (related to F34)
- A24: send/receive files
- A25: app can refrain from exposing local IP

Proposed use-cases not added

- Call center
- Enterprise policy related use-cases
  - 5 of them
- Low complex central node for multiparty
- Multiparty central node that is not allowed to decipher
- WebEx-like service enabling co-op between organizations without access to un-encrypted media

Call center use case

- User is on a web page, clicks “call us”
- At the receiving end there is a need to
  - Be able to route to any available handler; identity tied to web site owner, not person
  - Be able to record
- Determined that this could be handled inside a PeerConnection termination

http://www.ietf.org/mail-archive/web/rtcweb/current/msg04203.html

Enterprise policy related UCs

1. Enterprise would like to limit the amount of bandwidth available for WebRTC communications per location and per user.
2. Enterprise would like to limit WebRTC communications (but not the other communications such as HTTP) to particular networks.
3. Enterprise would like to limit certain types of communications, ie enable audio, but disable video and data for all the WebRTC applications on its premises.
4. Enterprise would like to limit external communications only to destinations signed by a specified list of identity providers, ie users are allowed to communicate with anybody with identity at acme.com, but not with user with identity at socialnetwork.com
5. Enterprise would like to enable only communications that are recorded to leave its premises.

http://www.ietf.org/mail-archive/web/rtcweb/current/msg04271.html

Enterprise 1

- “Enterprise would like to limit the amount of bandwidth available for WebRTC communications per location and per user.”
  - Set up HTTP proxy and TURN server on enterprise netw
    - TURN part already covered by F32
  - Force all webrtc traffic via the TURN server
  - The TURN server can police
  - Req: TURN server setting in browser must override app selection
- What does “per location” mean in this context?

http://www.ietf.org/mail-archive/web/rtcweb/current/msg04271.html

Enterprise 2

- “Enterprise would like to limit WebRTC communications (but not the other communications such as HTTP) to particular networks.”
- Prop solution: same as previous
- Unclear: How is “network” defined?

http://www.ietf.org/mail-archive/web/rtcweb/current/msg04271.html

Enterprise 3

- “Enterprise would like to limit certain types of communications, ie enable audio, but disable video and data for all the WebRTC applications on its premises.”
- No solution?

http://www.ietf.org/mail-archive/web/rtcweb/current/msg04271.html

Enterprise 4

- “Enterprise would like to limit external communications only to destinations signed by a specified list of identity providers, ie users are allowed to communicate with anybody with identity at acme.com, but not with user with identity at socialnetwork.com”
- No solution
- Identity related - assumes draft-rescorla-rtcweb-generic-idp is being used

http://www.ietf.org/mail-archive/web/rtcweb/current/msg04271.html

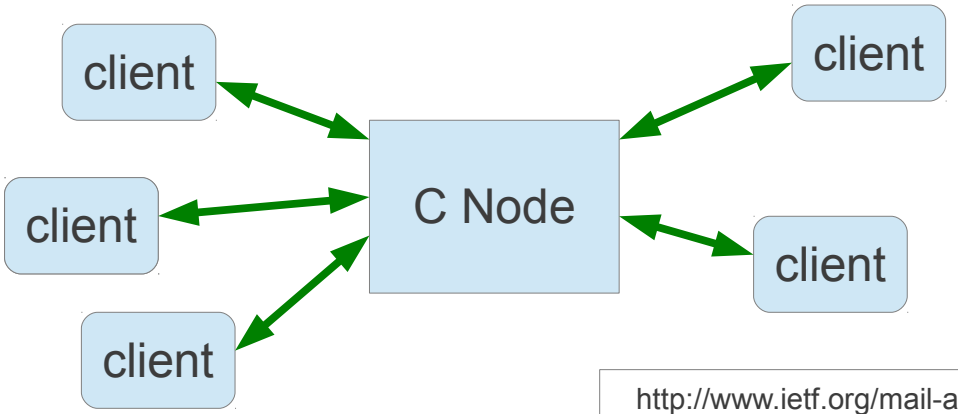
Enterprise 5

- “Enterprise would like to enable only communications that are recorded to leave its premises.”
- No solution proposed
- Would require that enterprise can access signaling messages

http://www.ietf.org/mail-archive/web/rtcweb/current/msg04271.html

Low complex central node for multiparty

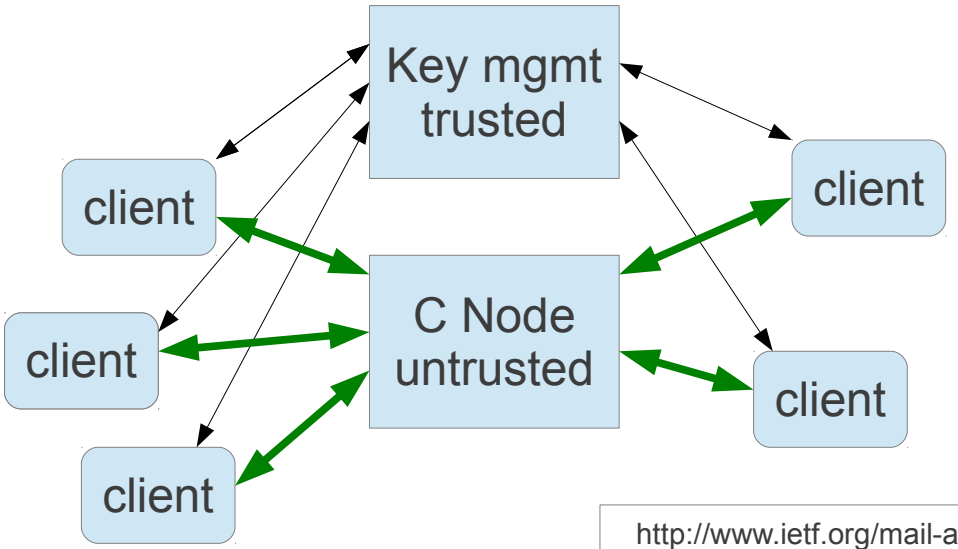
- Enable multiparty sessions with central server that does not need to
  - Transcode, de-crypt/en-crypt, Rewrite RTP etc.
- Users can come and go



http://www.ietf.org/mail-archive/web/rtcweb/current/msg04430.html

Multiparty central node that is not able to decrypt media

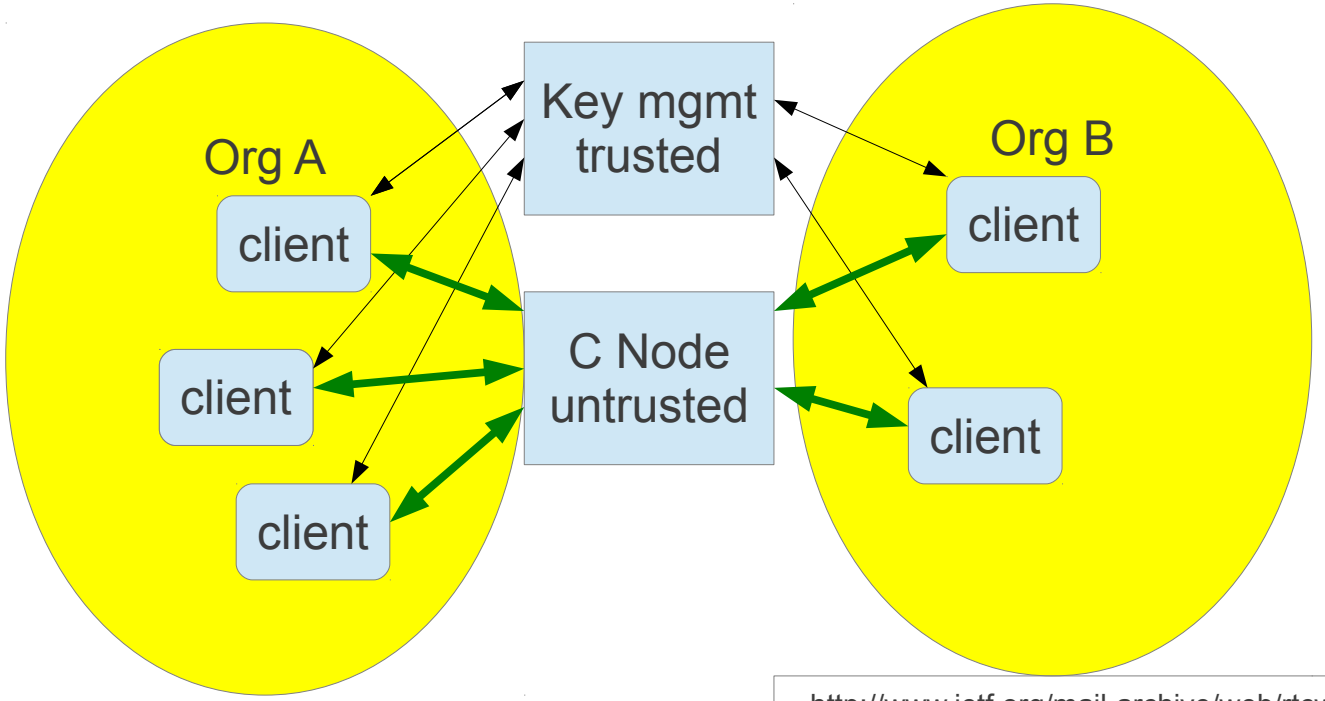
- To allow use of untrusted 3rd party multiparty service
- As central node doesn't de-crypt + en-crypt
  - No transcoding
  - No re-write of RTP field



http://www.ietf.org/mail-archive/web/rtcweb/current/msg04457.html

WebEx-like service enabling co-op between organizations without access to un-encrypted media

- To allow use of untrusted 3rd party multiparty service
- Need to be able to set up multiparty sessions



http://www.ietf.org/mail-archive/web/rtcweb/current/msg04461.html

Comment

- Last 3 use-cases basically drives a common req:
  - "It must be possible to set up media/data streams/session in such a way that a multiparty central node can forward data to the right recipients without the need to de-crypt”

Proposed way forward

- Skip Call Center
  - Concluded that no new reqs are derived
- Discuss Enterprise 1 – 3 (5?) further to determine what should be added to use-case doc
  - Potentially F32 should be updated (stating precedence for configured server over app supplied)
- Create a new use-case document that focuses on Identity (and related stuff)
  - Call Center, Enterprise 4 could be included in this document

Items for discussion

- Priority / QoS
- Mobility/multihoming
- UDP blocking NATs
- “Eavesdropped” - should another term be used?

Priority / QoS

- There are now two priority related reqs:
  - F24: The browser MUST be able to take advantage of capabilities to prioritize voice, video and data appropriately – use functions in network nodes
  - F34: The browser MUST support prioritization of streams and data – the app sets the relative importance
- These requirements have not been discussed much yet

Mobility

- F26: “It must be possible to move from one network interface to another”
- Not discussed in more detail
  - Acceptable interrupt
  - How to accomplish

UDP blocking NATs

- F29 “The browser MUST be able to send streams to a peer in the presence of NATs that block UDP traffic.”
- Not discussed much
- Part of version 1?

“Eavesdropping”

- Use "wiretapping", and refer to RFC 2804 instead

WebRTC and differentiated treatment

Status and what to do…

Goals

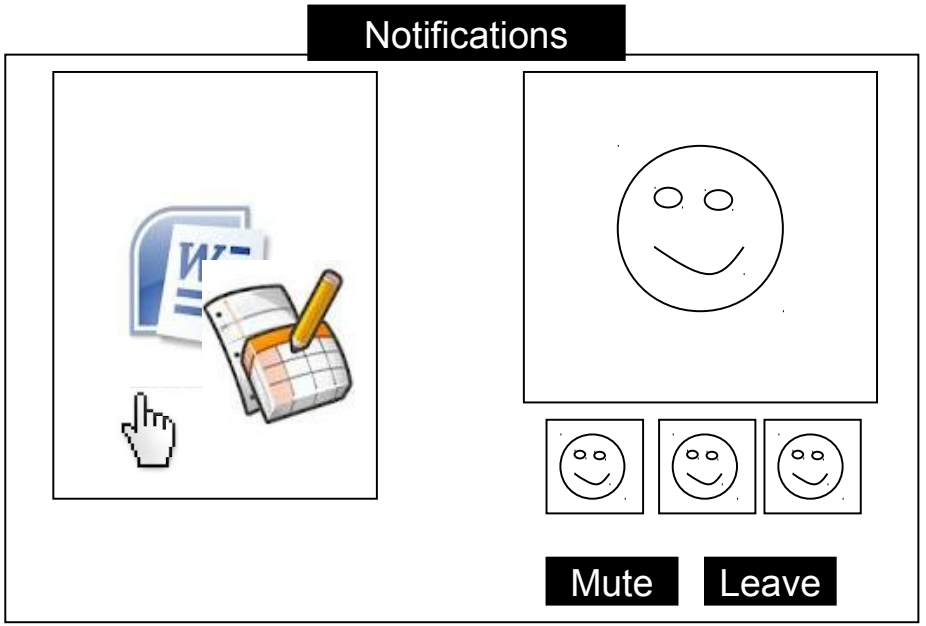
- The goals with these presentations are:
  - Increase your awareness of issues of enabling differentiated treatment of webRTC media and data packets.
  - Enable discussion of which ambition we should have in the WG.

WebRTC differentiated treatment

- Current requirements:
  - F24: The browser MUST be able to take advantage of capabilities to prioritize voice, video and data appropriately.
  - F34: The browser MUST support prioritization of streams and data.
- Proposal to add use cases to detail requirements.
- Next step?

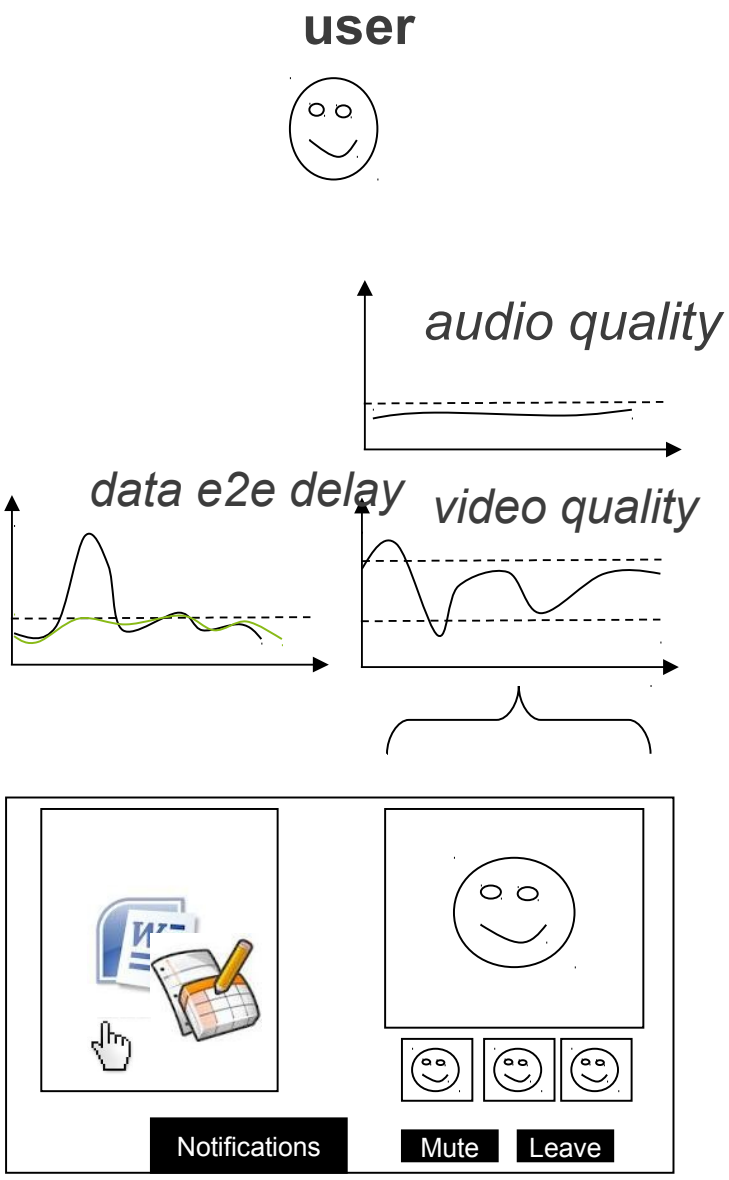
WebRTC differentiated treatment Example

- Differentiated treatment of different type of packet flows on LTE radio (4G).
- A collaboration app…



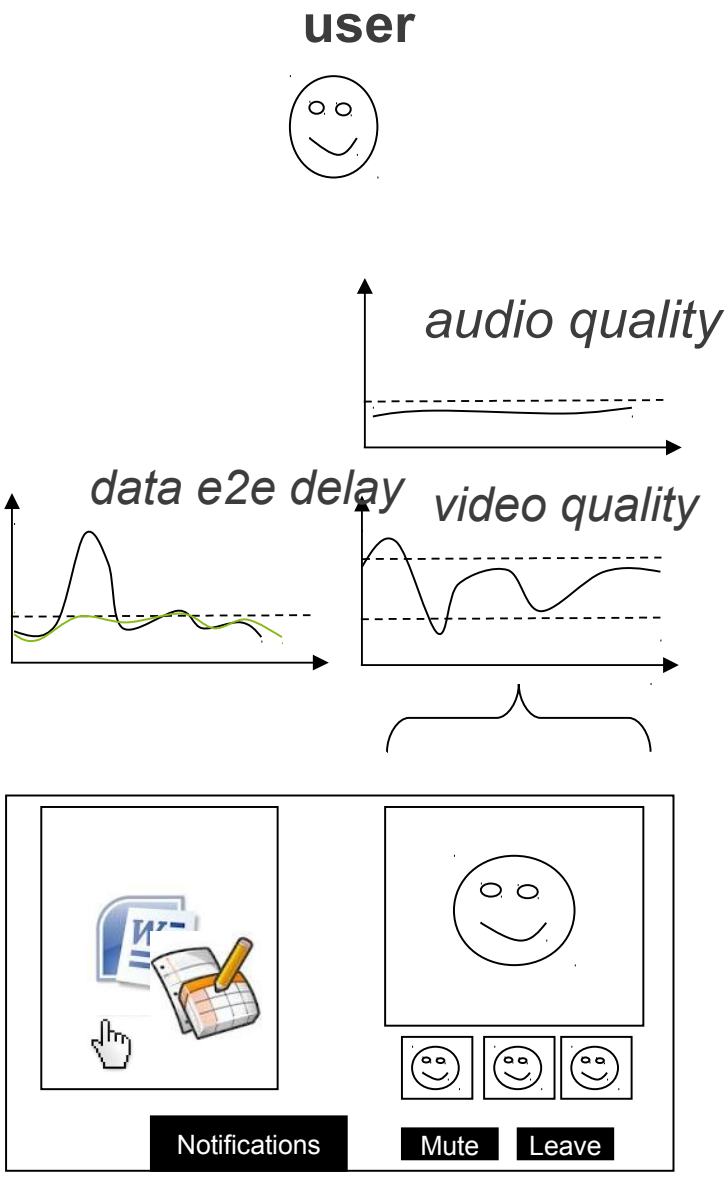
WebRTC differentiated treatment Example

- Differentiated treatment of different type of packet flows on LTE radio (4G).
- A collaboration app…



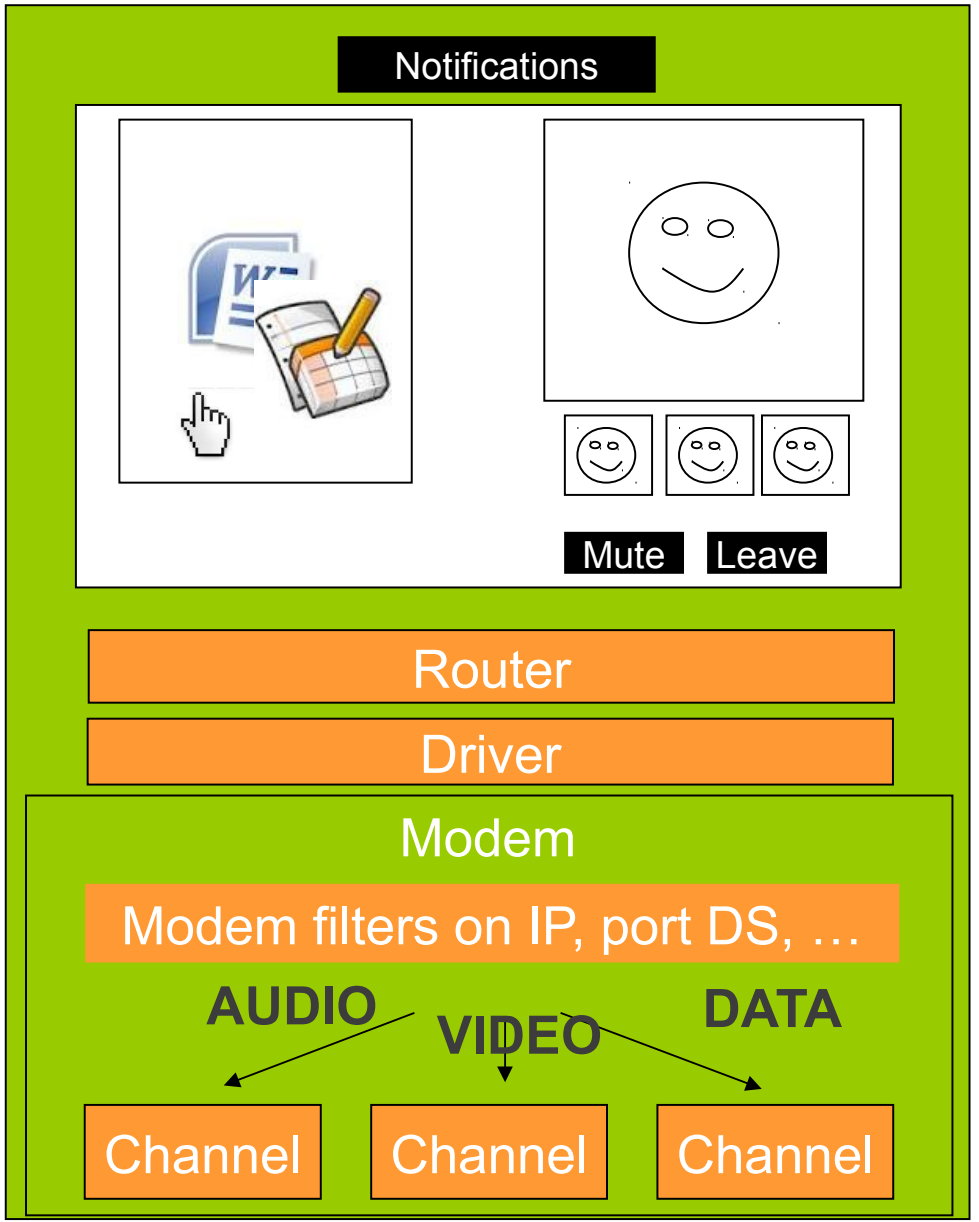
WebRTC differentiated treatment Example

- Differentiated/ preferential treatment of flows because…
- User eXperience reasons and optimal use of scarce (transport) resources.



WebRTC differentiated treatment Example

- Different channels for audio, video and the rest…
- Modem map packets based on IP header info, e.g. address, port and diffserv.
- Do not multiplex audio/video on same port.
- Consider diffserv-marking.



WebRTC differentiated treatment Proposed next step

- Current requirements:
  - F24: The browser MUST be able to take advantage of capabilities to prioritize voice, video and data appropriately.
  - F34: The browser MUST support prioritization of streams and data.

1. More use case input.
2. Discuss browser UA impact, e.g.:
   1. Possible to run different media types separate flows.
   2. diffserv marking.
3. “best practice” for web app developer?