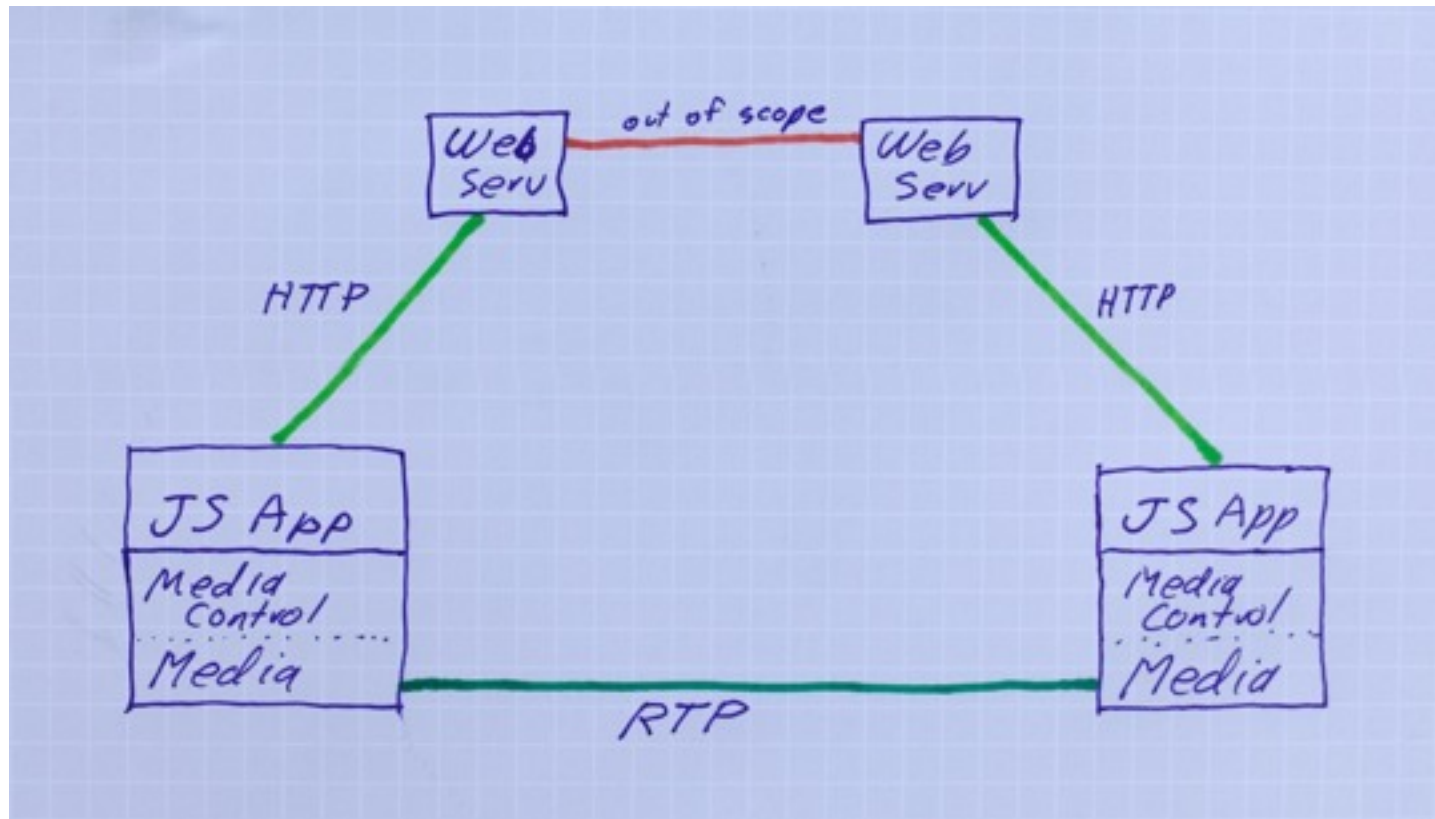


Architecture Questions: How Media Negotiation Works

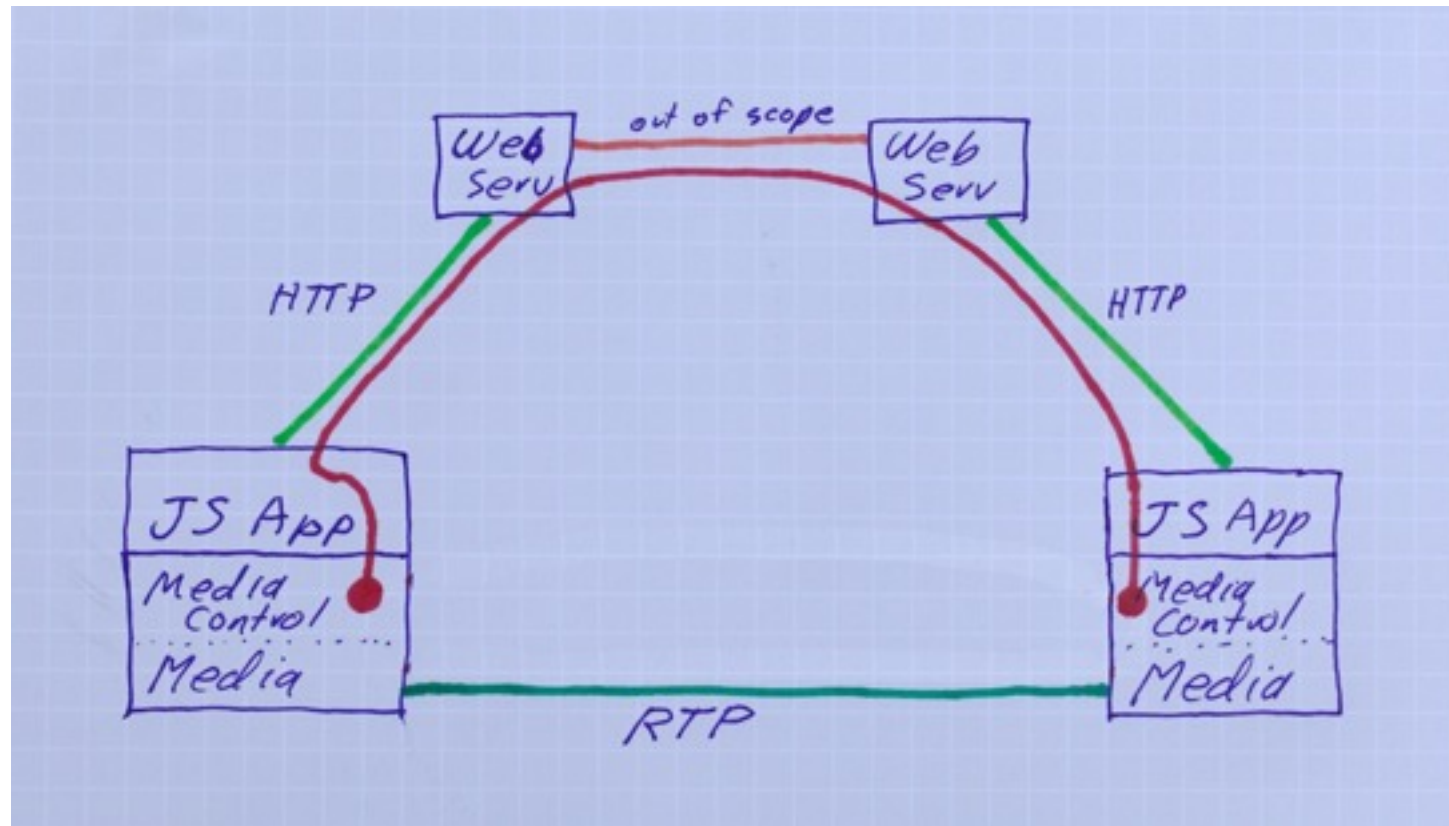
Cullen Jennings, June 2011

What we seem to agree on



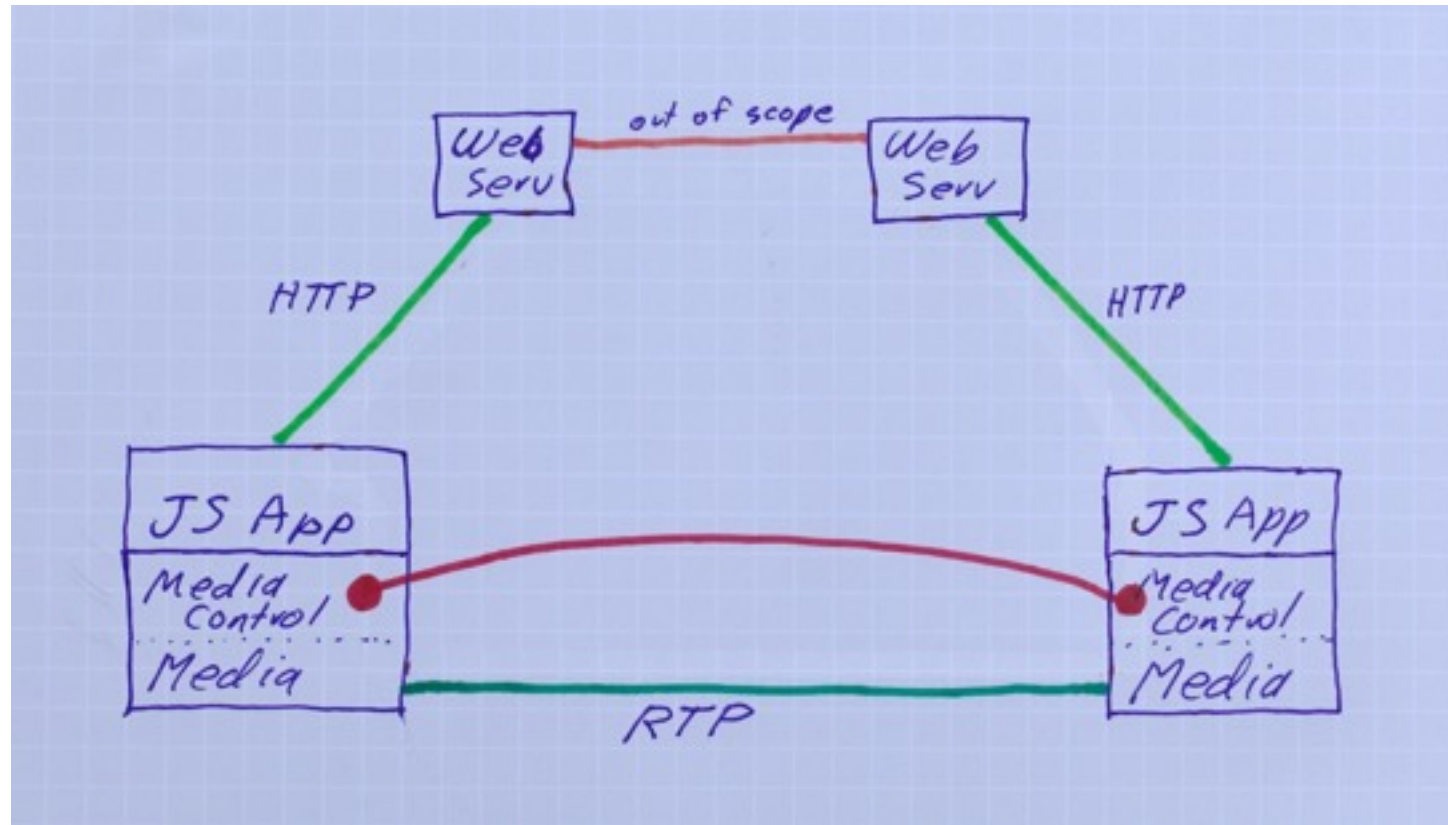
- We agree there is some media flowing from one browser to the other (green line on bottom)
- We agree there is some HTTP and if there is more than one web server, we don't care how they talk to each other
- We agree there is media codecs with parameters that need coordination between the two sides.
- Question is what path does the media negotiation information flow along and what does it look like.

Option: High Path



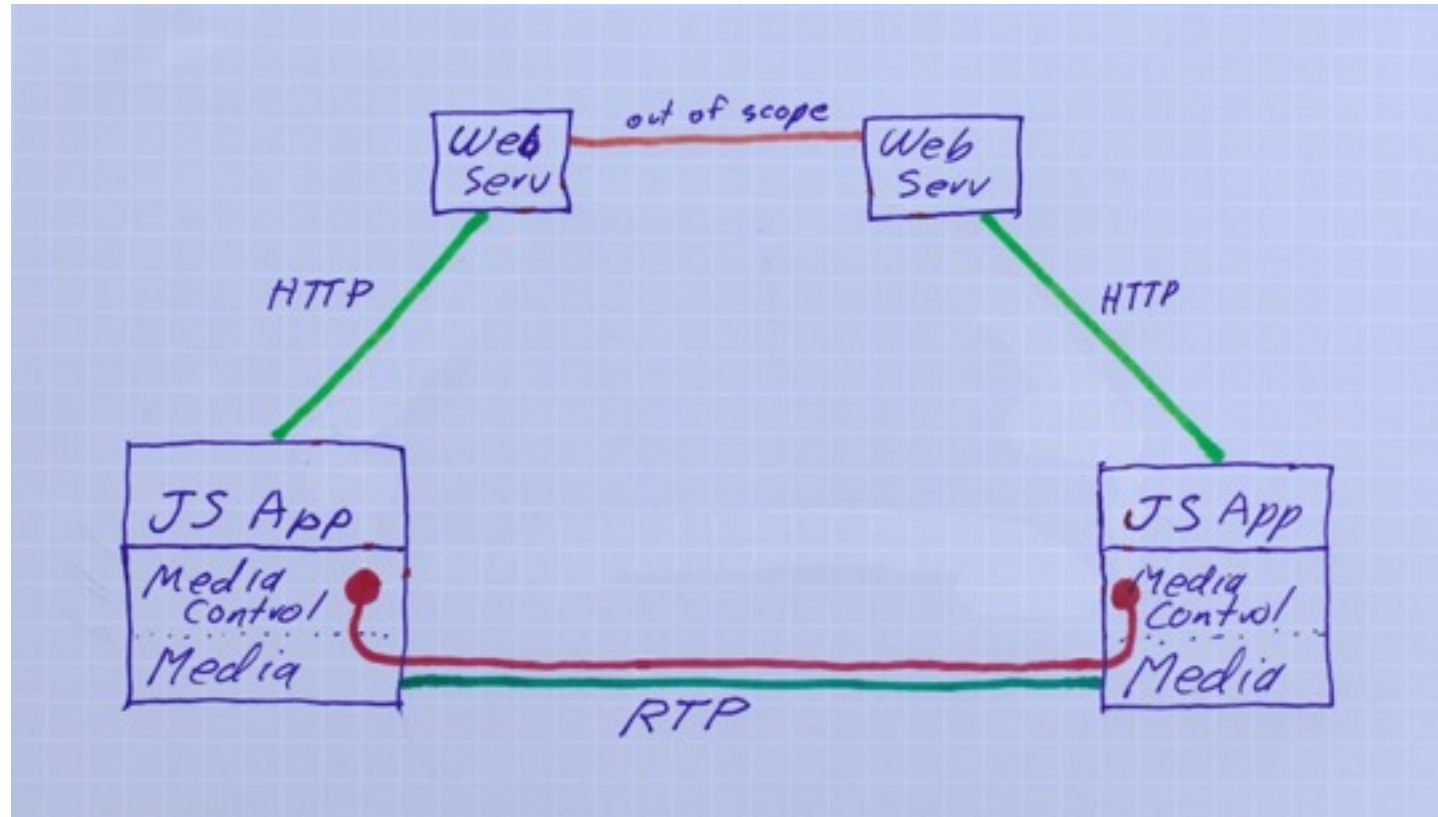
- In this model, what is standardized is an interface from the core part of the browser to the JavaScript application running in the browser
- The JS App takes care of transporting this in whatever formats it wants to the far side
- Probably best to think of this API much like MGCP. The browser tells the app what it can do (the advertisement), and the JS App tells the browser what media to send and receive (the proposal)
- In the case where there are two federated web servers as shown in the diagram, instead of both browsers connected to one web service, it gets complicated to define what happens on the orange line. Most likely both web servers would translate to SIP or Jingle

Option: Mid Path



- In this model, the browser speaks a first class signaling protocol such as Jingle or SIP and can use that to negotiate media with the far end
- The HTTP green/orange path is used only to find the address of who you want to communicate with
- Mostly likely candidates for the signaling protocol are SIP and/or Jingle

Option: Low Path



- In this model, the HTTP / orange path communicates enough information that the two browsers can perform ICE and set up a channel between the browser
- This channel is then used to exchange the media signaling information
- The possible candidates for exchange of signaling data are:
 1. SIP (Cisco proposal)
 2. SDP Offer/Answer from SIP (WhatWG proposal)
 3. Jingle (Current Chrome implementation)
 4. Advertisement / Proposal object

Important Points about “low path”:

- It is what Apple is doing in their current products such as iChatAV
- It is what the WhatWG is proposing
- It is what Google has open sourced in Chrome
- It is what Cisco is currently working on