

WebRTC

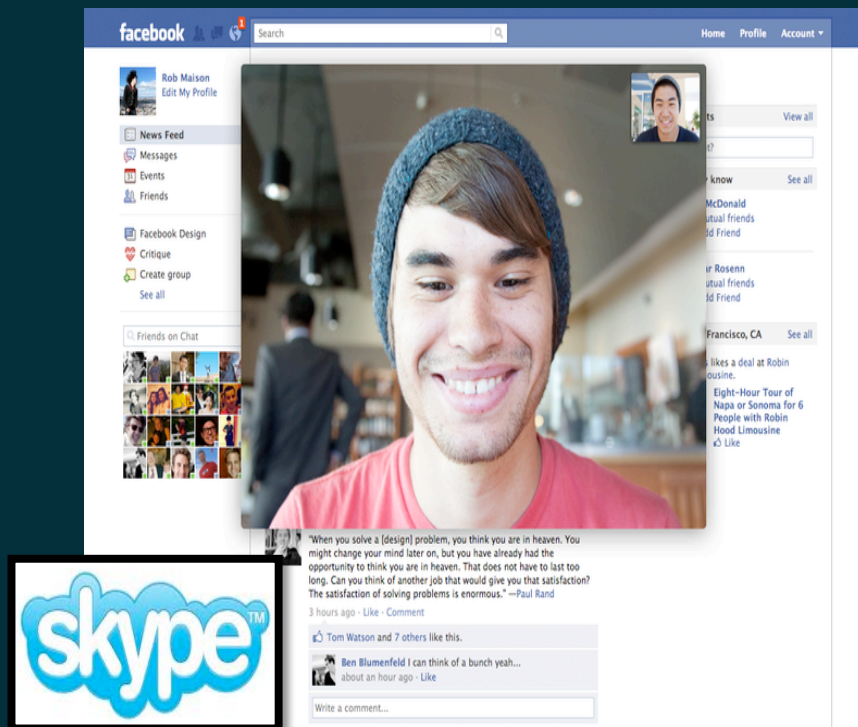
The simplified, hand wavy, fluffy version

IETF 82

Cullen Jennings



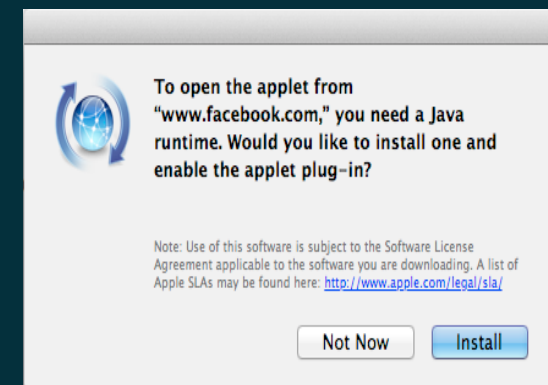
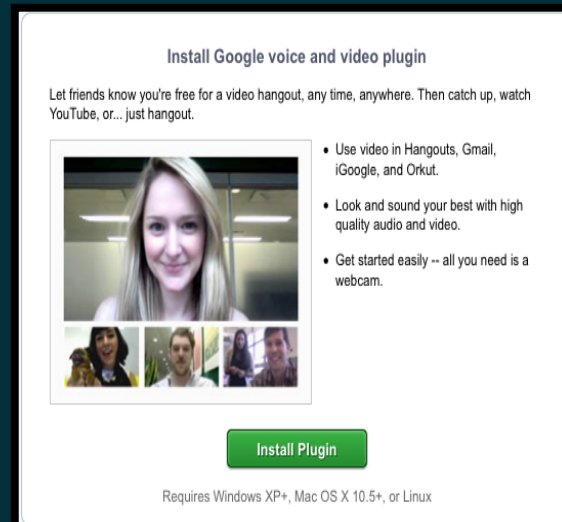
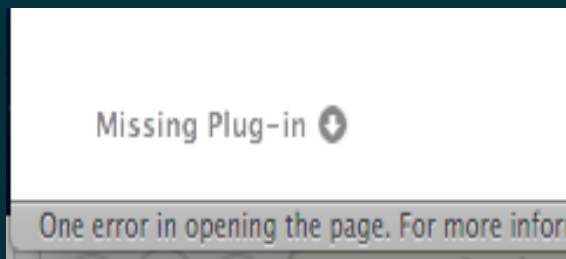
Interactive Voice and Video is in your browser today ...



Sort of ...

Yes, we can do interactive voice and video today, but it's...

- Proprietary, no interoperability
- Dependant on 3rd Party Browser plug-ins or add-ons
- Not easy to deploy

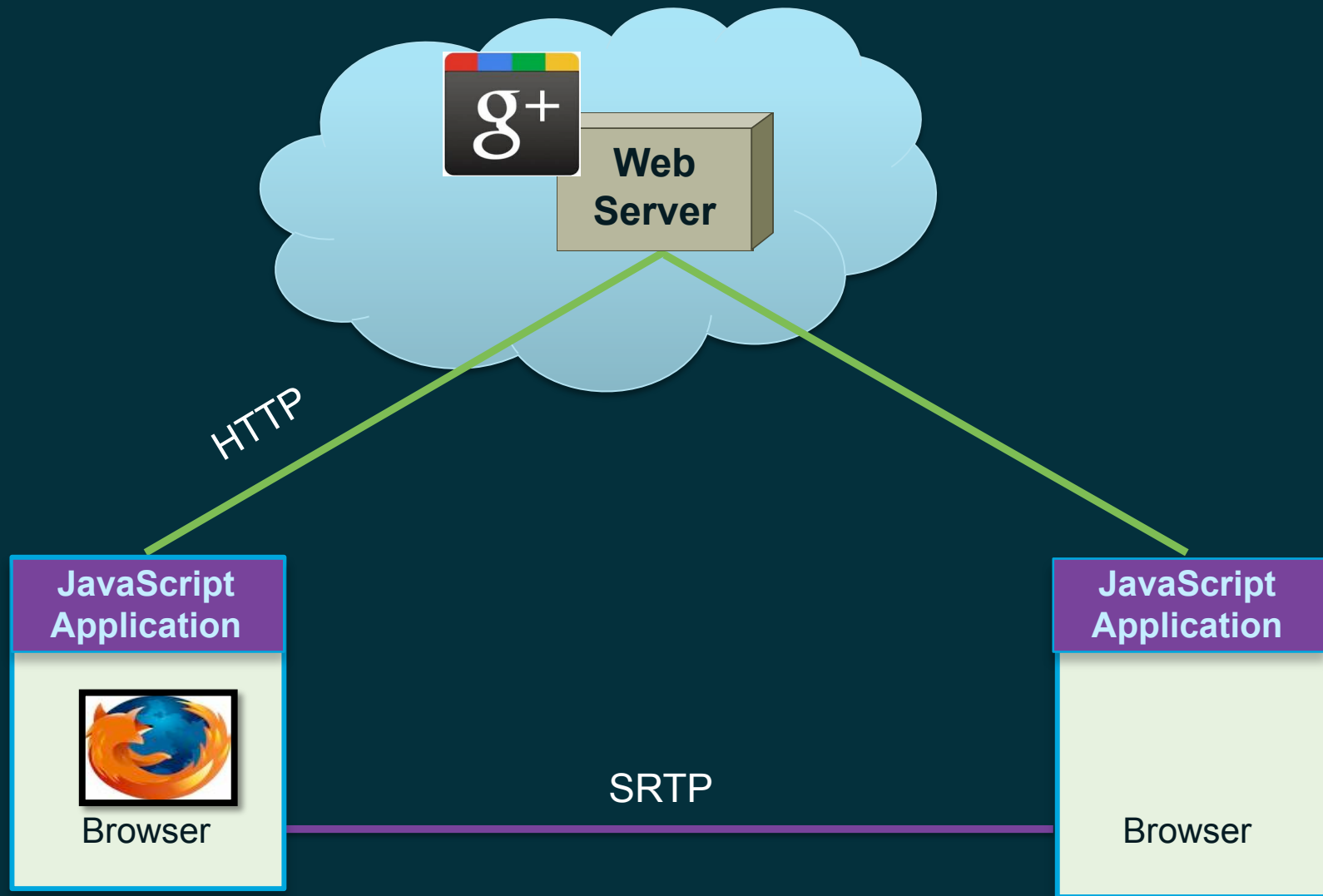


Personal Shopper/Instant Customer Care

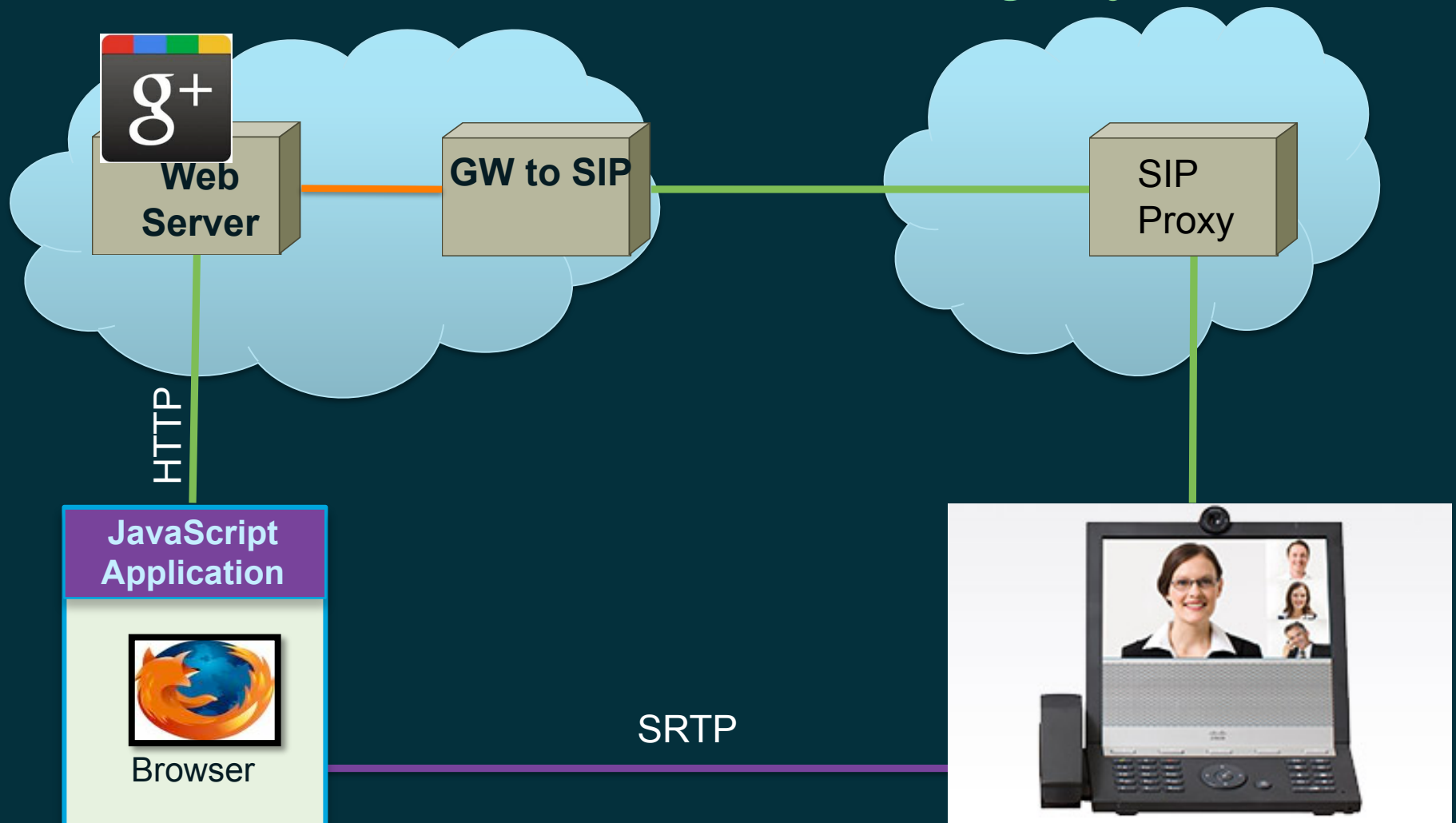
The screenshot shows the Amazon.com homepage with a search for 'router'. The top navigation bar includes the Amazon logo, a greeting, links for 'Sign in' and 'Start here', a promotional banner for '25% Off Select Valentine's Day Gifts', and links for 'Your Amazon.com', 'Today's Deals', 'Gifts & Wish Lists', 'Gift Cards', 'Your Account', and 'Help'. The search bar shows 'router' with a 'GO' button and links to 'Cart' and 'Wish List'. Below the search bar, a banner for 'Shop for Routers' features a router image and text: 'Check out our great selection of routers from top brands like Bosch, DEWALT, and Milwaukee. See all routers.' A video call overlay on the right shows a male Amazon representative with glasses, smiling, with a button that says 'Talk to me about routers'. The main content area displays search results for 'router', showing 1-16 of 65,848 results. The first result is the 'Cisco-Linksys WRT54GL Wireless-G Broadband Router (Compatible with Linux)' by Cisco, priced at \$79.99 (43 used & new from \$47.99). The second result is 'Amazon Connected Home' with features like Streaming Music, Home Automation, Streaming Movies, Security Cameras, Improving Cell Phone Coverage, and Printer Sharing. The third result is the 'Cisco-Linksys E1000 Wireless-N Router' by Cisco, priced at \$72.99 (45 used & new from \$25.98). The left sidebar contains departmental links: 'Computers & Accessories' (Computer Routers, Computer Networking Switches, Ethernet Cables), 'Tools & Home Improvement' (Routers, Router Bits, Router Accessories), 'Video Games' (PC Game Hardware), and 'Shipping Option' (Any Shipping Option, Free Super Saver Shipping). The bottom left has a 'Listmania!' link.

- Web storefronts offer personal shopper/instant help functionality
- The user is presented with a means to instantly video call a storefront customer care representative
- The customer care agent could be using legacy video phone / call center

Architecture



Architecture – Connection to Legacy VoIP



Security

- Some ways a bit like problem in SIP based communications
- Some ways a bit like HTTP / HTML security
- PITA to secure something where you download the applications from the attacker



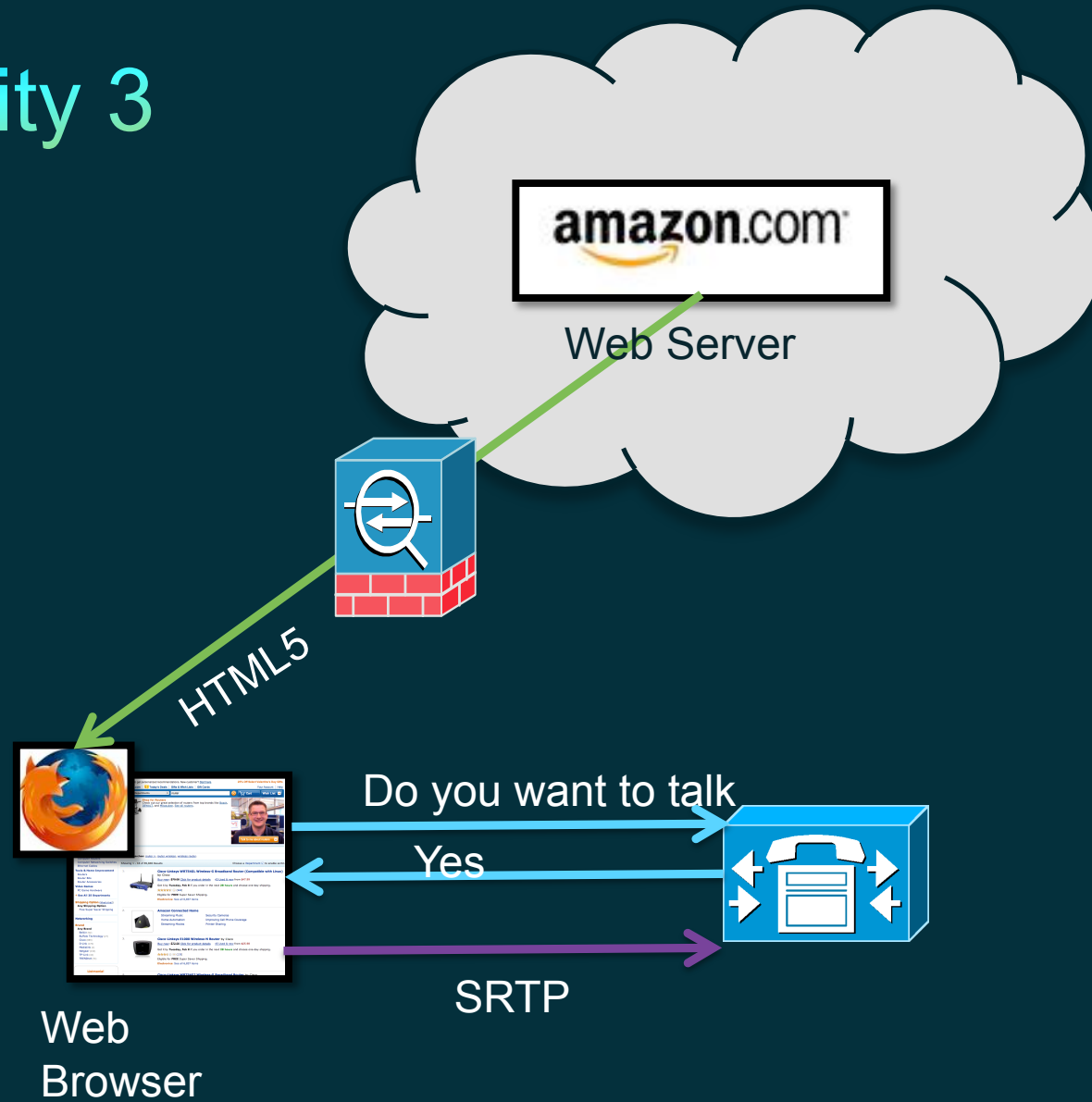
Security 1



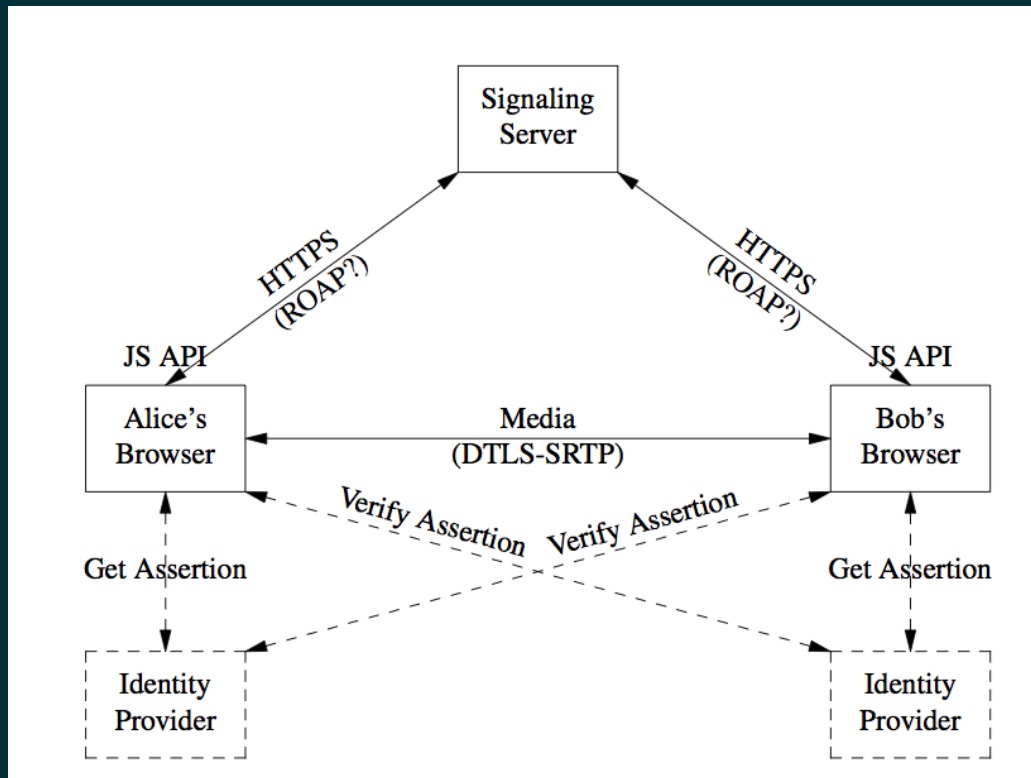
Security 2



Security 3



Identity



- Used to understand who is access camera
- Used to understand who the encrypted media is from or to

(Thanks to EKR for figure)

RTCWeb is going to help choose

- Audio codecs (G.711 and perhaps opus)
- Video codecs (who knows but VP8 and H.264 get mentioned)
- Way to transport media (SRTP and perhaps RTP)
- Ways to transport p2p real time application data
This is for game moves etc. Might be SRTP over DTLS over UDP.
- Requirements for API to control media engines and GW to SIP
- Ways to deal with NAT / FW traversal (ICE, STUN, TURN)
Optimizations for using less UDP ports for media to speed up ICE
- Ways to key the media security (DTLS and / or / perhaps SDES)
- Ways to assert identity of of who media is encrypted to
Hopefully we can support multiple identity protocols

Points of Overlap with CLUE

- We both wish AVT had one way to send RTP on single or small number of UDP flows
- Both have people bringing proposal to do things like negotiate video codec parameters without using SDP

