



# Hangouts in 30 minutes with Socket.io

**Speaker:**

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## Aleksandar Mihajlovski

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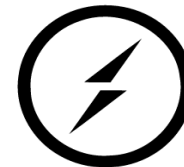
# What is live streaming?

- Live streaming refers to content delivered live over the Internet, requires a form of source media (e.g. a video camera, an audio interface, screen capture software), an encoder to digitize the content, a media publisher, and a content delivery network to distribute and deliver the content.

# Why to use it?

- Conversations
- Competitions
- Teaching lessons

# How to implement?



socket.io



**WebRTC**



- Node.js uses an **event-driven, non-blocking I/O** model, which makes it lightweight.
- In simple words Node.js is “**server-side JavaScript**”
- In *not-so-simple* words Node.js is a high-performance **network applications framework**, well optimized for high concurrent environments.



- Socket.io is a framework that creates a persistent, real time, connection between server and client.
- Works on every platform, browser, device.
- Mainly used for
  - Instant messaging and chat
  - Binary streaming (image/video/audio)



## WebRTC

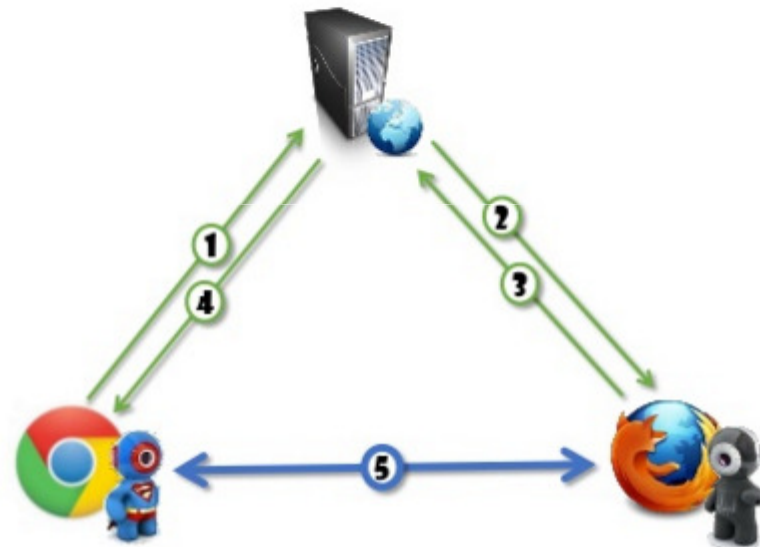


- WebRTC offers real time communication natively from a web browser.
- WebRTC is a media engine with JavaScript API.
  - MediaStream
  - RTCPeerConnection
  - RTCDataChannel



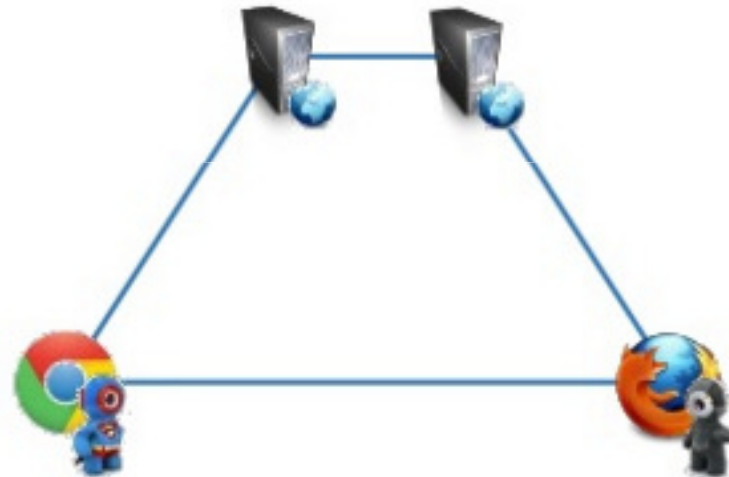
# Architectures

- Triangle



# Architectures

- Trapezoid



# Compatibility

## Where & When



**May 2011: WebRTC Announced**

Google releases WebRTC source code for the first time under a permissive BSD license

**Nov 2011: Chrome 23 adds WebRTC**

No optional flag is required. Data channel capabilities not supported

2012

**Jan 2013: Firefox 20 adds WebRTC**

First release of Firefox supporting WebRTC. Comes with GetUserMedia support only, which gives access to the local camera

2013

**Feb 2013: Interoperability**

Initial interoperability between Chrome and Firefox browsers achieved. This is still early on in the process, so things still don't work as expected, but this is an indication of things to come

**Jun 2013: Firefox 22 released**

First Firefox release that officially supports the ability to make video calls as well as use the Data channel API

**Jul 2013: Chrome for Android Beta with WebRTC**

The beta version of Chrome 29 on Android supports WebRTC

**Aug 2013: Chrome for Android**

Chrome 29 for Android now fully supports WebRTC

**Sep 2013: Firefox for Android supports WebRTC**

The beta version of Chrome 29 on Android supports WebRTC



Demo



Questions?



# Discussion

- How to implement live streaming application with more than two clients?