WebRTC: Коммуникации в реальном времени.

Обзор и демонстрация возможностей WebRTC - работа с видео и peer-to-peer соединения.

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David Klassen

WebRTC API's

MediaStream

```
navigator.getUserMedia(constraints, function (stream) {
    // handle stream
}, function (err) {
    // handle error
});
```

PeerConnection

```
var pc = new RTCPeerConnection();

// Signalling related API
pc.createOffer(function (offer) { /* process offer */ });
pc.createAnswer(function (answer) { /* process answer */ });
pc.setLocalDescription(description, successCallback, errorCallback);
pc.setRemoteDescription(description, successCallback, errorCallback);
pc.onicecandidate = function (event) { /* process candidate */ };

// Media API
pc.addStream(stream);
pc.onaddstream = function (stream) { /* process stream */ };
```

MediaStream Demo

Hello, World! (https://github.com/DavidKlassen/webrtc-demos/tree/master/hello-world/)

Canvas (https://github.com/DavidKlassen/webrtc-demos/tree/master/canvas/)

CSS (https://github.com/DavidKlassen/webrtc-demos/tree/master/css/)

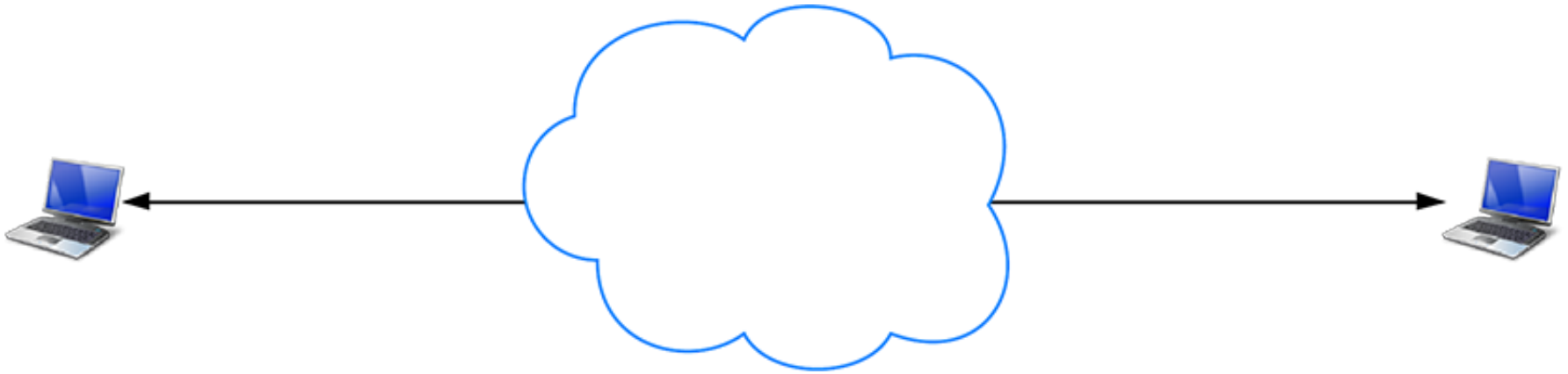
PeerConnection и его протоколы

SDP (Session Description Protocol)
RTP (Real-time Transport Protocol)
RTCP (RTP Control Protocol)

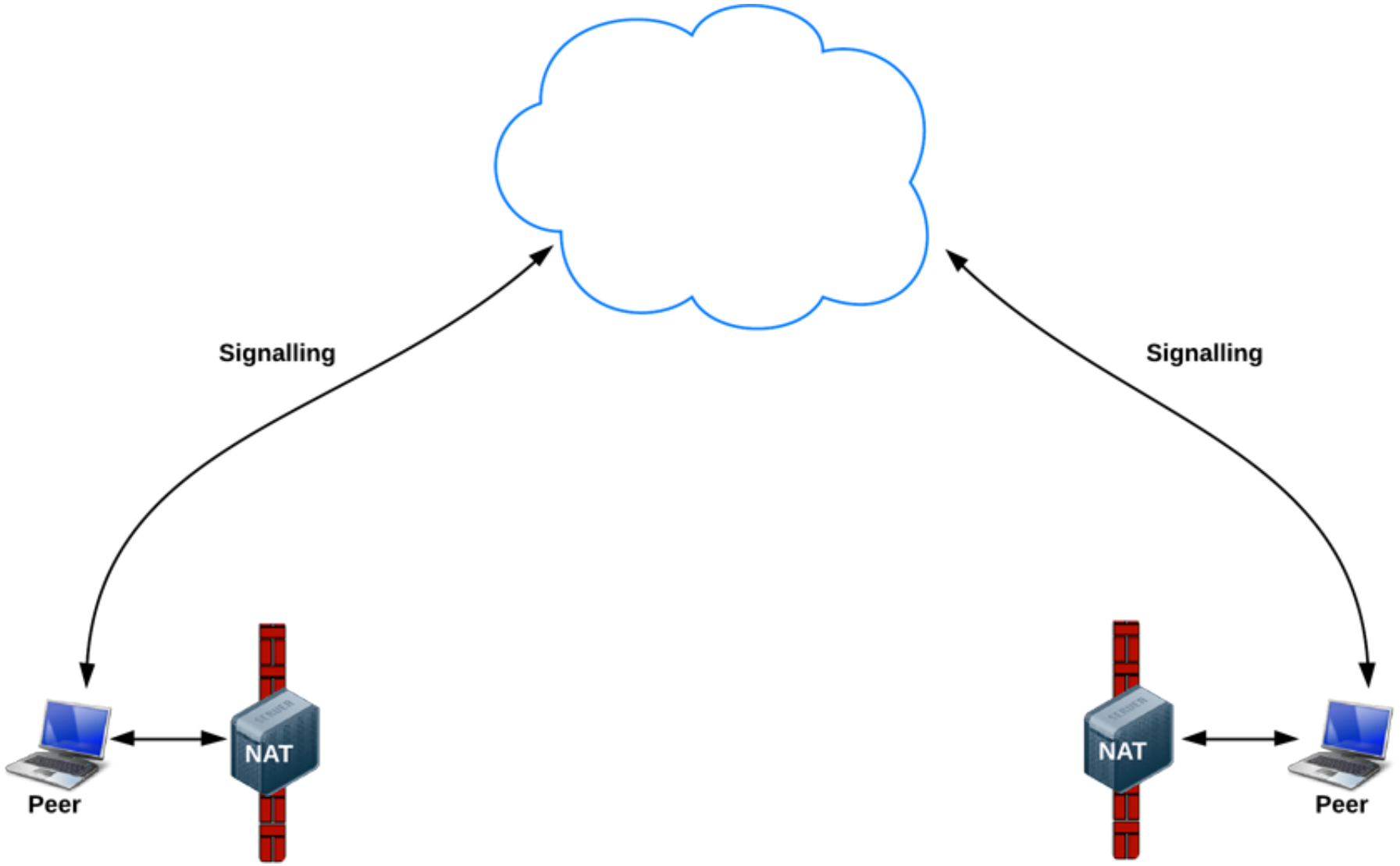
PeerConnection Demo

Hello, World! (https://github.com/DavidKlassen/webrtc-demos/tree/master/peer-to-peer/)

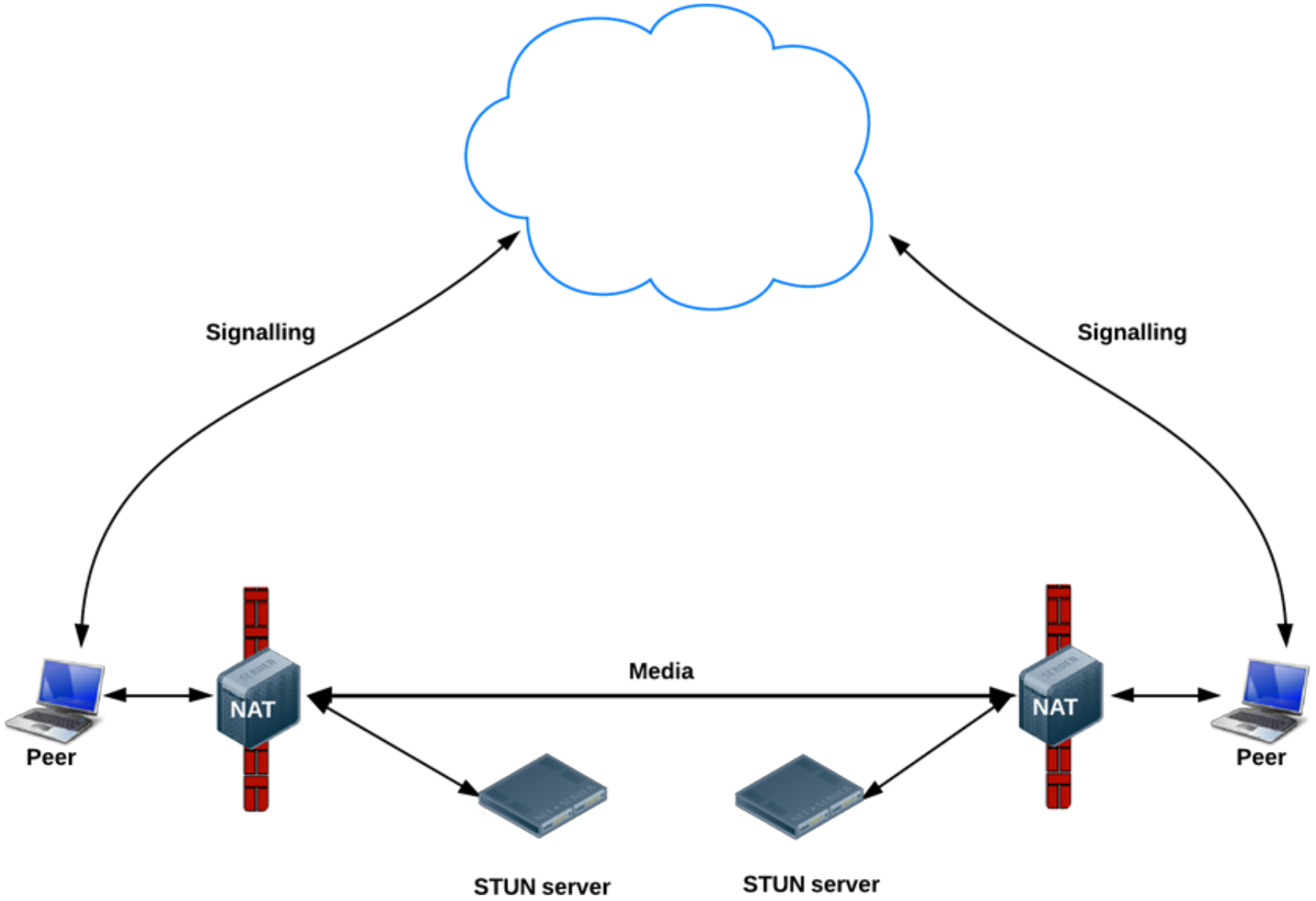
Что такое peer-to-peer?



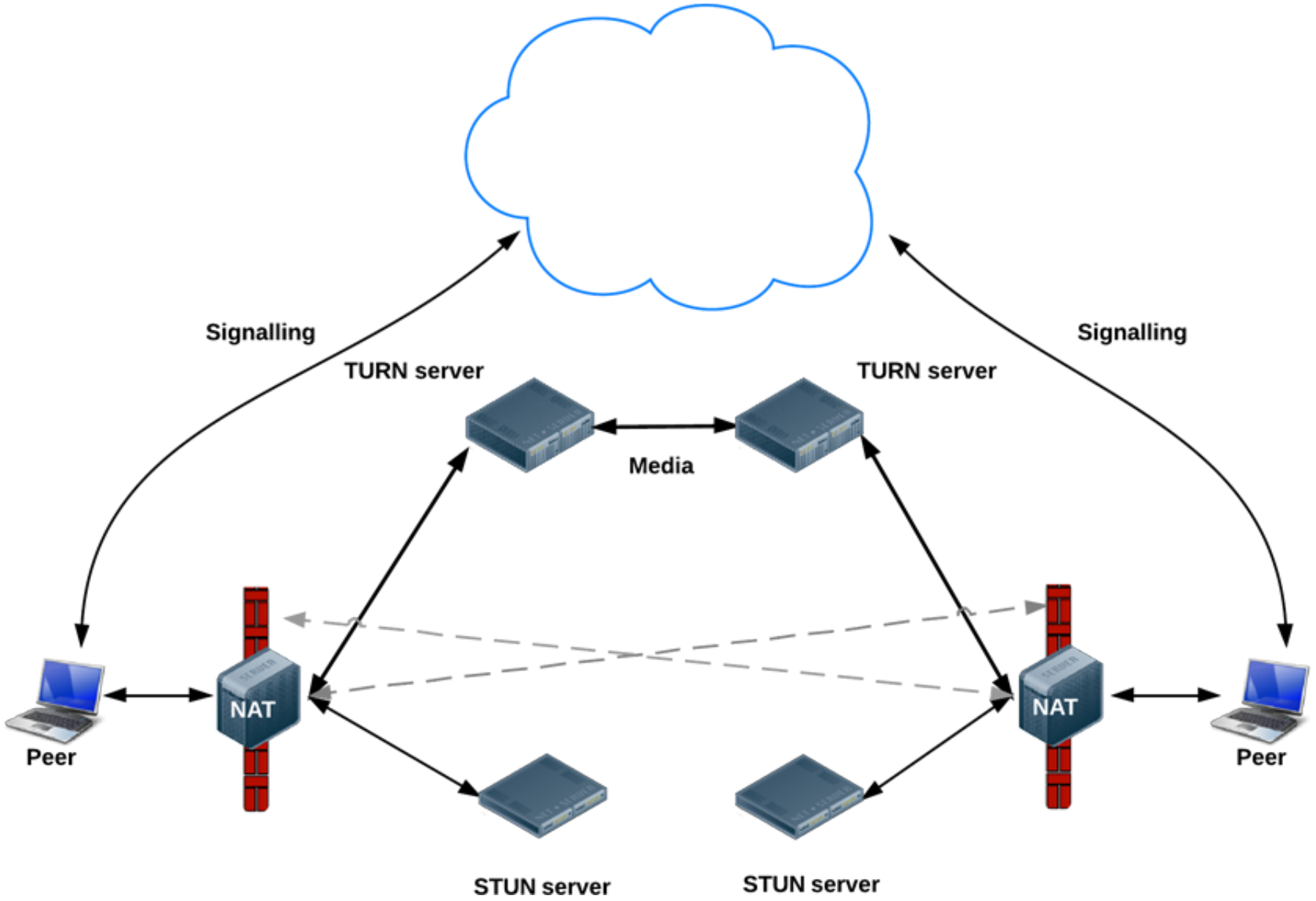
Реальность



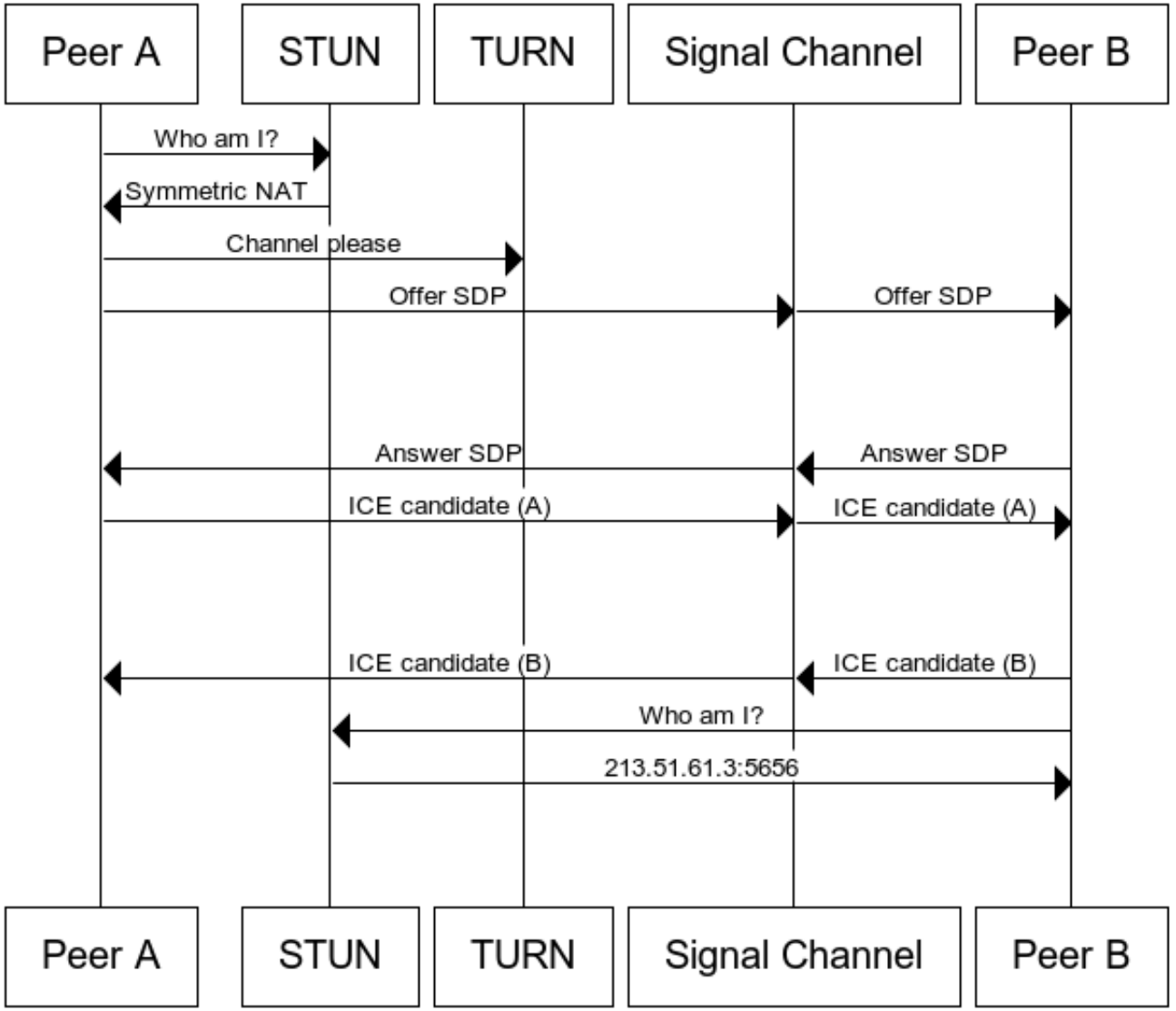
STUN (Session Traversal Utilities for NAT)



TURN (Traversal Using Relays around NAT)



Signalling


Peer A
STUN
TURN
Signal Channel
Peer B
Who am I?
Symmetric NAT
Channel please
Offer SDP
Offer SDP
Answer SDP
Answer SDP
ICE candidate (A)
ICE candidate (A)
ICE candidate (B)
ICE candidate (B)
Who am I?
213.51.61.3:5656
Peer A
STUN
TURN
Signal Channel
Peer B

Потрогаем все это руками

Hello, World! (https://github.com/DavidKlassen/webrtc-demos/tree/master/signaling)

Что еще?

DataChannel
Media Servers (kurento)

Thank you

David Klassen
f0rk.tt@gmail.com (mailto:f0rk.tt@gmail.com)