

# WebRTC on Mobile Edge Cloud

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# Motivation

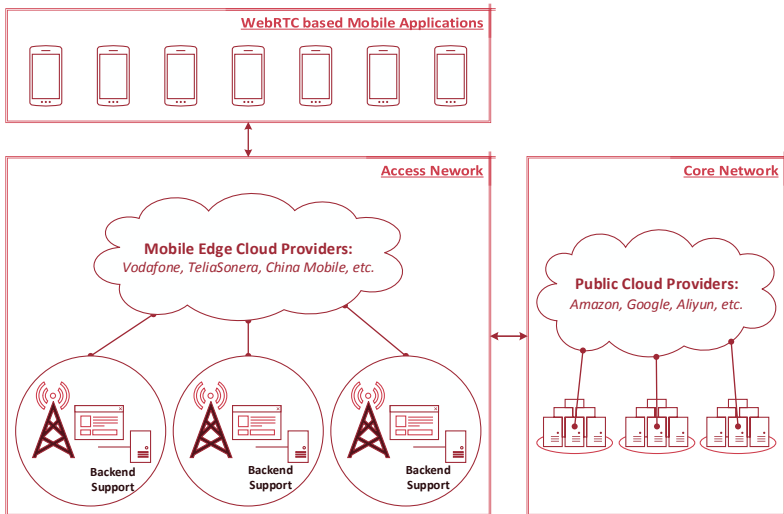
## WebRTC

- 1 Open source plugin-free real-time communication in browsers
- 2 More than 1 billion unique cross platform endpoints
- 3 Peer-to-peer optimization as a service required

## Mobile Edge Cloud

- 1 Deployed on access network layer
- 2 Low latency to mobile end-users
- 3 "Smart proxy" to process media stream prior to the forwarding

# Concept



# Summary

## Exchange

real-time video, audio and data between browsers

## Deploy

backend services on mobile edge cloud

## Improve

user experience on WebRTC based mobile applications

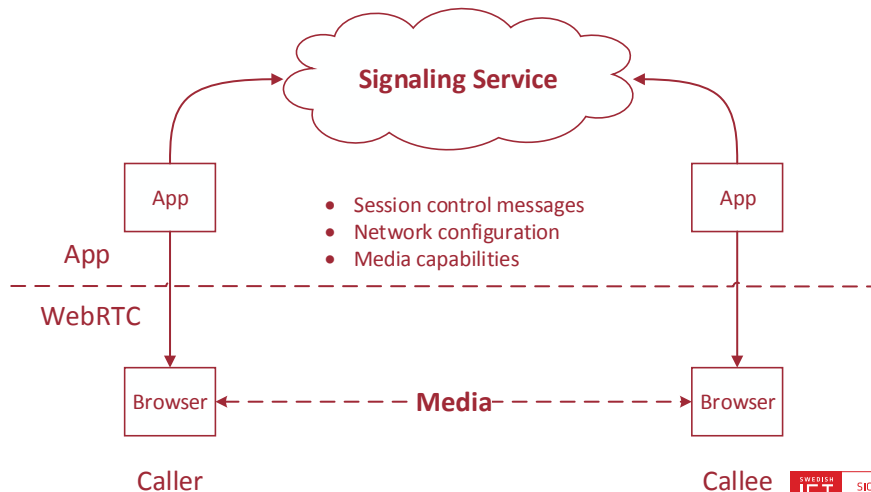
## Reduce

bandwidth consumption for mobile network operators

# Signaling Service (1/2)

- 1 Initiate a peer-to-peer connection
- 2 Exchange session description
- 3 Not specified by WebRTC

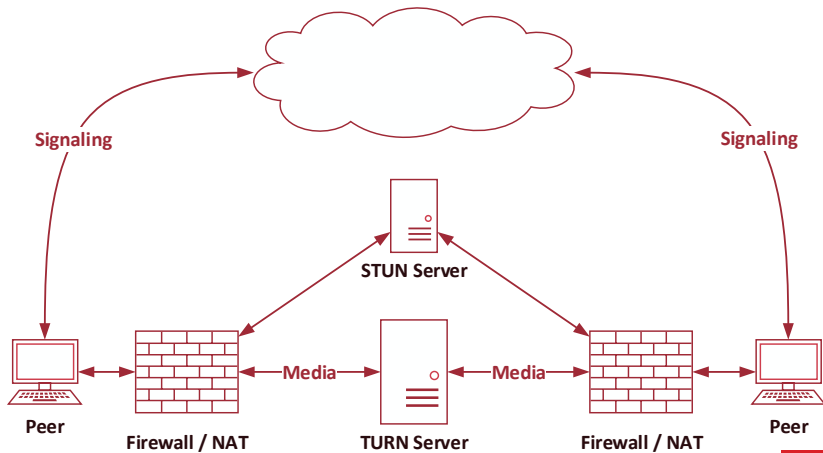
# Signaling Service (2/2)



# Firewall and NAT Traversal (1/2)

- 1 STUN: Session Traversal Utilities for NAT
- 2 TURN: Traversal Using Relays around NAT
- 3 ICE: Interactive Connectivity Establishment

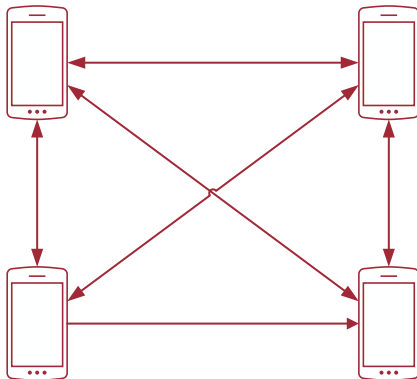
# Firewall and NAT Traversal (2/2)





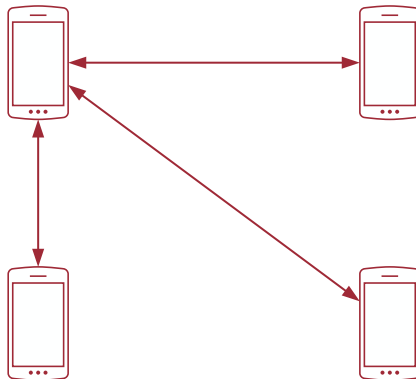
# Mesh Network

Simple but inefficient.



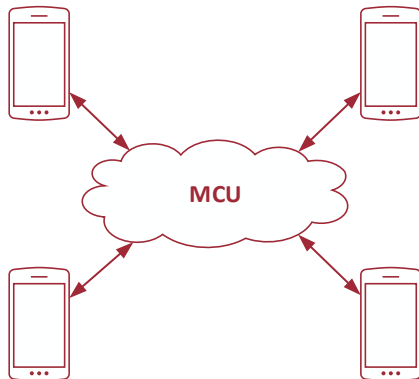
# Star Network

Too much traffic on single peer.



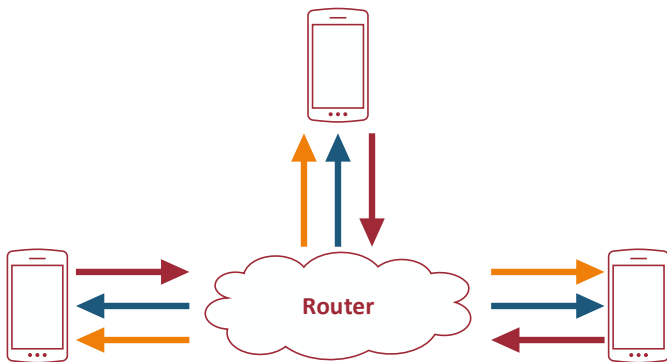
# Mixer Solution

Multipoint Control Unit (MCU) - a central point transcodes stream and maintains a single one-to-one stream with each peer



# Router Solution

Relay approach - a central point inspects and forwards stream



# Demo

# Demo

# The End

Thank you!