UNINETT WebRTC-Efforts

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WebRTC@Uninett
2014 first contact

- Experiments with network setups (first Jitsi meet installation)
- Turnserver setup
- Student practice work
  - one to one communication (v/a) webclient + server)
- Sommerstudent: communication client:
  - A/V, Chat, File exchange, Presence + integration with norwegian identity provider (feide)

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WebRTC@Uninett
2015

- Started GÉANT WebRTC (Service Activity 8 T2)
  - Investigate WebRTC as technology & make a plan
- Tests with Pexip & Acano
  - Virtuell meeting room concept
  - Translate between Lync/S4B, Skype, SIP, H323 WebRTC automatically
- Jitsi meet as experimentell service

WebRTC@Uninett 2016

- GÉANT SA8T2
  - Made recommendations for future work
  - Federated STUN/TURN Service
  - Rendezvous (Jitsi meet)
  - WebTut
- Joined GÉANT4-2 JRA4 T5
- National videobridge: Acano/Cisco
- KnockPlop

KnockPlop

- Inspired by appear.in
- Started from a simple survey while national technical meeting
  - Should we provide our own appear.in like service? → YES
- Go to the startpage and type a room name
- Share your URL: startpage/room
- Audio/Video p2p (many to many)
- Automatic layout
- Mute (audio or video)
- Fullscreen
- Demo

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KnockPlop

- client+server 100% pure Javascript
- Server:
  - 100% nodejs (express + socketio)
  - Deliver webclient
  - Signaling over websocket (socketio)
- Client
  - (jquery+bootstrap)

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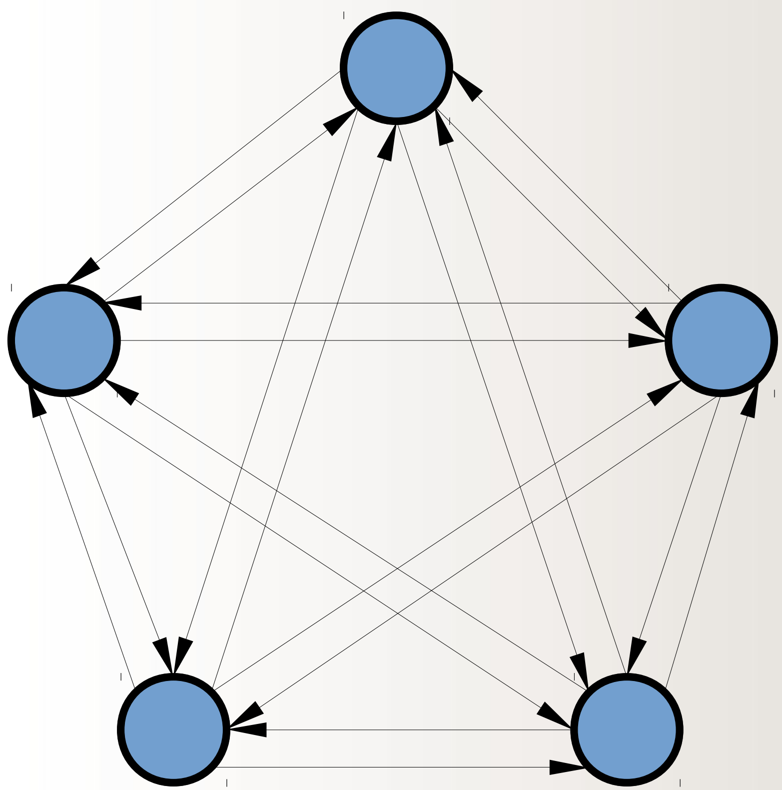
KnockPlop future plans

- Experimentell pilot in Norway
- Federated STUN/TURN integration
- User login (eduGain)
- Screensharing
- Manual Quality control from user (resolution)
- Choose media sources
- Separate Signaling / media handling / GUI
- Mirror / connection test
- Kurrento integration

KnockPlop future plans

- Desktop/Application sharing
- File sharing (webtorrent)
- Chat
- Room control
  - Lock / KickOut
  - Claim / Release(To)
  - Limit user number (queue – system, helpdesk)
  - Save room properties (fast installations)
  - Remote control
- https://github.com/so010/knockplop

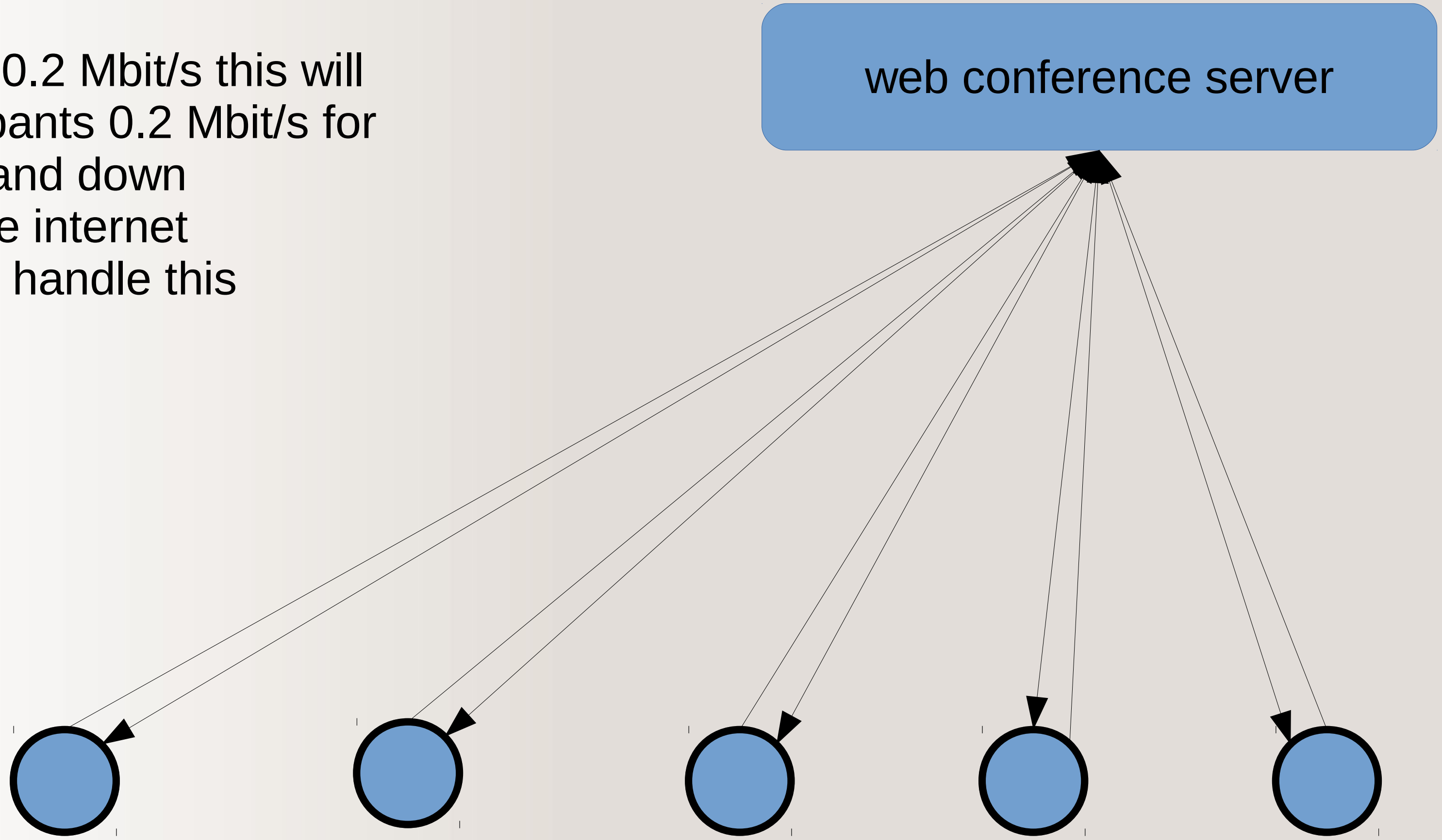
Multi-part p2p communication



- (n-1) up and down-streams for each client
- For video with 0.2 Mbit/s this will be for 5 participants 1 Mbit/s for each client up and down
- This outperfoms an basic private ADSL uplink connection
- This will exclude low bandwith-clients from the communication when number of participants > 5

Classic web-conference

- 1 up and 1 down-streams for each client
- For video with 0.2 Mbit/s this will be for 5 participants 0.2 Mbit/s for each client up and down
- An usual private internet connection can handle this



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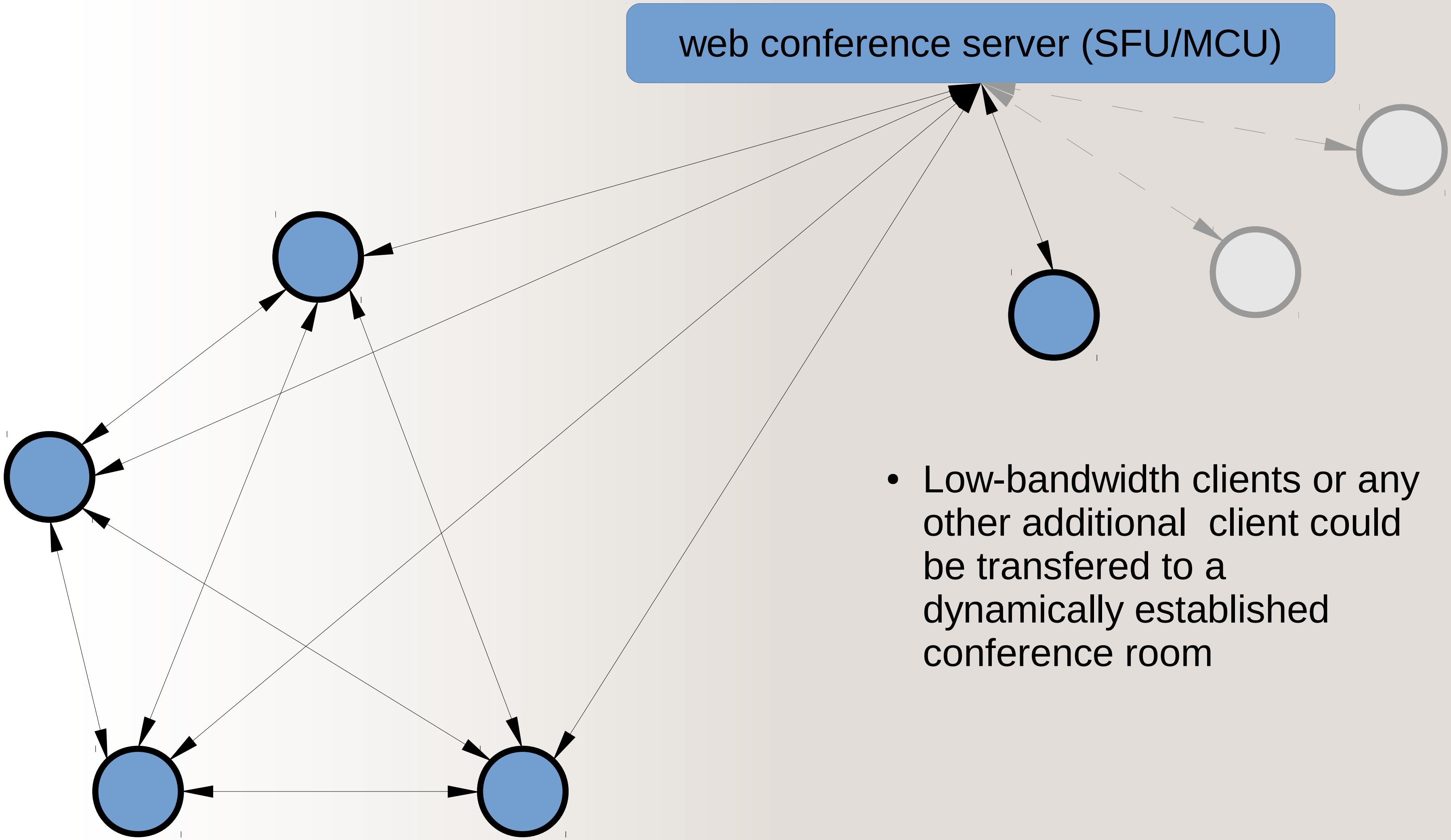
p2p with central web conference



- Low-bandwidth clients or any other additional client could be transfered to a dynamically established conference room

Thanks