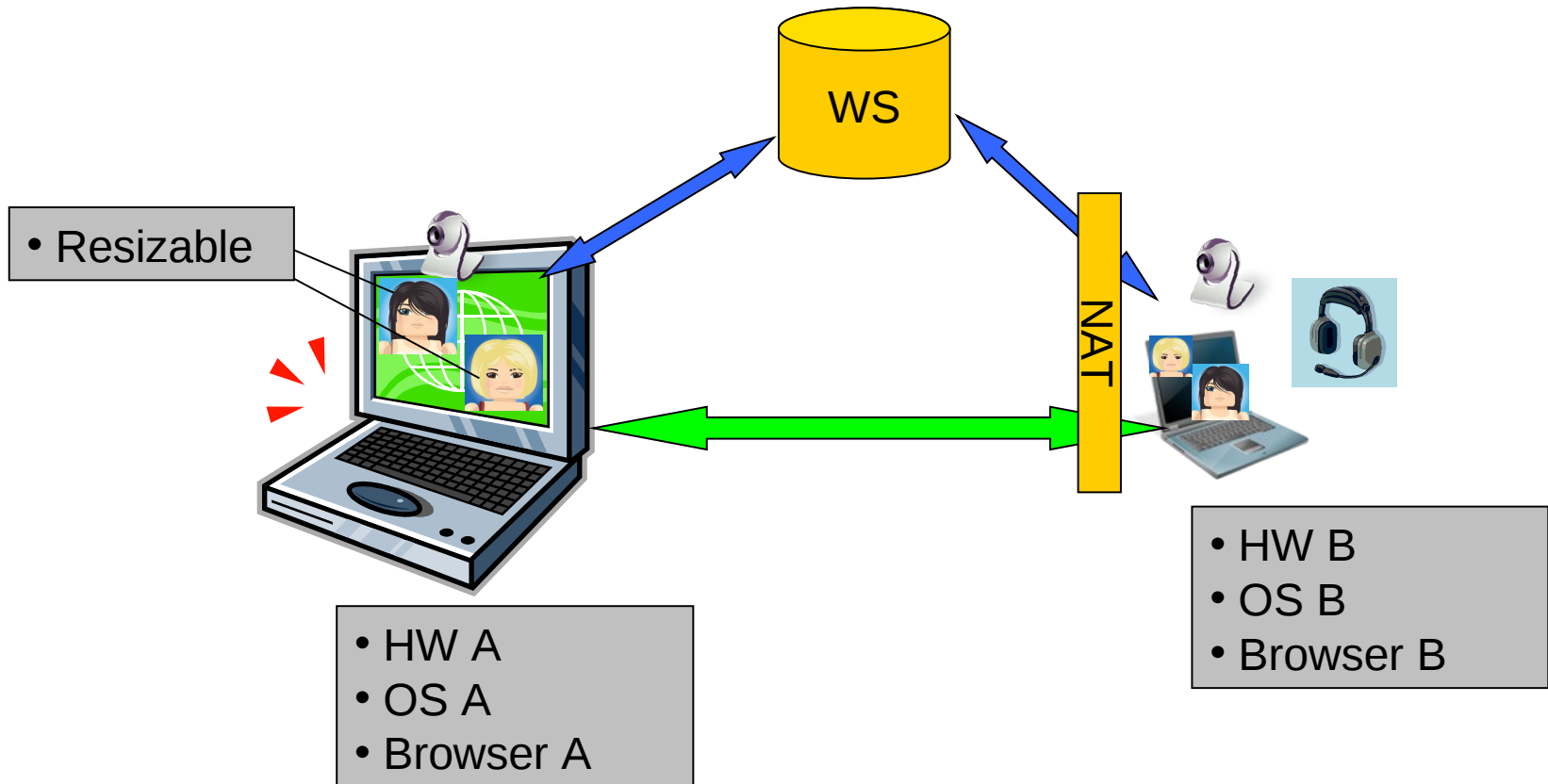
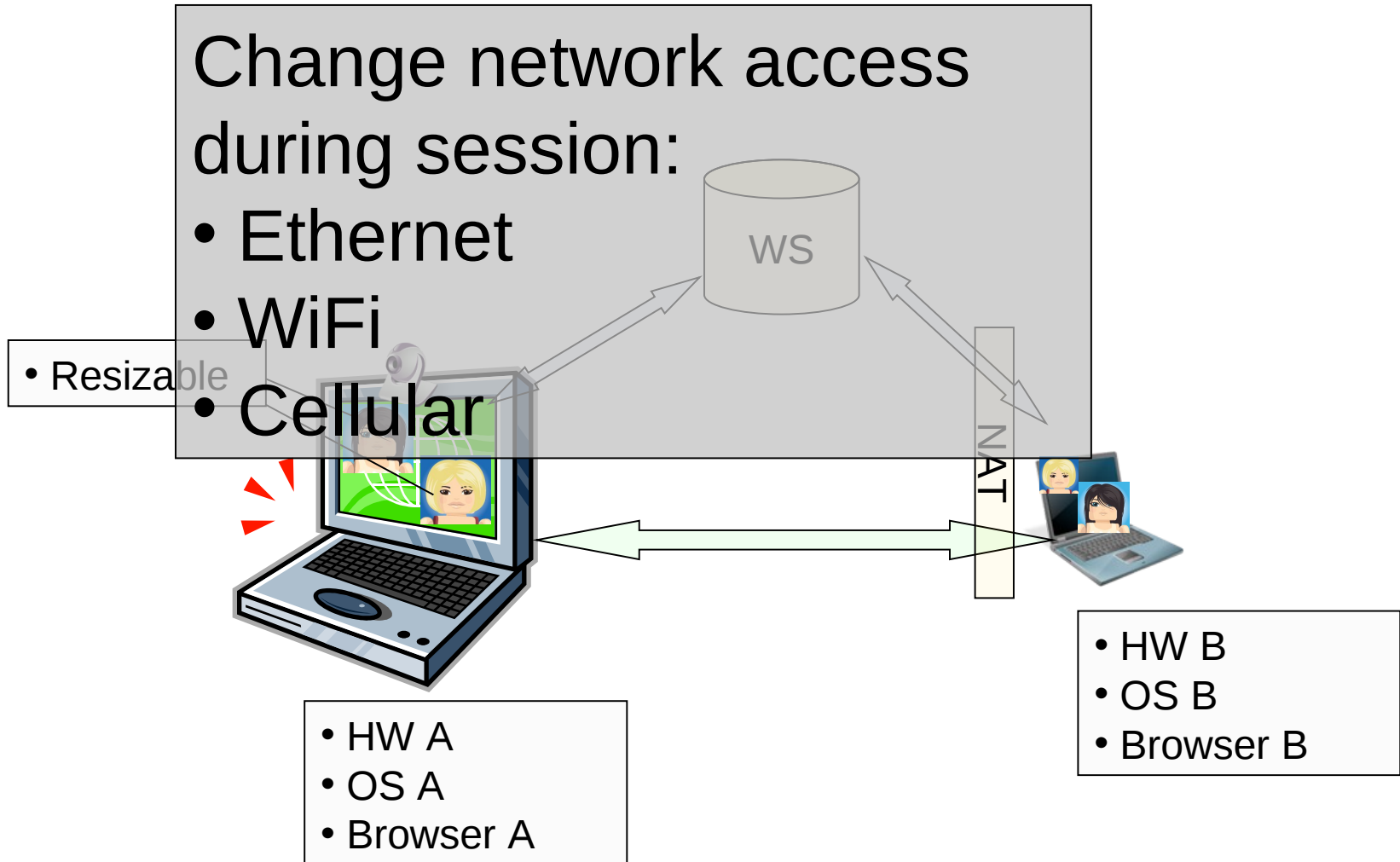


Simple Video Communication Service



Simple Video Communication Service, access change



Simple Video Communication Service, QoS

Change network access
during session:

- Ethernet
- WiFi
- Cellular

Behind a
residential GW

• Resizable

Make use of QoS offered by
Res GW and Cellular NW

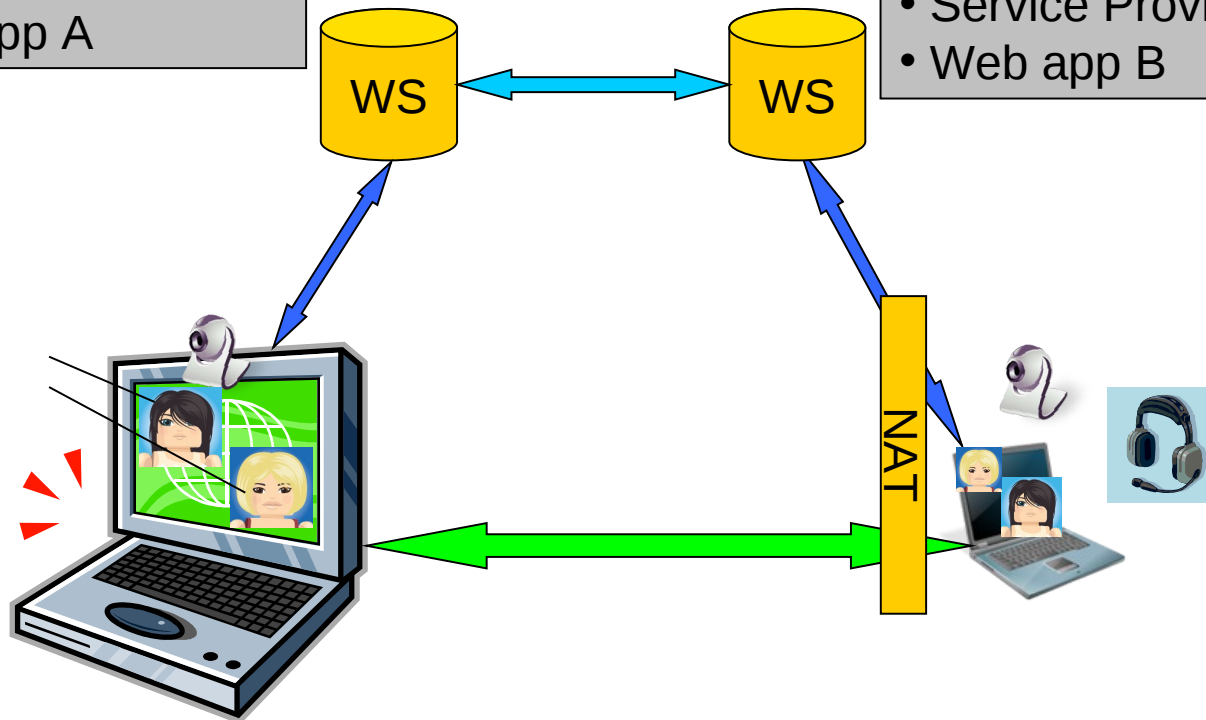
- HW A
- OS A
- Browser A

- HW B
- OS B
- Browser B

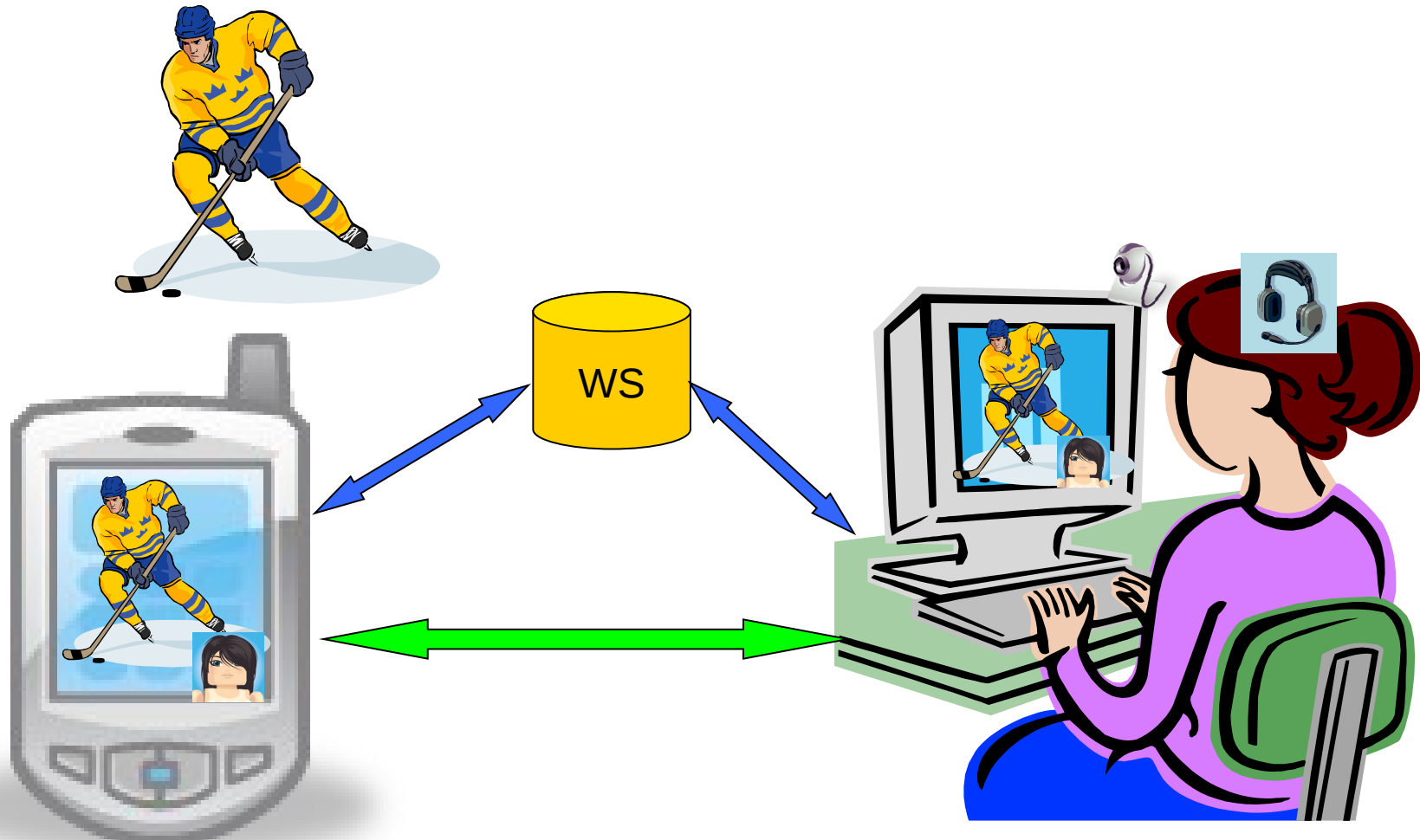
Simple Video Communication Service with inter-operator calling

- Service Provider A
- Web app A

- Service Provider B
- Web app B

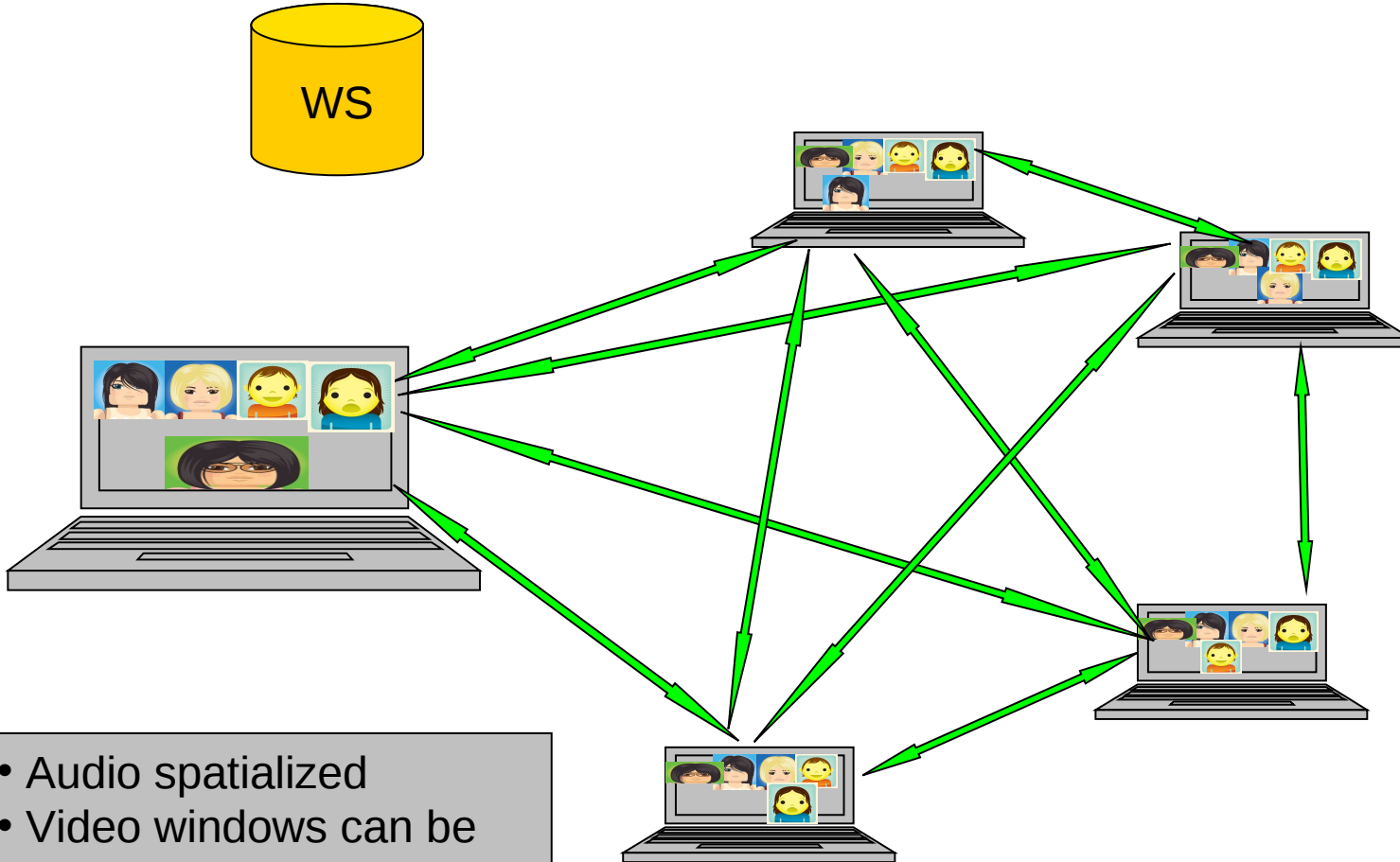


Hockey game viewer



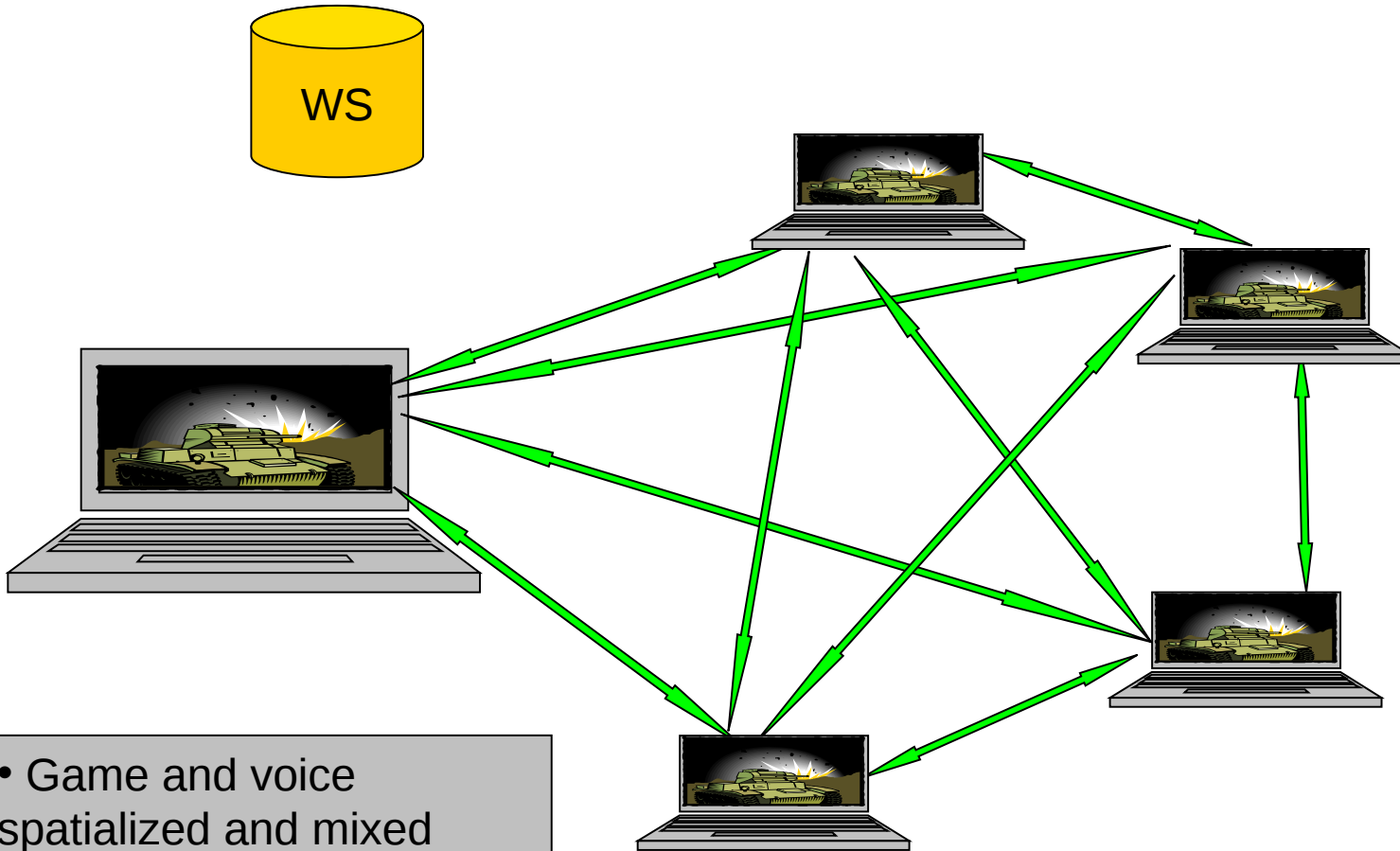
Two cameras (front and rear)

Multiparty video comm



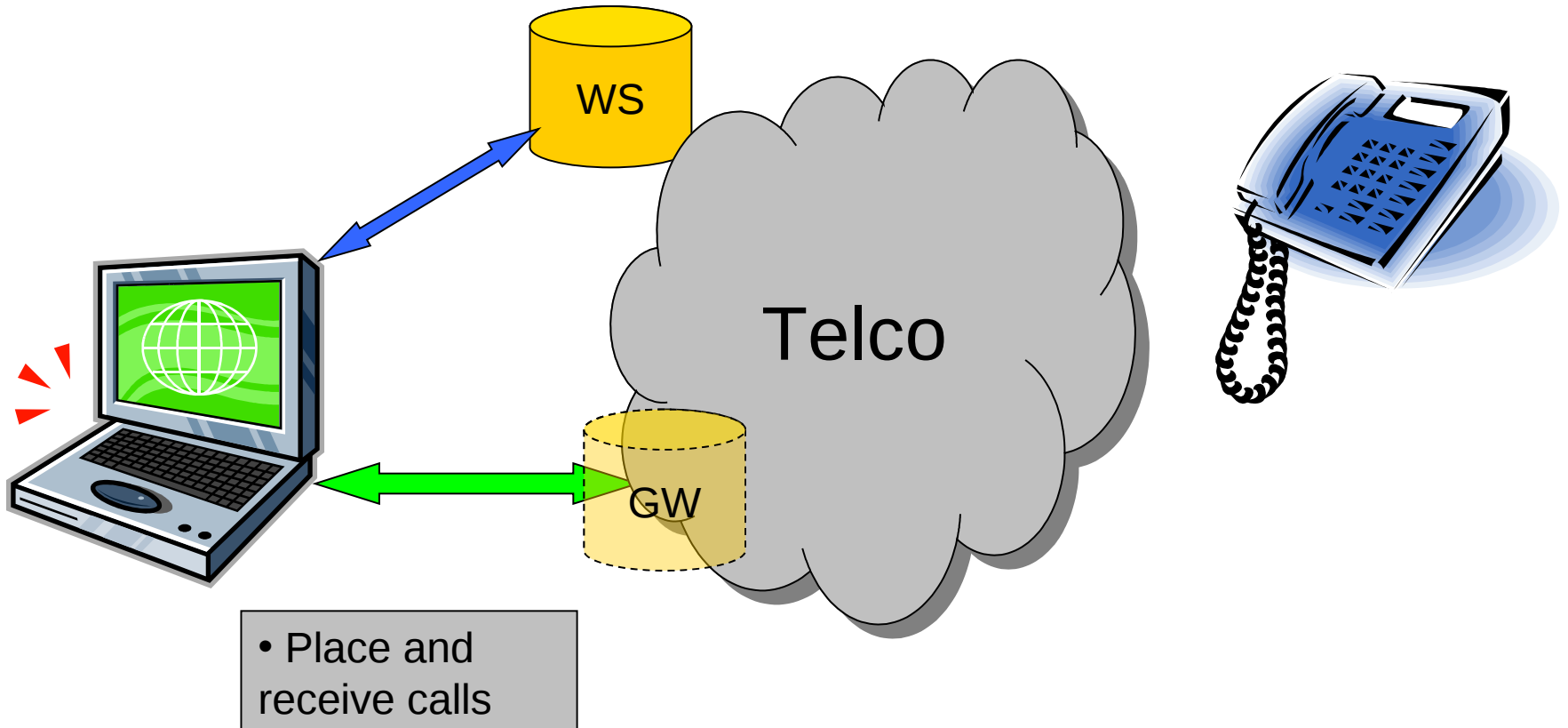
- Audio spatialized
- Video windows can be resized and rearranged

Multiparty on-line game with voice comm

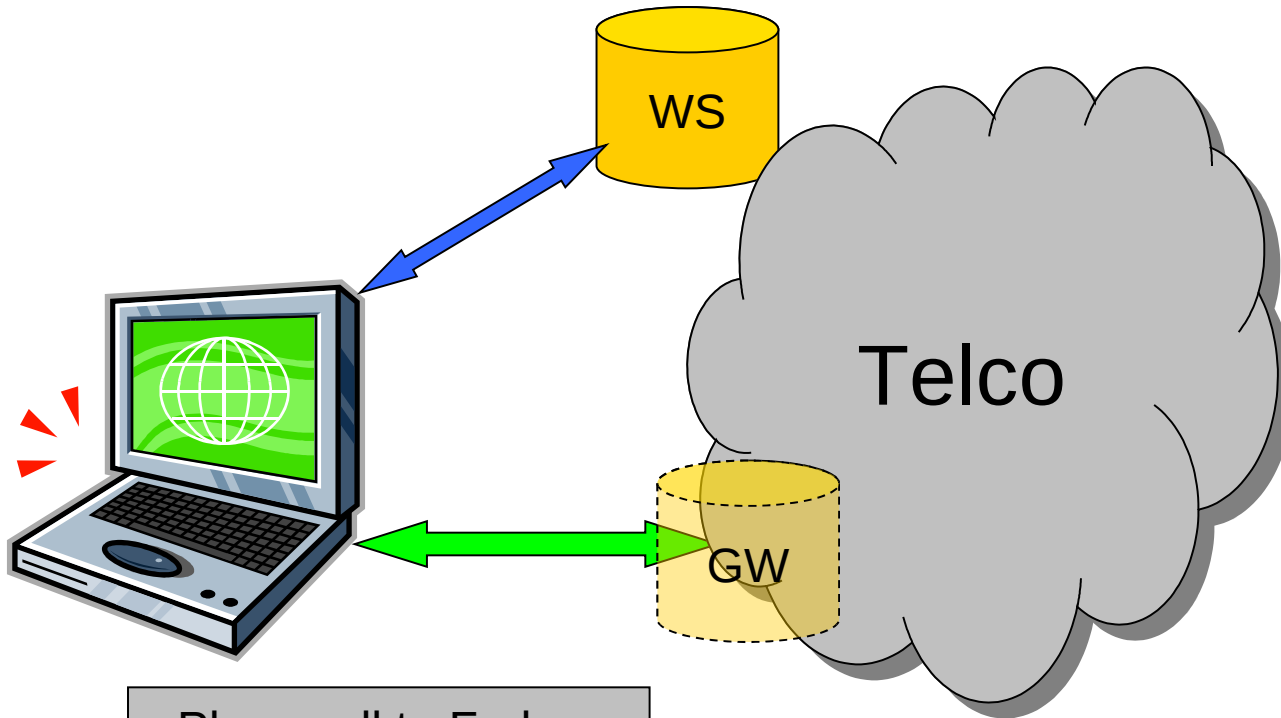


- Game and voice spatialized and mixed
- Game scene updates go peer-to-peer (latency)

Telephony terminal



Fedex call

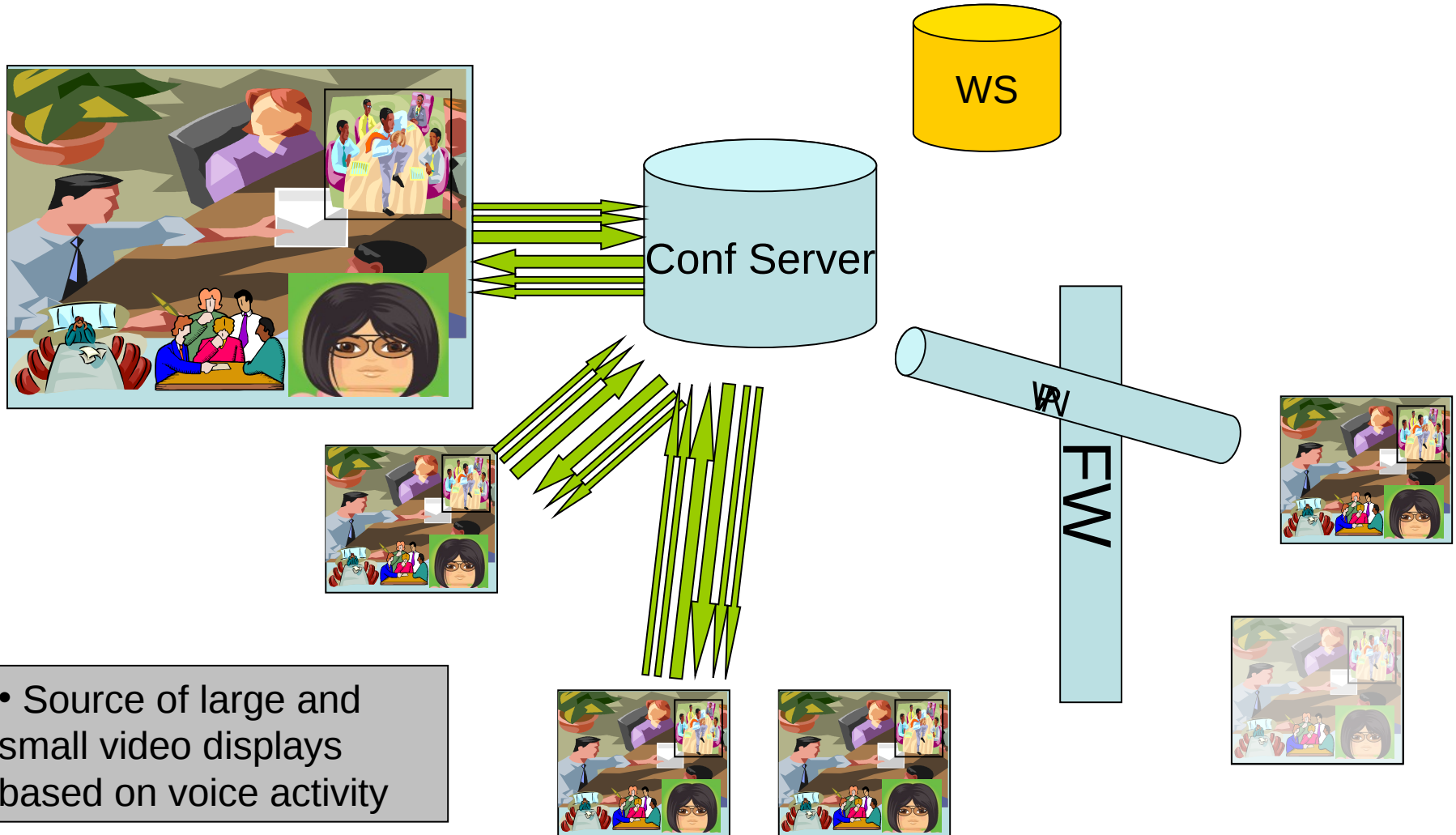


- Place call to Fedex
- Navigate Interactive Voice Response (IVR)

• Fedex



Video conf with server



- Source of large and small video displays based on voice activity

Derived API reqs

- A1 The web application **MUST** be able to query the user about the usage of cameras and microphones as input devices.
- A2 The web application **MUST** be able to control how streams generated by input devices are used.
- A3 The web application **MUST** be able to control the local rendering of streams (locally generated streams and streams received from a peer).
- A4 The web application **MUST** be able to initiate sending of stream/stream components to a peer.
- A5 The web application **MUST** be able to control the media format (codec) to be used for the streams sent to a peer. **NOTE:** The level of control depends on whether the codec negotiation is handled by the browser or the web application.
- A6 After a media stream has been established, the web application **MUST** be able to modify the media format for streams sent to a peer.

Derived API reqs

- A7 The web application **MUST** be made aware of whether the establishment of a stream with a peer was successful or not.
- A8 The web application **MUST** be able to pause/unpause the sending of a stream to a peer.
- A9 The web application **MUST** be able to mute/unmute a stream received from a peer.
- A10 The web application **MUST** be able to cease the sending of a stream to a peer.
- A11 The web application **MUST** be able to cease processing and rendering of a stream received from a peer.
- A12 The web application **MUST** be informed when a stream from a peer is no longer received.
- A13 The web application **MUST** be informed when high loss rates occur.

Derived API reqs

- A14 It MUST be possible for the web application to control panning, mixing and other processing for individual streams.
- A15 The web application MUST be able to identify the context of a stream
- A16 It MUST be possible for the web application to send and receive datagrams to/from peer

Security Consideration

- The browser is expected to provide mechanisms for getting user consent to use device resources such as camera and microphone.
- The browser is expected to provide mechanisms for informing the user that device resources such as camera and microphone are in use.
- The browser is expected to provide mechanisms for users to revise consent to use device resources such as camera and microphone.
- The browser is expected to provide mechanisms in order to assure that streams are the ones the recipient intended to receive.
- The browser needs to ensure that media is not sent, and that received media is not rendered, until the associated stream establishment and handshake procedures with the remote peer have been successfully finished.
- The browser needs to ensure that the stream negotiation procedures are not seen as Denial Of Service (DOS) by other entities.

Not covered

- Security...
- Signaling reqs
- Authentication (towards STUN/TURN server)

Proposed new use cases

- Explicit video resize use case
- Distributed music band
 - Treat mic signal as “audio”, not “speech”
- E911
 - Same so far (but would extend to QoS, location, ...)