

# Mixed Reality Conferencing

---

Hirokazu Kato, Mark Billinghurst

[kato@hitl.washington.edu](mailto:kato@hitl.washington.edu)

[grof@hitl.washington.edu](mailto:grof@hitl.washington.edu)

*HIT Lab., University of Washington*

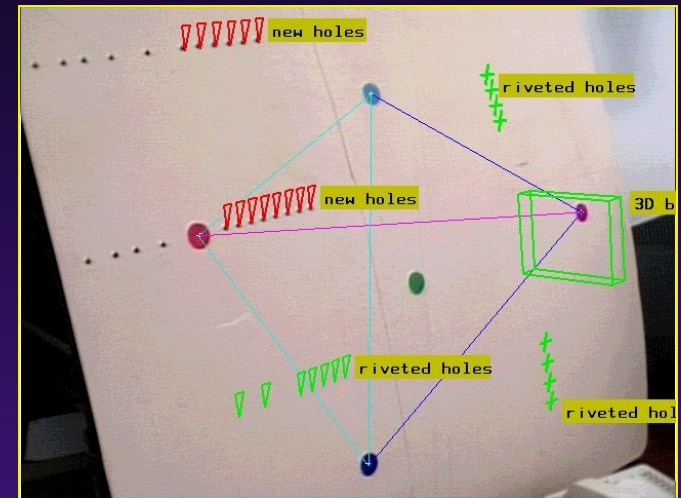
# Traditional Video Conferencing

- **Limitations:**
  - lack of spatial cues
  - small images
  - introduces seams
    - functional
    - cognitive
  - limited non-verbal cues
  - must move to conferencing space



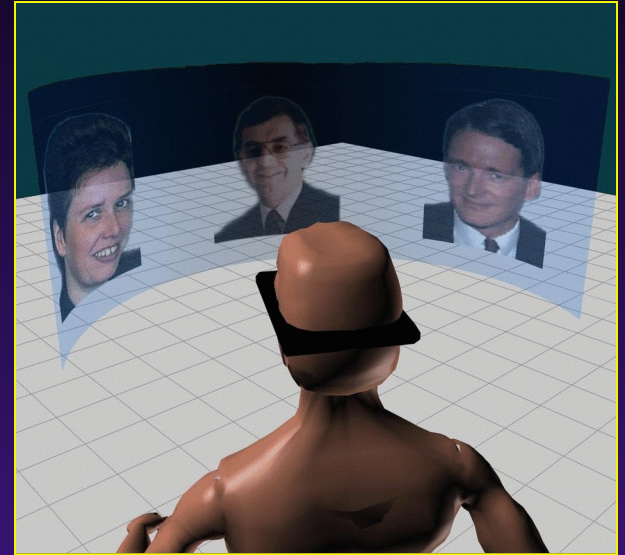
# Mixed Reality (Augmented Reality)

- VR: Replaces Reality
  - immersive displays
- MR: Enhances Reality
  - see-through displays
- Characteristics
  - combines real and virtual images
  - interactive in real-time
  - registered in 3D



# Wearable MR Conferencing

- Features
  - mobile conferencing
  - full size images
  - spatial audio/visual cues
  - image overlay on real world
  - dozens of simultaneous users



# The WearCom Prototype

- Internet Telephony
- Spatial Audio/Visuals
- See-through HMD
- Head Tracking
- Wireless Internet
- Wearable Computer
- Static Images



# Fixed MR Conferencing

- Moves conferencing from the desktop to the workspace
- Features:
  - portability
  - live video
  - shared whiteboard
  - world stabilized images
  - computer vision registration techniques



# MR Conferencing Prototype



live video

shared whiteboard

