Canarie AAP Workshop

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Shared Spaces: High Definition Ultra-Videoconferencing

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McGill Ultra-Videoconferencing Group

Members

- John Roston - Video
- Wieslaw Woszczyk - Audio
- Jeremy Cooperstock - Transmission
- Stephen Spackman - Programmer
- Centre for Inter-disciplinary Research in Music, Media and Technology (CIRMMT)

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Canarie ANAST Projects

- Transmit SDI broadcast video @ 270 Mbps
- Transmit multi-channel surround sound
- Low latency
- Executive videoconferencing
- Music teaching & collaboration

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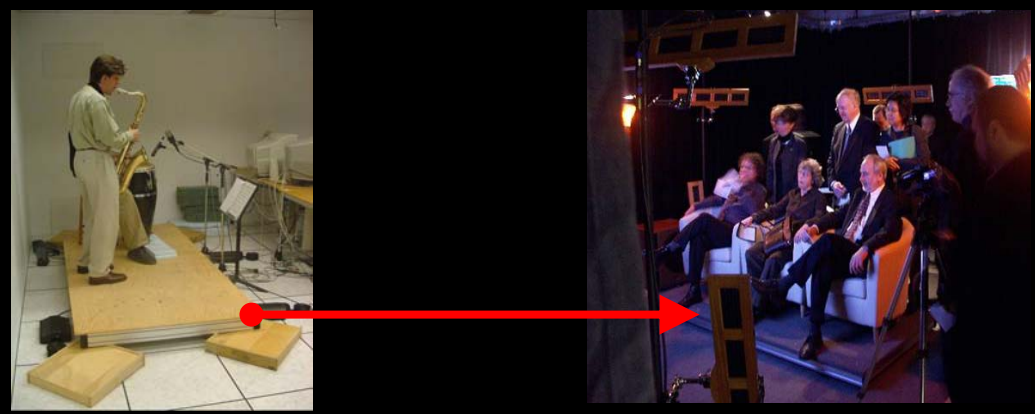
Canarie ANAST Projects

- Transmit DV video @ 25 Mbps
- Remote sign language interpretation

Quebec VRQ Project

- Transmit SDI broadcast video @ 270 Mbps
- Transmit 24 channel surround sound
- Transmit vibrosensory data using motion platforms



McGill Ultra-Videoconferencing Group

New Canarie AAP Project

- Shared Spaces: High Definition Ultra-Videoconferencing

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Shared Spaces AAP Project

Partners

- McGill
- University of British Columbia
- BCnet

Shared Spaces AAP Project

Participants

- Canarie
- RISQ
- Communications Research Centre BADLAB
- National Research Council
- National Arts Centre

Shared Spaces AAP Project

Funding

- Canarie Advanced Applications Program
- McGill
- University of British Columbia
- BCnet
- Panasonic
- Cisco

Shared Spaces AAP Project

Major Task 1

- Improve existing system
- Introduce multicast capability
- Investigate multichannel audio echo cancellation

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Shared Spaces AAP Project

Major Task 2

- Move to broadcast high definition video
- Move to larger 65” plasma display
- Progressive 720p60 format to match display
- Test immersive 3D audio
- Transmit HD-SDI - nominally 1.5 Gbps including audio
- Lossless compression (video only, RLC) to just under 1 Gbps

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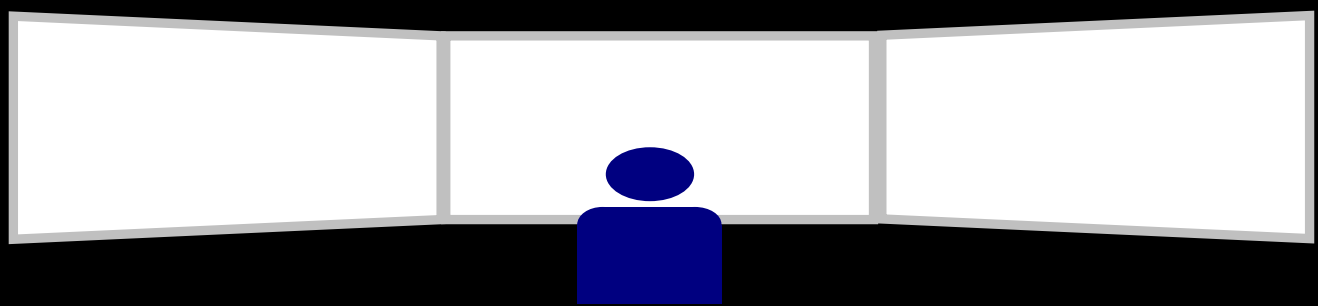
Major Task 3

- Move to panoramic view using three plasma displays to create a shared space
- Three high definition video cameras
- Three synchronized 1 Gbps video streams



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Major Task 4

- Test conventional vs lightpath transmission
- Network performance, low latency
- Connectivity options:
  10 Gbps vs multiple 1 Gbps

Teaching Applications

- Shared conference room or studio
- Small group teaching in medicine, etc.
- Music teaching & collaboration
- Shared “drop-in” common room
- Multiple conversations
- Deaf student interaction

Other Applications

- Executive videoconferencing
- Small group meetings
- Transmission of live concerts and sports events on a super-wide screen

Dissemination of Results

- Academic journals
- Conferences
- Demos for the press
- Software likely made available free for non-commercial purposes

Merci. Thank you.

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