

The Telematic Arts



Donald Tavel Arts Technology Research Center

Department of Music and Arts Technology

School of Engineering and Technology

Indiana University Purdue University Indianapolis

Telematic Art

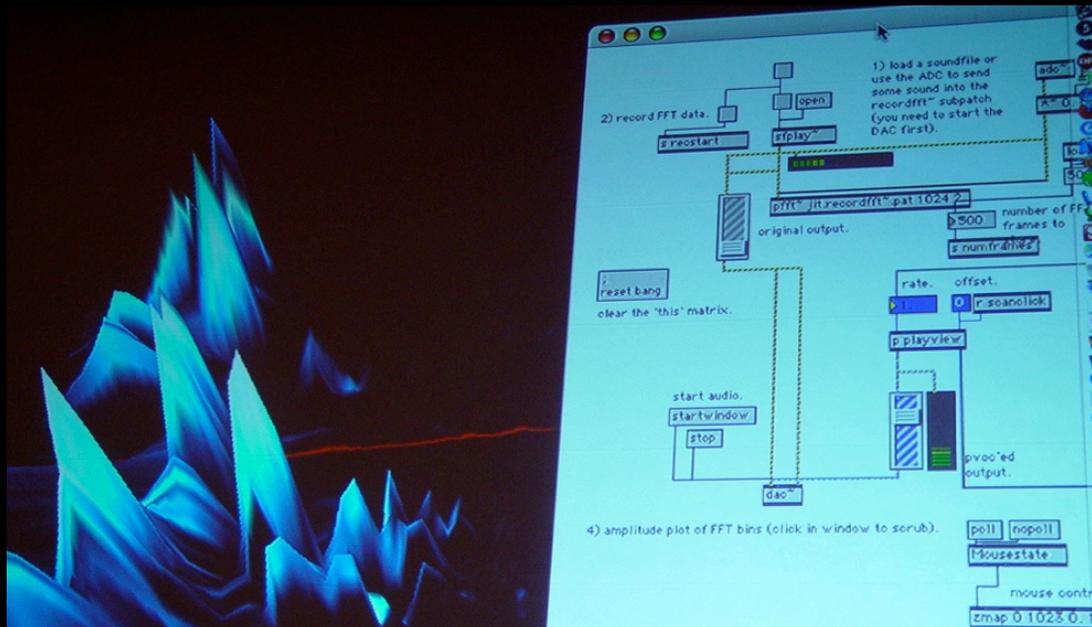
synthesis of mediums and media



A synthesis of mediums such as live music, dance, drama and visual arts with Internet-based interactive media and performance content. The resulting productions connect media-rich spaces to the real world using modern communication systems to create evocative experiences.

Telematic Art

human/computer interactivity



Artistic expression through exploitation of computers processes, while interacting and relating to them. Integration of the Internet creates more expansive ubiquitous environments in which new modes of expression emerge.

Telematic Art networked engagement



“Telematic culture means, in short, that we do not think, see, or feel in isolation. Creativity is shared, authorship is distributed... enabling one to participate in the production of global vision through networked interaction with other minds...”

Roy Ascott (1989), *Is Their Love in the Telematic Embrace?*

Performance Examples



Interplay: Loose Minds in a Box



Distributed Performance on the Access Grid Network between seven sites.
Live performances at SIGGRAPH and SC Global.
Participating institutions included Universities of Utah (Center for High Performance Computing), Alaska Fairbanks (Arctic Region Supercomputing Center), Maryland, Illinois Chicago (EVL Lab) Purdue (Envision Center), Montana and Ryerson University, Canada.

Interplay: Loose Minds in a Box



Using live rapid music ensemble techniques between multiple locations;
Data flow between remote VR environments, remote video mixing, virtual
network control, remote audio mixing, processing in Max MSP.

The Sound of a Voice (2007)

by David Henry Hwang

Performed at the University of Alaska Fairbanks with musicians online in San Francisco and Illinois



Important Technical Issues

- Network latency
- synchronization
- motion-sensing technology
- multi-site DVTS
- immersion in ubiquitous computer environments/interfaces
- real-time graphics/network
- noise-intensive audio fidelity
- Best practices for issues relating to:
 - lighting
 - staging
 - human/media synthesis and interactivity in a live, and distributed context

Student Telematic Ensemble









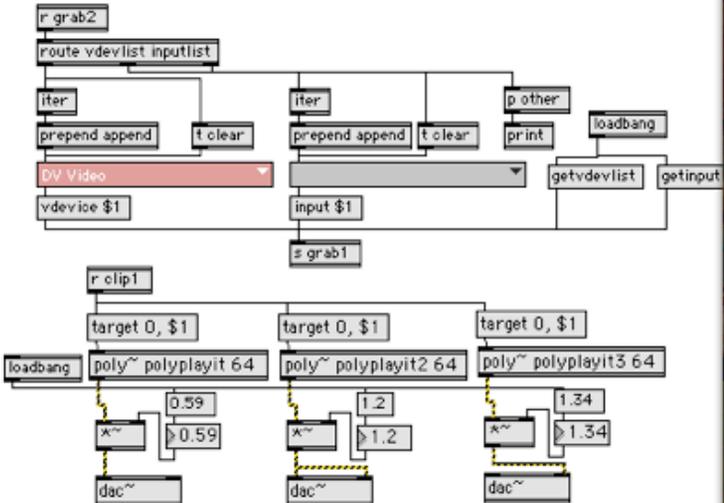
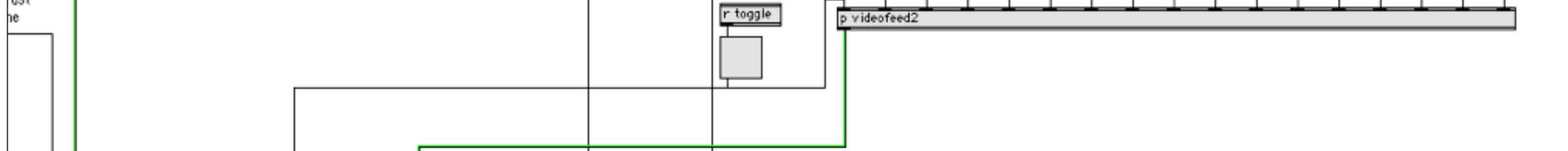
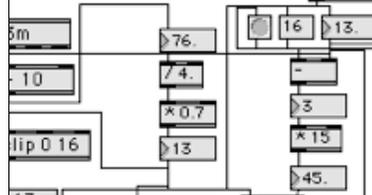






start camera (spacebar)

1. hit spacebar to capture empty frame ->

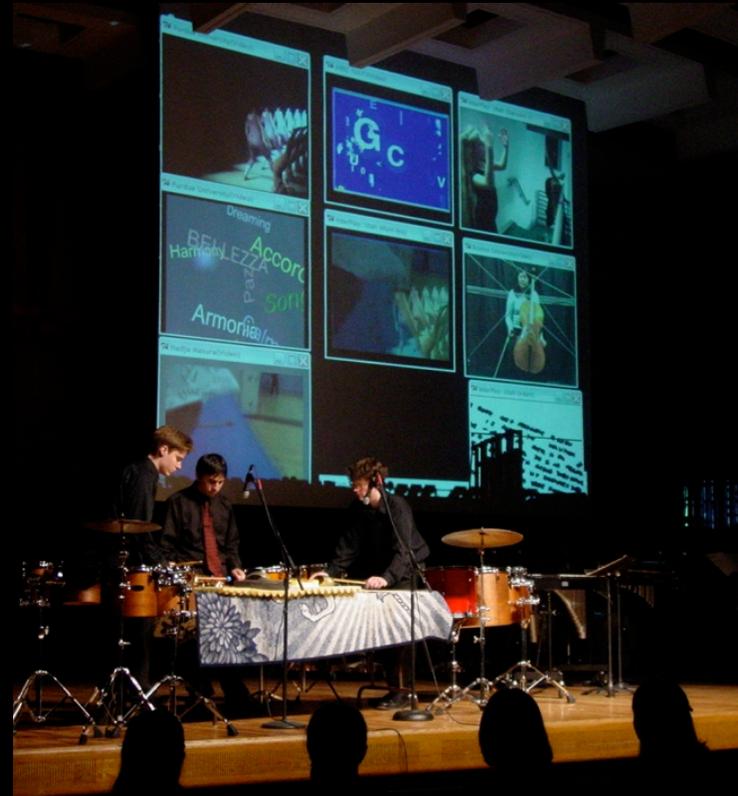




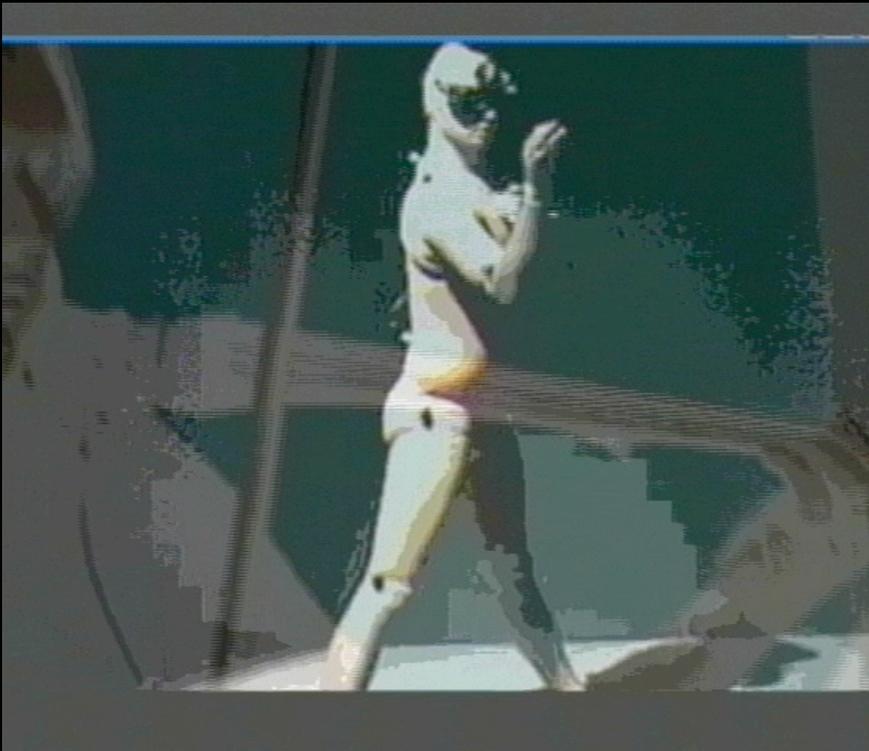
Tavel Center
Telematic Lab

Telematic Collective

The Telematic Collective creates original artistic works that interweave aesthetic expression with information technology and computer engineering research. This is a new and highly innovative medium whose possibilities are being explored by research institutions, visualization labs and computing centers worldwide.



Telematic Collective

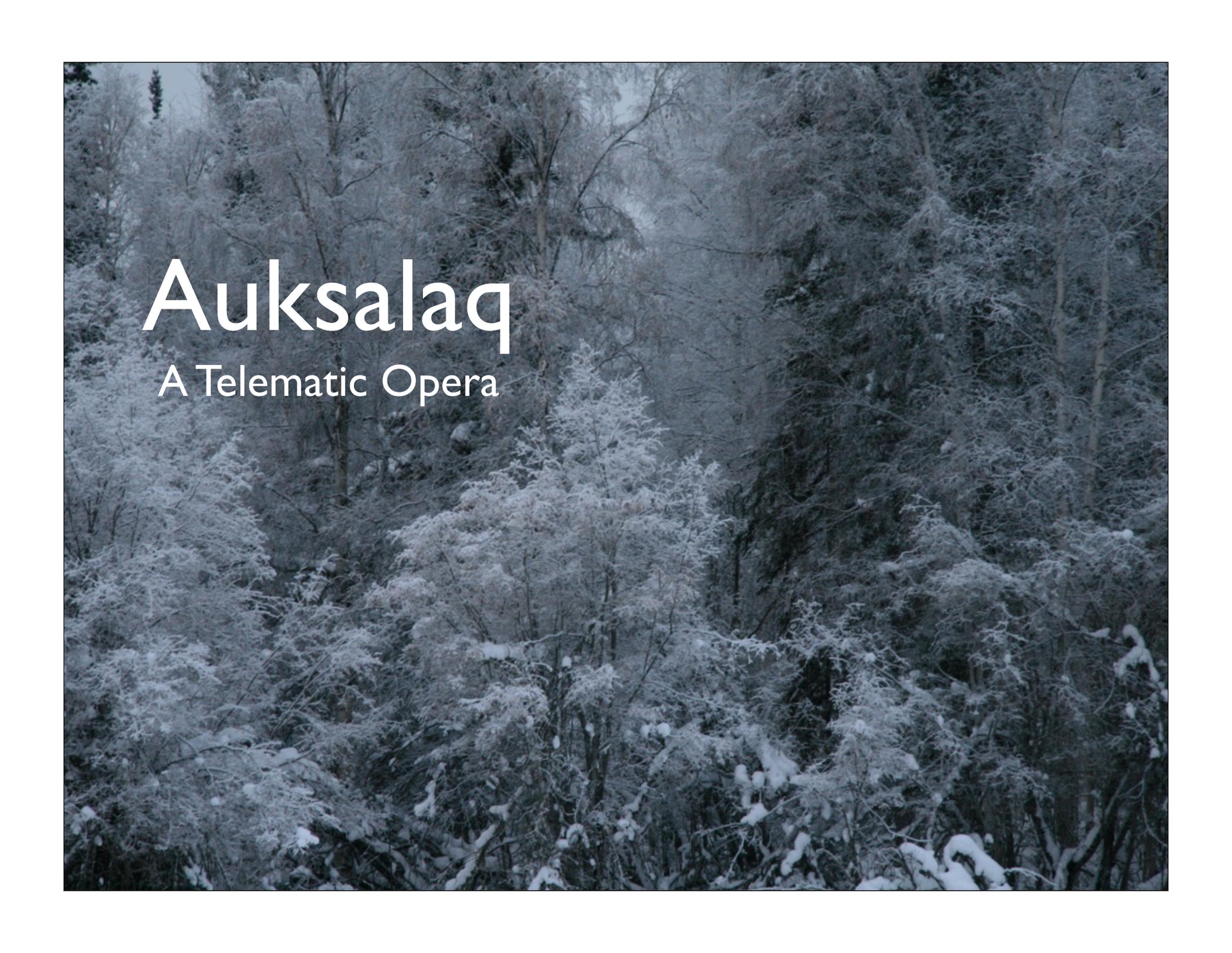


Since 2007, the Collective has been coordinated through the Donald Tavel Arts Technology Research Center at Indiana University Purdue University Indianapolis (IUPUI). The group consists of individuals working in music, dance, drama, literature, visual arts, videography, software development, information technology, scientific inquiry and computer engineering.

Telematic Collective



The Collective engages issues of culture and thought through funded research, production and education in collaboration with arts, humanities and research institutions. Both location-based applications (media, performance, and installation events) and distribution-based formats (Internet2 high-speed bandwidth) are employed.



Auksalaq

A Telematic Opera

Auksalaq



Auksalaq, the Inupiaq Eskimo word for “melting snow”, is a live, telematic, multimedia opera performed simultaneously in select venues worldwide.

Using distance technology, live music, dance, movement, visual arts and commentary, the work creates a rich counterpoint of media linking great distances.

Auksalaq will integrate artistic expression, scientific information and social/political commentary to present an interactive, multi-dimensional experience that embodies relevant complex cultural and empirical processes.

The piece illuminates scientific analysis as well as cultural and political issues surrounding global climate change.



Sponsors

Donald Tavel Arts Technology Research Center, IUPUI

Advanced Visualization Lab, Indiana University

University of Virginia Center for Computer Music

George and Eliza Gardener Howard Foundation

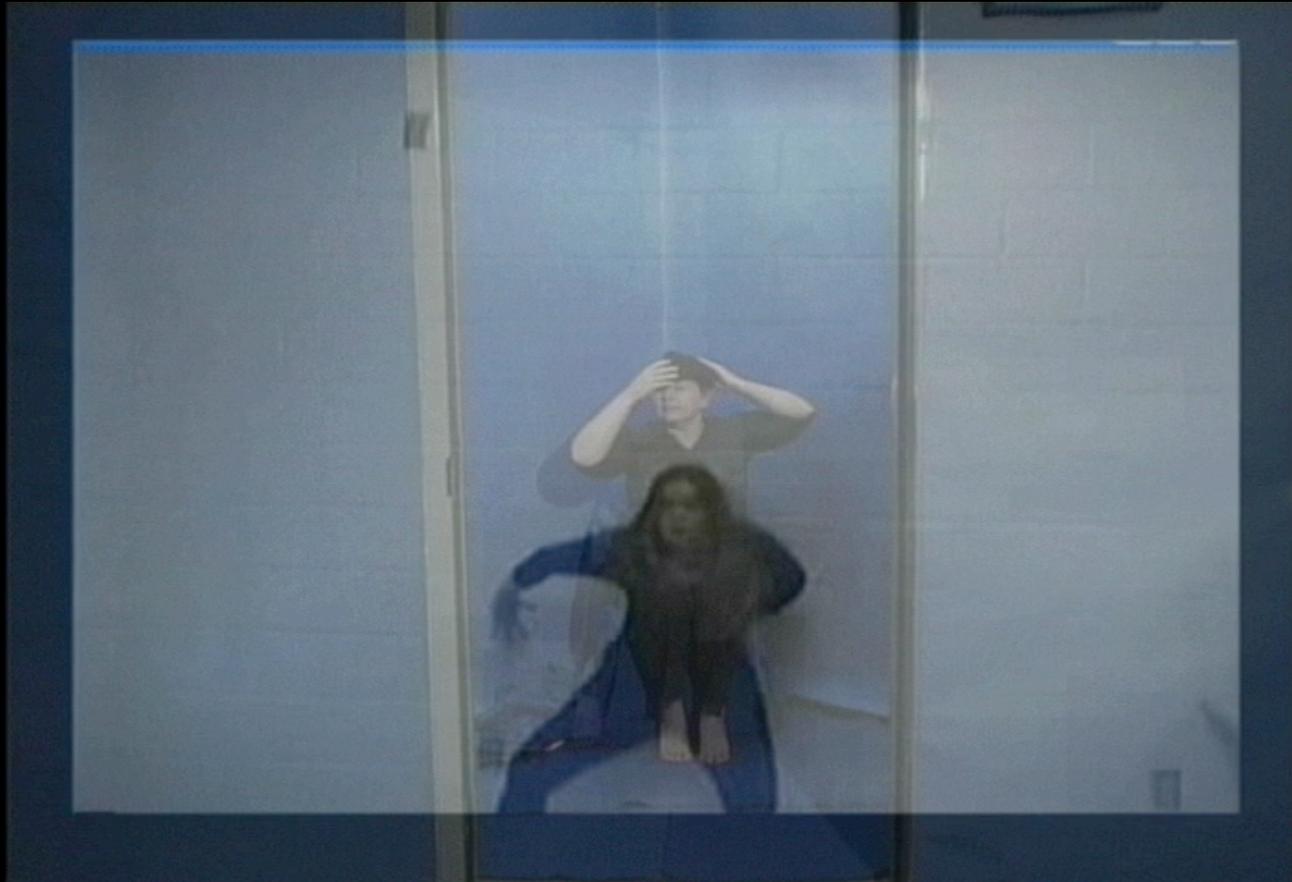
Arctic Region Supercomputing Center
University of Alaska Fairbanks

Creators

Scott Deal, DMA; Executive Producer, Co-Creator. Professor of Music, Director, Donald Tavel Arts Technology Research Center, Indiana University Purdue University Indianapolis

Matthew Burtner, DMA: Composer, Co-Creator. Associate Professor of Music, University of Virginia

Intermedia Festival 2010



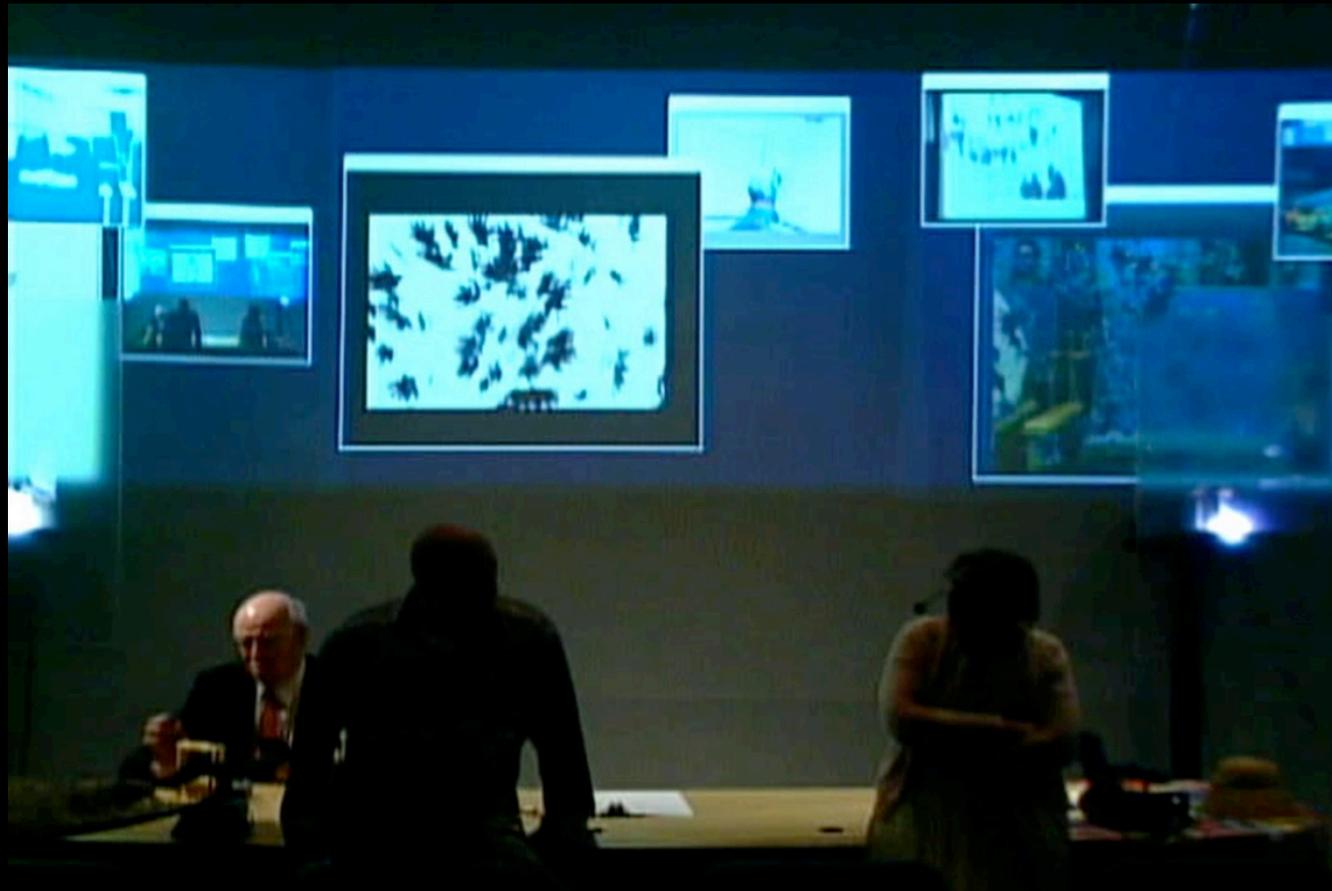
Intermedia Festival

Using Telematic Art and Networks to:

- Present International Works to Indianapolis
- Showcase Indianapolis Art to the World
- Catalyst for innovative activity in Indiana



Telematic and Human Interaction Software



Telematic Collective



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