

## **Friday, April 11**

### **Pauline Oliveros**

"Telematic Circle", from France

### **Greg Surges**

"NRCI: Networked Resources for Collaborative Improvisation"

### **Ken Fields**

"Equipping New Venues"

### **Scott Deal**

Discussion: "The Telematic Collective"

### **Mihir Sarkar**

"Tabla Duos at a Distance  
with Prediction"

### **Maurizio Ortolani**

"Remote Master Classes"  
with Pace Sturdevant at NAC

### **Robert Hamilton**

"Networked Gaming Platforms as  
Musical Performance Environments"

## **Saturday, April 12**

### **Juan-Pablo Caceres and Alain Renaud**

"Real Time Wide Area Network Musical Collaborations"

### **Stanford**

"Beijing/Stanford Pan-Asian Festival"

### **Niels Lund**

"World Opera Project"

### **Ge Wang**

"Laptop Orchestra Music"

### **Alvaro Barbosa**

"Public Sound Objects Project"

### **Sarah WeaverJonas Braash**

"Sound Painting and Compositions for Linked Ensembles" (possible demo)

### **Jonas Braash**

"Audio and Video Calibration in Telematic Music Transmissions"

## **DETAILS**

### **Kenneth Fields**

"Cooperative Research and Performance on E-Art Grids"

Network music performance is an eventuality-type manifested by the establishment of high-speed electronic art (E-Art) grids toward a sustained practice like that of its big brother E-Science, encompassing such issues as cluster computing and transcontinental light-paths. Previously, I've focused on issues of terminology, ontology and categorization (Organised Sound 12.2), this paper extends the discussion to that of the physical and pragmatic substrate through which language runs, organizes and emerges in the modern sense: on networks. In combination, the practices of discourse on networks and music on networks can be engineered to advance a semiosis of symbol and sound as embedded in the collaborative production environment. In other words, we are preparing for a much more fluid scenario of musicians interacting with sound in metadata-saturated, high-speed network environments.

**Scott Deal**  
**"The Telematic Collective"**

Telematic art synthesizes traditional mediums of live music, dance, drama and visual arts with interactive, hypermedia, and performance content in a networked context utilizing various formats of the Internet. The resulting productions connect media-rich spaces and experiences to the real world using modern communication systems to create powerful and evocative experiences. Both location-based applications (media, performance, and installation events) and distribution-based formats (Internet2 high-speed bandwidth Access Grid and DVTS, HD-SDI, commodity) are employed. Issues for discussion include latency, audio, lighting, staging, resource coordination and comparison of the major Internet delivery modes. Selected software applications will be assessed in the context of artistic and aesthetic considerations. Videos of recent examples will be drawn from educational master classes, clinics, dramatic plays, musical improvisation, as well as through composed, high-precision musical performances whose players span global distances.

**Mihir Sarkar**  
**"Tabla Duos at a Distance with Prediction"**

For playing music such as the highly rhythmic Indian tabla over computer networks, and minimize the effects of network latency, we need intelligent systems that go beyond transmitting compressed audio signals or low-level musical events. In order to cope with the tight synchronization and timing constraints required by such music, I developed a system that draws on machine listening and predictive analysis. Trained for a particular instrument and musical style, my system recognizes musical events like drum strokes and pitch, and sends hierarchical symbolic structures that map to musical features like phrasing and tempo. These symbols shape predicted rhythmic phrases in a musically meaningful way that aims to preserve the performers' intent even as prediction approximations may result in a slightly different experience at both ends of the interaction. This system is being evaluated for distance education, interactive collaboration, and network performance.

**Juan-Pablo Caceres and Alain Renaud**  
**"Real Time Wide Area Network Musical Collaborations"**

The long lasting collaboration between SARC and CCRMA over the network is highlighted in this discussion. Topics include: remote collaboration, remote recording, multi-channel real time networked audio collaboration, video over IP and distributed musical cues. Systems for networked improvisation such as the Frequencyliator will be showcased. We will also present audio and video examples of the various events that are taking place between SARC and CCRMA and introduce the Net vs. Net network music collective. Techniques that use the latency as musical devices in its structured improvisations will also be presented.

**Alvaro Barbosa**  
**“Public Sound Objects Project”**

This presentation addresses the latest developments of the Public Sound Objects (PSOs) system, an experimental framework to implement and test new concepts for Networked Music. The project of a Public interactive installation using the PSOs system was commissioned in 2007 by Casa da Musica, the main concert hall space in Porto. It resulted in a distributed musical structure with up to seven interactive performance terminals distributed along the Casa da Musica's hallways, collectively controlling a shared acoustic piano. The system allows the visitors to collaborate remotely with each other, within the building, using a software interface custom developed to facilitate collaborative music practices and with no requirements in terms previous knowledge of musical performance.

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**“Real Time Wide Area Network Musical Collaborations”**

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