Orai/Kalos: Installation Proposal
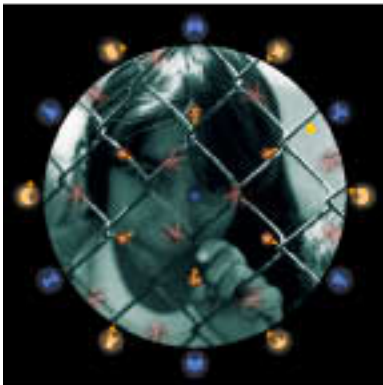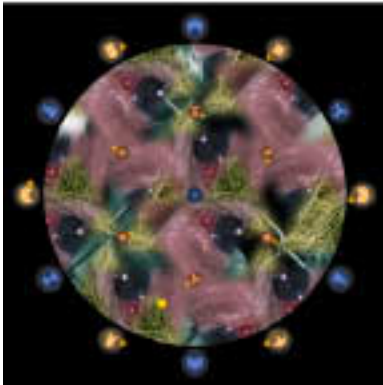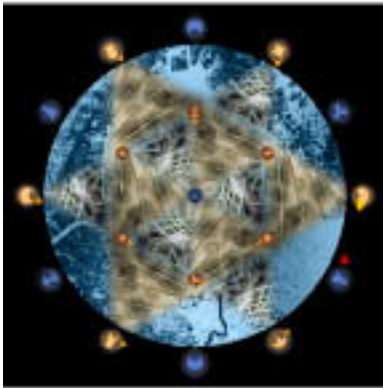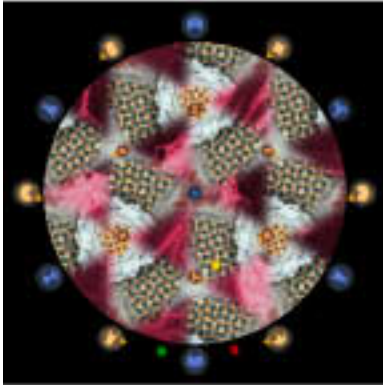
Paul Hertz • 2002

Orai (Japanese): "comings and goings, communication, contract, streets and traffic"

Concept and Realization

Orai/Kalos presents images and audio in an interactive computer-driven installation that continually varies its content and composition. Orai/Kalos is an intermedia work, where sound and image events are controlled by the same underlying parameters, and an interactive work, where each visitor generates new configurations.

Visual events consist of samples of natural and manmade patterns. The kaleidoscope-like patterns shift size, position, and rotation in multiple overlapping layers, sometimes revealing hidden images. Sound events consist of natural and manmade sounds. The sounds shift duration, pitch, and timbre using granular synthesis, a technique which uses multiple overlapping layers of short samples.

The installation displays a computer monitor image on a circular table equipped with sensors. Visitors wave wands over the sensors to control the installation.

In the installation, images and sounds of nature mix with images and sounds of human cities and technology. Reduced to patterns, the images blend hypnotically, but when visitors interact with the display, whole images from communications media and other sources emerge from a hidden layer. Images and sounds in Orai/Kalos can be tailored to the installation site, and can even be continually updated from an online database open for public contributions.

Orai/Kalos attempts to examine how communications technologies seduce us visually while they mix geographical locations and persons together into new constellations. It is easy to be hypnotized by the speed and momentum of these changes, by the transformation of the world into patterns of information. Fortunately, our state of technological distraction is continually interrupted by events, large and small. Will our dearest desire be to return to distraction, or will we waken to the construction of a more just world?

Dimensions: 762 mm high x 1117 mm wide. 4 x 4 meters floor space with 3.5 meters vertical distance for projection.

Equipment: Computer monitor projector, 800 x 600 resolution. Equipment to mount projector to project down onto the table. Two Macintosh G4 computers (512M RAM) to drive installation. Stereo speakers. Artist will supply software and I/O hardware for sensors.

Orai/Kalos (then titled Crossworlds) was first shown at ISEA2002 in Nagoya, Japan, October 2002, followed by version 2.0 at Siggraph 2004, Los Angeles, USA, and version 2.5 at the International Computer Music Conference, September 2005, in Barcelona, Spain.
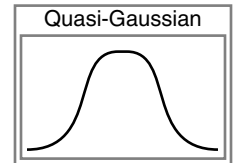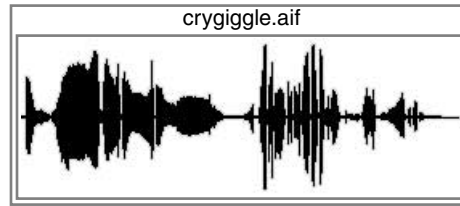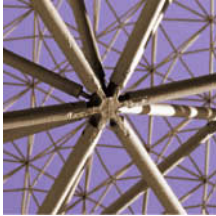
Orai/Kalos: Installation Proposal

Paul Hertz • 2002

Kalos (Greek): "fair, beautiful, just"

1. Images and sounds are collected, possibly through a web site acting as a front end to a database.

crygiggle.aif

Quasi-Gaussian

2. Selected patterns are scaled to 320 x 320 pixel squares. A mask is used to selected a small portion of the pattern for display.

3. Selected sounds are fit into ten-second segments. A windowing function is used to select a small portion of the sound for playback as a granular sample.

4. Additional images are collected to appear behind the pattern images.

5. Additional sound material expands the compositional framework of the installation.

6. Images and animated cues are projected onto a circular table with 19 embedded magnetic sensors. Spatialized sound samples are generated and played through speakers around the installation or under the table. Visitors use three wands to change the behavior of the installation.

   Orai/Kalos has elements of a social game: when two or three people work together they can reveal aspects of the work that are physically difficult for a single person to discover.

The three wands: dodo, plesiosaurus, rhinoceros

How the Work Functions

Orai/Kalos is presented as two applications that communicate with each other over a network: one handles animation, the other handles audio. When the applications are launched, animated "agents" moving over the display cause changes in pattern and sound generation whenever they hit specific "nodes" superimposed on the images. Image changes correspond to sound changes in both direct and subtle ways. User interactions control the movement of the agents, thereby controlling the installation. Orai/Kalos can be controlled with a mouse (simulation mode) or with external sensors.

Orai/Kalos permits a designer to replace the image and sound files with new files. In addition, a tool in the the animation application can be used to set up transition probabilities among patterns, similar to a Markov chain. Granular synthesis parameters for the sounds can also be changed. In this way, Orai/Kalos can be tailored to the sounds and patterns around its installation site.