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CYCLORAMA

Panoramic display with immersive sound

The *Cyclorama* is an apparatus for creating immersive audiovisual environments on a large scale. The hardware setup includes the display screens, projectors, computers, network and audio components. Two different software applications drive the system: *LightTWIST* and *AudioTWIST*.

LightTWIST is the brainchild of Sébastien Roy, who runs the Vision3D laboratory in the computer science department at the Université de Montréal. The software application, which was developed under the Open Territories research program operated by the SAT, makes it possible to generate large-scale images on irregularly shaped surfaces, no matter how many projectors are used, and to import and distribute images over the networked projectors in a way that preserves the coherence of the visual environment.

Developed at the SAT under the supervision of Zack Settler, *AudioTWIST* is used to analyze and create 3D frameworks for immersive audio and audiovisual applications. The software acts as a digital interface for acoustic environments established by hardware audio components that broadcast sound (via loudspeakers) or capture sound (with microphones). Users have very detailed control over the directivity of sound and the parameters of acoustic propagation. Audio can thus be "steered" through a virtual scene in a precise manner, allowing for the rendering of spatial audio and also for digital signal processing (DSP) in 3D space.

RECENT PROJECTS

Fabrique Numérique

Five works produced especially for presentation with the audio and video applications of the Cyclorama.

Ars Natura

A permanent interactive installation in the Square Victoria metro station. It offers virtual access to Montreal's science museums: the Biodome, Insectarium, Botanical Garden, and Planetarium.

Fabrique Numérique



Society for Arts and Technology (Montreal)
Circular display in the SAT[Art&D] exhibition space
www.foi.sat.qc.ca

Ars Natura



Prix audiovisuel et multimédia Téléquébec
Société des musées Québécois

Canadian Museums Association Award
Outstanding achievement, multimedia

Grand prix du tourisme de Montréal
Technological innovation in tourism

Société des arts technologiques | SAT | Society for Arts and Technology

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