SLIDERS, a collective experience of interactive cinema

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ABSTRACT
SLIDERS is an ambitious artistic and technical endeavour that proposes a new way of imagining and creating cinema. We have invented an open computer machine [1] that enables three "performers" to mount, in real-time and using visual and sound data stored in databases, a new type of film. This film, which has been played at performances in front of spectators, is what we call "the movie to come", that is to say, an N+1 film in which a new track, a programming track, has been added to the video and sound tracks. One of the features of this new type of film is that it has an infinite number of possible configurations or models.

Categories and Subject Descriptors
J.5 [Computer Applications]: Arts and Humanities: Fine arts.

General Terms
Algorithms, Performance, Design, Theory.

Keywords
Live interactive performance, real time video and sound mix, multi screen projection, future cinema, interface design.

1. INTRODUCTION
Our aim is an interactive cinema that uses the spatial and temporal properties of interactive objects. They are there, virtually present in a database, and consequently, potentially actualisable on the screen, out of "uchronic" and "utopic" time and space. The organisation law governing the entirety is an algorithm, a programming language that contains all the possibilities for mixing sounds and images. Indeed, with computers, it is possible to simulate cinema which appears in this way as one of interactive cinema's special cases that writes 24 (or 25 or 30) images per second in a determined order [2]. As intuited in 1988 by the video artist, Bill Viola: "Mounting" is going to become 'writing a software program' that will tell the computer how to arrange (that is to say, to shoot, cut, disperse, erase) information on the hard disk, to diffuse this information in a specified order in real-time or to enable the spectator to intervene" [3].

So, by putting cinematographic language into perspective, we propose a new way of envisioning and creating cinema that uses digital potentialities. Thus, *SLIDERS* is not a film in the traditional meaning of the word, but rather a *hyper-film*. An N+1 film [4] whose main characteristic is, first, to exist in a virtual state in the computer's memory, that is to say, in the form of a database, to be then actualised during a public performance. The *SLIDERS* database was constituted using the two "Psycho" films: the first being the original version, directed by Alfred Hitchcock in 1960, and the second, its remake, directed by Gus Van Sant in 1998. The idea of Norman Bates' schizophrenia (two minds in one body) is found to be personified on another level in our demonstration device: two films in one machine, two videos projected on the same surface: the database and the film, created by the performers.

Figure 1: *SLIDERS* performance, IRCAM, Paris, June 2006.

2. A LOGIC THUS A SOFTWARE
In order to work on this new type of cinema, a logic and therefore, a software, were invented. The *SLIDERS* computerised machine, installed during performances, thus presents three spaces devoted to three moments of creation of the N+1 film: a space for managing the video database, a space for manipulating the videos and finally, a space for choosing and playing the sounds (Figure 2). An independent program that can be modulated and linked in the network via the OSC (Open Sound Control) data exchange protocol, was developed for each space.

2.1 The "database" program
The program for managing the video database operates on client-server architecture. It regroups a database on the server computer. On the client computer, it enables one to

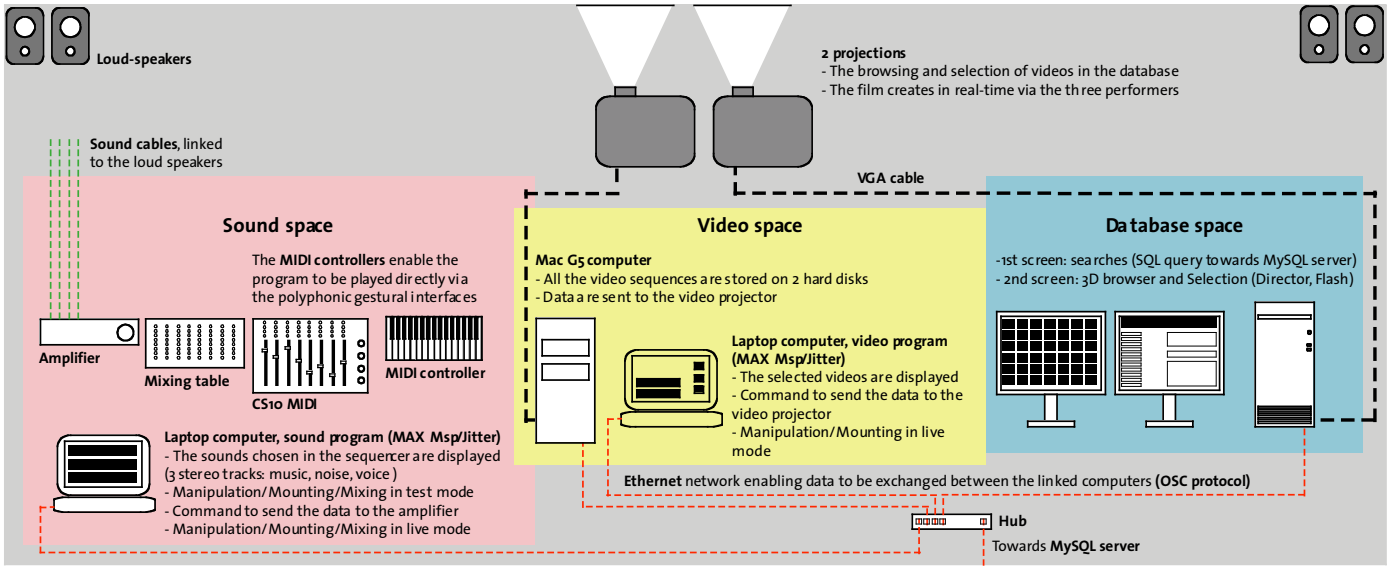

Figure 2. *SLIDERS* installation.

interactively visualize a set of video files in a homogenous 3D environment according to thematic or semantic criteria and to browse within this multidimensional representation of films in order to make a selection. When a video file is chosen, the program then communicates, among other data, the name of the video file to be played on the network's computers.

On the server side, the database operates on a MySQL server with an EasyPHP interface. The queries are carried out in SQL language. On the client side, the graphic interface was programmed using Director. Two overlapping Flash scripts in Director ensure the special functions (SQL queries, OSC coding). A Java applet serves as the link to the OSC communication.

Figure 3. The 3D database programm.

2.2 The "video" and "sound" programs

These programs constitute the real-time editing tables linked to the database. For example, the video files selected by the client computer are displayed sequentially in a special "reservoir" imagined for the video program. The sequences are stored here, put "on hold" by the *SLIDERS* performer before being, or not being, played.

The programs, developed using Max Msp/Jitter software, offer a range of tools that describe all the gestures to which we have paid attention as regards the ergonomics, in other words as regards their design in space.

If we have chosen to work with this software, it is mainly because it enables us to invent little interactive, autonomous programs for both the video space as well as for the sound space. Moreover, it is a software written to manage actions in real-time and thus, it is often used for performances due to its reliability. Finally, it is stable and its functionalities are regularly enhanced each year.

3. CONCLUSIONS

SLIDERS has enabled us to test, during performances or workshops at festivals or exhibitions, some hypotheses concerning real-time interactive cinema. Moreover, the project is evolving, technically and aesthetically, in the course of these different confrontations. Thus, it is foreseen to develop a certain number of algorithms involving the visualisation of the databases, to work on the idea of multiple screens and to publish a free software program.

4. ACKNOWLEDGMENTS

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