

# Struct\_0 (2001)

André Sier



## Index:

0. [Introduction](#)
1. [Audio](#)
2. [Video](#)
3. [Setup](#)
4. [Documentation](#)

## D E S C R I P T I O N

---

### 0. Introduction

---

Struct\_0 is an audio-visual site-specific installation/composition. It is an informatic application that seeks to visually expose the subjective aural tissue of a space under the shape of particle systems synthesis (Reeves 1983) in "audible" synthyony with the composed sound. Audio-visual site-specific painting.

## 1. Audio

---

The sound of a nearby space is gathered through several directional microphones and it is inserted in real-time in the Macintosh computer. The application mechanizes the audible capture and executes the sonic composition referring to the present and/or nearby sound temporal structure.

The source sound is registered into the RAM memory upon certain time conditions. In that situation, the registered sound may or may not serve as projection or as a reading base into the present.

The processes and algorithms of sound manipulation orbit the universe of temporal analysis -- they seek to analyze sonic evolutions, perspectivize the sound changes in the present and in the recent past. There are buffers that store the input sound seldomly and reproduce the stored information at shifting and colliding speeds; also a ninth buffer stores in a second level the result of direct sound input via the computers' minijack and also of the different speeds manipulation by the buffers. This last buffer serves as a basis for granular synthesis sound manipulation techniques, extending time in a limitless fashion, projecting small clusters of sound into volts to the speakers.

The sonic audio composition is like invisible fingers weaving, shifting and displacing the sound continuum through the thin sonic vibrating air.

## 2. Video

---

The image is synthesized generating a particle system that is modulated and represented according to the spectral value of the sound energy. Those values are utilized directly or building new values through operations of the set theory: intersections, unions, complements, differences... numbers that are suitably mapped into the visual universe, controlling rotations, speeds, radius and axes of projection - enveloping the iris in a perpetual game.

## 3. Setup

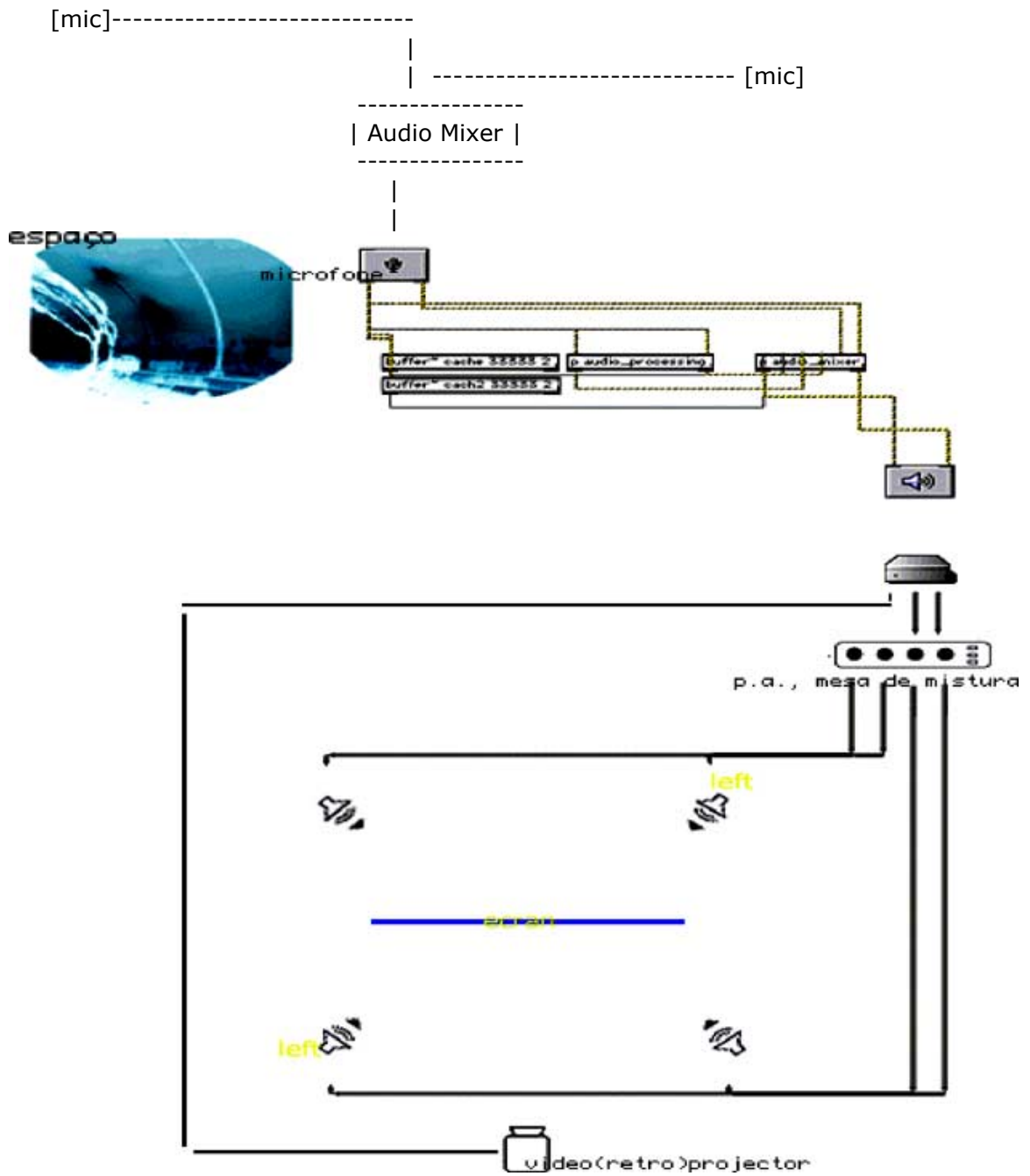
---

### 3.1 Material Required

---

- 2,3 microphones;
- 1 audio mixer table;
- 1 G4 ppc, 256Mb RAM, audio in-out, video out;
- 1 Pre Amplifier with double stereo output (2 Lefts, 2 Rights);
- 4 Speakers;
- 1 Video Projector;
- 1 Video Canvas;

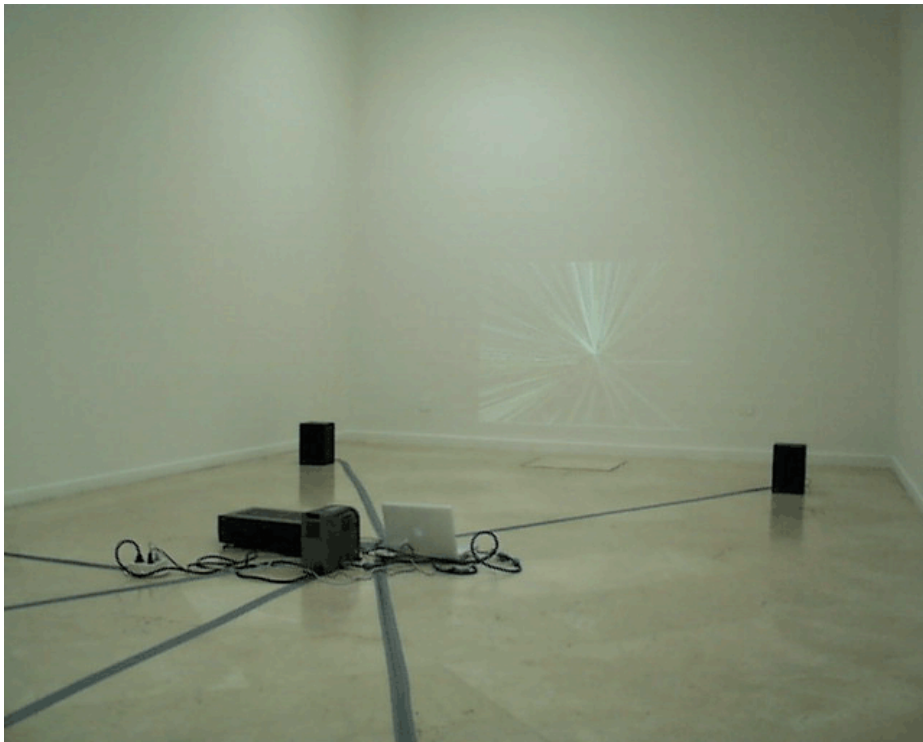
### 3.2 Spatial Setup



### 3. Stills

---

Struct\_0 was presented in *Apertura 1.0 : seis proyectos digitales en el MEIAC, SEVILHA and MADRID (ES) 2001*





## 4. D O C U M E N T A T I O N

---

Struct\_0 was built using the MAX visual programming environment plus the MSP/GEM extensions. It only requires launching the software when the installation space is setup (microphones and audio mixer turned on, audio levels adjusted to the space, all the cables connected to the right places...) and quitting the application (Apple+q) when the day is done: it is fully automated.

BEFORE launching the application you should select the SOUND INPUT SOURCE (in the installation it should be EXTERNAL MIC, for testing may select BUILTIN MIC if available) in the SOUND CONTROL PANEL.

The more time you feed different kinds of sound into it, the more interesting resulting you'll get: It requires some time to get used to the space you are using it in.

If possible, select OVERSCAN on the video out option when you connect it to the video projector. The main monitor that outputs to the video projector should be set up in a 640x480xMillions of colors resolution.

### *System Requirements:*

The faster the machine, the better it runs. Therefore it is recommended to run it in a G4 Macintosh machine with at least 256Mb RAM, Audio Stereo Input and Output and a video out card.

Mac OS Classic (9.2.2 || 8.6 is recommended)

QuickTime 5 (standard in OS 9.2 – Available from apple.com)

OpenGL 1.2.1 (standard in OS 9.2 – Available from apple.com)