

Club NIME III

piano works

Antoine Schmitt

piano works is an improvisational piece composed with and for the nanomachine instrument. It is an homage to the king of the instruments, the piano, a very complex machine with a very straightforward approach, which can be explored by children and expressed by experienced improvisers at the same time through the material, the harmonics, and the rhythm: the one place in music where language (the note) rubs itself against reality (the touch). In this piece, small fragments of very fragile piano phrases and touches are slowly looped and layered, yielding a very harmonically and rhythmically complex audio and visual composition that barely remains on the verge of readability.

The nanomachine is an audiovisual performance, in which I build nanomachines in public, using self-designed software called the nanomachine, my instrument. A nanomachine is composed of an ensemble of objects, each with its own shape, sound and autonomous behavior, which influences its neighbors, thus yielding a complex semi-autonomous rhythmic machine sensitive to control. My computer screen is projected and its audio is sent to the sound system, so that the whole building and exploration process is accessible to the public, making it a spectator experience. The audio signature is one of an ambiguous rhythmic sample loop; the visual aspect is minimal and abstract.

<http://www.gratin.org/as/nanos/>

chdh

Cyrille Henry and Nicolas Montgermont

chdh developed a body of work from theoretical principles which makes the creation of a live, real-time, audio-visual performance based on about thirty instruments possible. These instruments are made of generative, stochastic, or physical modeling algorithms and each of them control a sound and a visual. With mathematical algorithms as well as physical modeling for the real-time generation of control data for an audio/video synthesis, chdh brings a new vision of the use of data-processing tools in musical creation. The use of instruments having an audio component and a video component, controlled by the same parameters, allows for an effective management of the audiovisual relations.

This project required the development of a virtual world of more or less autonomous abstract creatures. During a performance, chdh plays with these “instruments”, in order to make them react both visually and aurally. Two musicians, connected through a network, interact on the same interface with motorized MIDI faders. Each instrument, or “patch”, can then be played by one of the two musicians or by both simultaneously. They handle the instruments by using an abstract layer, which modifies the parameters of the algorithm. Each algorithm then creates data used for the synthesis of video and sound, creating a strong cohesion between the two media. The video and sound aesthetic is minimalist: sines, diracs and noise interact with cubes, spheres, and other primitive 3D forms in a black and white environment. The different instruments make the creation of a solo-accompaniment musical structure possible; letting the audience discover the intrinsic bonds between image and sound as well as creating polyrhythms by playing on the visual and sound space granted to each instrument.

<http://www.chdh.net/>