

and otherwise manipulate projected pop culture video/audio sequences. The 2-handed interface is enticing—it encourages expressive, free-form movement and a dance approach to interactivity.

The software artists TMEMA (Golan Levin, Zachary Lieberman USA) in collaboration with voice artists Jaap Blonk (NL) and Joan La Barbara (USA), performed the playful *Messa di Voce*. The piece is written in custom code developed during a residency at *Ars Electronica*, and is based on speech recognition algorithms. In what was more a series of set pieces than a fully realised performance, the vocalists were tracked spatially and their utterances analysed in real time. The system synthesises and outputs graphics in response—so Blonk performs his virtuosic vocals and the graphically rendered bubbles projected around his head are pushed up and suspended by the force of his breath. While the possibilities of the technical arrangements are very inspiring, I had to ask what creative and aesthetic development has been sacrificed for the complexity of the software development.

A wonderfully realised live performance with interactivity was *POL, a Mechatronic Performance* by Marcel-li Antunez Rocha (Spain). Two performers with exo-skeletal apparatus drive the fable of a rabbit's search for love; performers' action and voice, transcoded by the exo-skeleton, manipulate robotic offsideers, sound and projections. The complex, 3 channel Flash animations are synthesised into a retro-futuristic trope of mythical creatures, Bosch-like scapes and scenarios of sex, death and betrayal. The robotic and the cybernetic merge with an aesthetic of baroque intensity, evoking various origins of the abject and disembodied subject: surrealism, 1920s futurism, medievalism and collective fable.

Multiuser environments provide a challenge to new media artists and designers. *Instant City* (Sybille Hauert, Daniel Reichmuth, CH) is developed in Max/MSP. A very tactile interface helps—visitors stand around a square plinth on which they arrange acrylic blocks in architectural forms—the 'buildings' of the instant city. The placement and mass of the blocks manipulates the sound composition (visitors choose between 6). The installation successfully brings visitors together across the top of the plinth: