

# INPUT OUTPUT

## Materialized Surveillance

**T**he increasingly elusive quest for security in an often-threatening world is prompting greater investments in computerized surveillance systems.

The newest systems may promise greater protection, but their operations carry sinister social implications. They can search out your ethnic background, or seek to match your face against databases of suspicious individuals.

Rafael Lozano-Hemmer argues that “these cameras have prejudices programmed into them, already built into their automated systems.”

In the creative hands of Lozano-Hemmer, a Rockefeller Fellow who is an inspired observer of advanced technology in contemporary society, surveillance systems become a source of playful, slapstick humor.

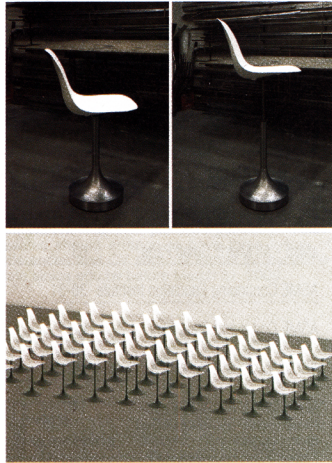
He creates large-scale interactive installations, deploying robotics, the Internet, cell phone links, sensors, and custom-made interfaces in public spaces.

Lozano-Hemmer was born in Mexico City and graduated from Concordia University in Montreal with a B.S. degree in physical chemistry. In 2003, he was named “Artist/Performer of the Year” by *Wired* magazine’s Rave Awards.

When in 2007, for the first time ever, Mexico participated in the prestigious Venice Art Biennial with its own national presentation, Lozano-Hemmer was selected as its featured artist.

His other interests include the mathematics of dynamic systems capable of generating complex, non-linear behavior. A related project, kinetic sculpture titled “Wavefunction,” appeared at a place called bitforms gallery nyc in Manhattan.

Fifty modernist chairs were arranged in a gridlike array. The chairs were designed by the famed American husband-and-wife team of Charles and Ray Eames and equipped with



Rising in welcome: CFD determines the wavelike response of chairs to onlookers.

bases designed by their partner and friend, the architect Eero Saarinen.

Viewers entered the room and approached the chairs. But before they could sit down, the nearest chairs began to rise to “greet” them. As visitors continued to circle the installation, the original chairs sank, but other chairs began to rise and fall in turn, forming a cresting wave that spread over the whole room. The entire field rippled with ghostlike movement.

In fact, those Saarinen bases hid electromechanical pistons that raised the chairs. Their operation sounded like the pounding of surf.

The motorized chairs were controlled by a computerized surveillance system equipped with programs that used visitors’ movements to calculate equations in fluid dynamics.

As other people entered the space, they created new waves that interfered with earlier waves, creating patterns of turbulence and chaos in an ironic application of modular furniture design and then resolving back to a studied calm.

Nearby, a computer graphic screen demonstrated how the program

interpreted visitors as targets radiating waves of motion whose wash prompts the motion of the chairs.

Lozano-Hemmer explained his intentions: “I’m looking for ways to materialize surveillance. How can we use this tracking and technology of control in a system that, through humor or absurdity or slowness or weakness or dissimulation, will make people think about their environment in a different way?”

He aims to provide a public space inspired in equal parts by animatronics and carnival—interrupting what he sees as the increasing homogeneity of the urban environment.

“Fluid dynamics can create environments that are out of my control,” he said. “As more people participate, more and more complex turbulence can emerge. This is the turbulence we see in most organic systems.”

His ambitions provide a contrast to those of engineers.

An engineer’s task might be to model all possible outcomes of a situation, then calculate and contain them. Instead, the artist is looking for an out-of-control quality that will give his work outcomes he did not anticipate. “If the piece does not surprise the author in some way, then it is not truly successful,” he said.

“I like living vicariously through technology,” Lozano-Hemmer said. “I work with technology because it is impossible not to. Technology is inseparable from contemporary identity. Technology is one of the inevitable languages of globalization.

“We’re living in an era of networks and globalization and, for better or worse, a lot of boundaries are coming down.”

A showing of Lozano-Hemmer’s work is currently at the Kemper Museum of Contemporary Art in Kansas City, Mo., through May 3. A public installation of his work will be a feature of the 2010 Winter Olympics in Vancouver. **ANTHONY ASIAGHI**

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