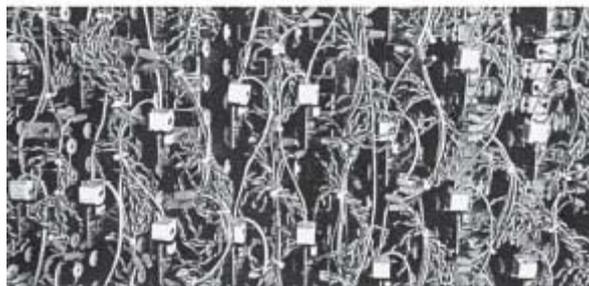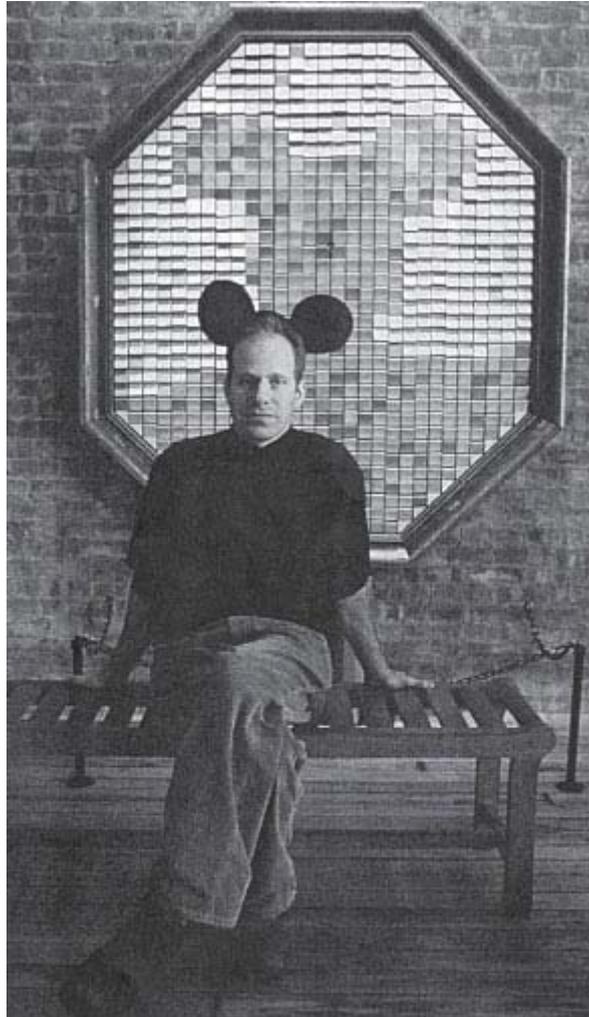# Wooden Mirror

DANIEL ROZIN

The *Wooden Mirror* is an impressive physical presence, over 2 meters tall and 1.5 meters wide. Move in front of it, and its surface of wooden tiles comes alive. The tiles tilt up and down, and the resulting pattern of light and shade creates an image of whatever is before the mirror. Movement is reflected instantly by the tiles in ripples of motion, accompanied by a rustling sound reminiscent of stiff breeze in a forest. To enable the mirror to create real-time images, artist Daniel Rozin connected a small video-camera in the mirror's center to a Macintosh computer. The image seen by the camera is digitized by the computer and reduced to a 35-by-29-pixel image with an 8-

bit grayscale. The computer analyzes the differences between the current image and the previous frame and sends commands only to those tiles that need to be changed, using software written by Rozin. The tiles are tilted by a total of 830 servomotors, one per tile [above bottom], connected to a series of micro-controllers that are linked by serial lines to the Macintosh. Each tile can take up one of 255 positions to form the image, although in regular lighting conditions typically only 10 or 12 levels of gray can be discerned. Depending on how much activity it is mimicking, the mirror can refresh between 5 and 10 times a second.

"In many ways, this is the essence what we try to do here: taking the power of digital computation and concealing it to see how it influences something more in touch with the human condition. Wood doesn't want to be very digital, each tile is slightly different. But computation can take all this randomness and messiness and put it into an order….The piece is on the line between analog and physical vs. digital and computational," explained creator Rozin, shown sitting in front of his creation [above top].

Rozin also strove to eliminate the concept of an interface. An interface "means putting some sort of membrane between you and the experience. With this, you understand immediately that it's a mirror, you know to operate it, and no interface is involved."