Dexter Dalwood
The Queen’s Bedroom
oil on canvas
Be There Now: Telepresence Art Online

David Pescovitz

Much of the new media art bandwidth buzzes with the virtual gallery — Web sites filled with visual or audio art that's been converted into ones and zeroes for all the world to experience on a CRT. But perhaps more revolutionary is Web art that not only subverts the dominant distribution paradigm but also symbolizes a new genre, works that were unimaginable before the Network's wires were laid. Indeed, these projects not only use the Web as a presentation forum, but could not exist without it. A handful of artists are knee deep in that datastream, combining cultural criticism with creative engineering to produce art for and about the Web.

However, the analog world is not obsolete. Even as the line between virtuality and hyperreality blurs, the digital will never replace the analog. They will co-exist. Indeed, as distance or size obstructs to our vision disappear, questions of authenticity, a desire for evidence, and a yearning for "proof" of what we see emerge. The power of telepresence can easily be overshadowed by our own fears of deception. How can we be certain that we were really viewing the real-time surreal red landscapes of Mars through Sojourner's electronic eyes, and not pre-recorded special effects wizardry?

The "telepistemology" seed was first planted when Goldberg co-directed the groundbreaking Telegarden (1995) and Mercury Project (1994) installations, which put the control of complicated robot arms in the hands of the online user. "Is it possible to distinguish the virtual from the distal?" Goldberg asks.

New media, yet classic conundrums of contemporary art — questions of reality, representation, and reproduction. "When the original artifact is distant either in space or in scale, the corporeal experience requires technologies such as WWW-telerobotics," Goldberg says. "Rather than diminishing the aura of the original artwork, these technologies enable it."

Teleporting an Unknown State
by Eduardo Kac
http://server.kibla.org/ekac/

A seed needs light to sprout. Preferably sunlight, the natural nutrient behind photosynthesis. The light at Mawson Station, Antarctica is bright, the sunlight reflecting off the snow and ice. The seed on a pedestal in the Multimedia Center Kibla Art Gallery thrives on that light from the South Pole, but also from locales scattered around the world — Tokyo, Sydney, Moscow. Imported light. Sunlight converted to digital data, transmitted across the globe, and recreated with pixels on a video projector feeding the seed underneath this virtual sun. A camera trained on the pedestal provides feedback for the Web participants.

Teleporting an Unknown State is a biotelematic interactive installation," says creator Eduardo Kac, assistant professor of art and technology at the School of the Art Institute of Chicago. "In other words: it is a computer-based telecommunications piece in which a biological process is an integral part of the work. The installation creates the experience of the Internet as a life-support system."

Whether the plant thrives or dies is up to the artwork's online audience. Eight images from Web-connected digital cameras trained on skylines around the world are captured by the gallery's Internet server and displayed at the Teleporting an Unknown State Web site. Online viewers select one of the images for projection onto the soil containing the seed. After five minutes, the image is turned off, denying the seed "sunlight" until the next user logs in.

"The installation takes the idea of teleportation of particles (and not of matter) out of its scientific context and transposes it to the domain of social interaction enabled by the Internet," Kac writes.

Kac's experiments in telecommunication span more than a decade — from the telerobotic
A biotelematic interactive installation is a computer-based telecommunications piece in which a biological process is an integral part of the work.


“In my art work I’m very interested in creating situations that convert the Web into an open social space, into a forum for dialogue and interaction,” says Kac.

Dislocation of Intimacy by Ken Goldberg and Bob Farzin http://www.dislocation.net

Tucked away in a corner of a UC Berkeley robotics laboratory, a small light-proof box containing a mix of secret objects is wired to the Internet and awaiting an audience. This is the Dislocation of Intimacy, Goldberg’s quintessential experiment in telepsychology.

Via an elegant Web interface, online viewers select a combination of lights to turn on and off inside the box. Seconds after hitting the “Proceed” button, a digital snapshot of the silhouettes created by the objects under the user’s chosen lighting condition appears on the Web site. The naturally grayscale images are surreal and mysterious, reminiscent of Rayograms or Moholy-Nagy’s eerie optical experiments.

“Electric light is a pure communications medium precisely because it has no content,” says Goldberg, paraphrasing a Marshall McLuhan quote. “In this case, the medium is the message.”

Further Explorations in Lethal Experimentation by Mark Pauline and Eric Paulos of Survival Research Laboratories <www.srl.org/shows/zkm>

Inside Tokyos ICC gallery, a snapshot of armed robot is developing right before the eyes of dozens of spectators and live TV cameras. A glimmering track robot similar to the devices the police use to defuse bombs is scurrying along the floor of the gallery, controlled over the Web. It approaches a second stationary mechanical contraption — known as the button robot — and the track robot’s mechanical arm extends to push one of the giant buttons on its partner in crime. Three metal arms on the button robot, outfitted with fresh squad, flail rapidly, but the audience’s eyes quickly shift to a large video screen behind the robots. Pictured on the screen is the live image from a Webcam mounted on an air rocket launcher — armed with explosive-filled soda cans — outside a machine shop in San Francisco. Moments after the track robot at the ICC taps the trigger on the button robot, the air rocket launcher fires, obliterating a moving target in its sights. Crowds in San Francisco, and Tokyo, cheer in unison. For better or worse, that was the first day that lethal machinery was operated over the Internet.

“The hope is that with works that have a familiar technology interface but that manifest an unexpected (and hopefully provoking) real physical outcome, individual will continue to question technology and understand our place within its world,” says co-creator Eric Paulos.

Beginning with that Tokyo event, titled Increasing the Laiet Period in a System of Remote Destructability, San Francisco’s infamous machine performance art group Survival Research Laboratories have created telepsychological Turing Tests for the Web98 Conference in San Francisco and the opening of ZKM in Karlsruhe, Germany. The method behind the madness is always the same: enable anonymous users to operate extremely dangerous equipment with no sense of corporeal connection. Then stand back.

“Part of the fun for me is knowing that people online are wondering if what they’re doing is fake, or via a Webcam, a mannequin known as “Judy” sports a blue taffeta and black velvet party dress near several computer monitors displaying stock ticker information. A computer program automatically pulls stock prices from online quote pages and determines whether a hidden system of motor and pulleys should raise or lower the skirt. While most telerobotic works are controlled by individuals via the Web, the hemline on the Stock Market Skirt is affected by "post-human" digital data.

"Responding to a dynamic feed of pure data, Stock Market Skirt is interactive with the internet itself, the global flow of information," Paterson says. "It’s interactive with culture, insofar as stock markets are a manifestation of the collective unconscious of a capitalist society."


Indeed, Paterson notes, users could affect the skirt by trading stock in whatever company her software is tracking at the moment.

"I describe Stock Market Skirt as a cyberfeminist fashion statement — my post-postmodern take on the convergence of technology, fashion and feminism," Paterson says. Indeed, convergence — of people, media, and ideas — seems to be at the heart of telepresence art.

David Persico is a contributing editor to Wired and I.D. Magazine. He has written about art, culture, and technology for the Los Angeles Times, and New York Times.