

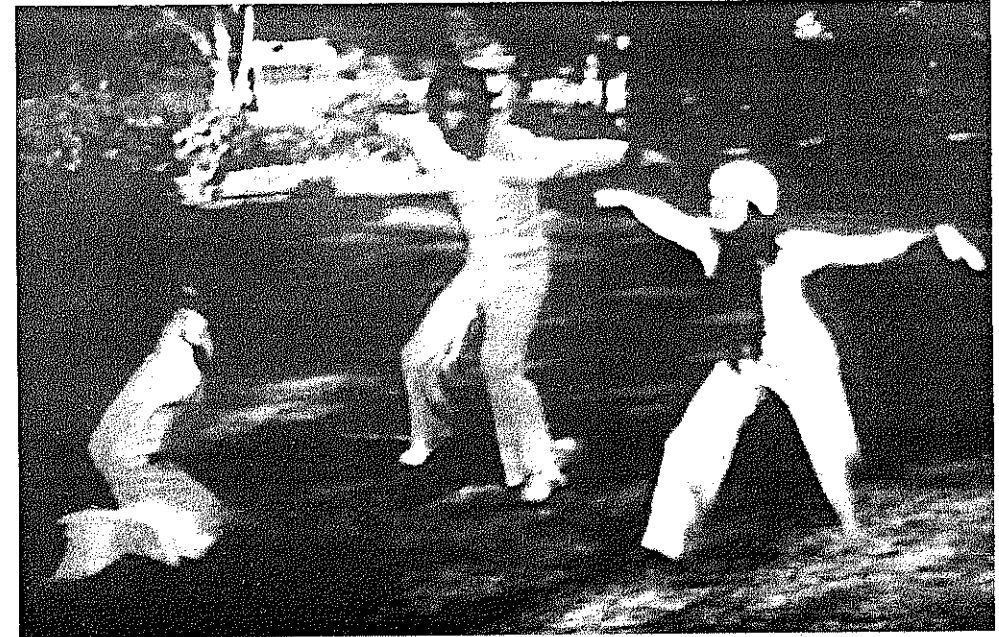
to grasp the ineluctable chaos of becoming, the secret order of disorder. And as we come to see more, we shall see the computer less and less. It will become invisible in its immanence, but its presence will be palpable to the artist engaged telematically in the world process of autopoiesis, planetary self-creation.

The technology of computerized media and telematic systems is no longer to be viewed simply as a set of rather complicated tools extending the range of painting and sculpture, performed music, or published literature. It can now be seen to support a whole new field of creative endeavor that is as radically unlike each of those established artistic genres as they are unlike each other. A new vehicle of consciousness, of creativity and expression, has entered our repertoire of being. While it is concerned with both technology and poetry, the virtual and the immaterial as well as the palpable and concrete, the telematic may be categorized as neither art nor science, while being allied in many ways to the discourses of both. The further development of this field will clearly mean an interdependence of artistic, scientific, and technological competencies and aspirations and, urgently, on the formulation of a transdisciplinary education.

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So, to link the ancient image-making process of Navajo sand painting to the digital imaging of modern supercomputers through common silicon, which serves them both as pigment and processor chip, is more than ironic whimsy. The holistic ambition of Native American culture is paralleled by the holistic potentiality of telematic art. More than a technological expedient for the interchange of information, networking provides the very infrastructure for spiritual interchange that could lead to the harmonization and creative development of the whole planet. With this prospectus, however naïvely optimistic and transcendental it may appear in our current fin-de-siècle gloom, the metaphor of love in the telematic embrace may not be entirely misplaced.

"Welcome to 'Electronic Cafe International': A Nice Place for Hot Coffee, Iced Tea, & Virtual Space" (1992)



Dancers Keija, Mitsuko, and Soto 3000 miles apart! Satellite Arts Project: A Space with No Geographical Boundaries. © 1977 Galloway/Rabinowitz.

"We first explored composite-image space because we wanted to create a performance place with no geographical boundaries, in which we could collaborate with other artists."

<< In 1984, Kit Galloway and Sherrie Rabinowitz debuted the prototype of the Electronic Cafe by linking five cafes in various communities in Los Angeles to the Museum of Contemporary Art for the Olympic Arts Festival. Five years later, they opened the Electronic Cafe International in Santa Monica, California, which they described as a "cafe for the global village," invoking the spirit of Marshall McLuhan. ECI could be considered the first cybercafe, but with a crucial difference from today's cybercafes. While it served food, drinks, and teleconferencing, ECI was primarily a cultural research lab. When few others had yet to see the need, Galloway and Rabinowitz brought real-time networked collaborative multimedia environments to people without other access. ECI's projects addressed multicultural communities and artists across the globe. By making cutting-edge telecommunications tools available in a casual, artists' cafe space (rather than on a campus or at a museum), ECI was the catalyst for much formal innovation in collaborative networked performance.

For Galloway and Rabinowitz, the cafe was the culmination of projects that dated to 1975, when they began their "Aesthetic Research in Telecommunications"—as they referred to their groundbreaking satellite art at the time. Inspired by the telematic experiments of Myron Krueger, they invited artists to collaborate in "a performance space with no geographic boundaries." In these live performances, the images of geographically dispersed artists were transmitted via satellite to create a composite performance video on a single screen. The objective, as they explained, was "to demonstrate (for the first time), that several performing artists, all of whom would be separated by oceans and geography, could appear and perform together in the same live image (the image as place)." These investigations in "teleperformance" opened up new possibilities for simultaneous theater events involving dancers, actors, and musicians networked across great distances.

Galloway and Rabinowitz's investigations with artists led them to explore a variety of unscripted forms of communication using these tools. Perhaps their best-known work in this vein is the 1980s *Hole-in-Space*, a two-way satellite hookup between Lincoln Center in New York and Century City in Los Angeles. Large screens were set up outside at both locations, projecting the image of the crowd that gathered at the opposite place, bringing people three thousand miles apart face-to-face in real time. In effect, each screen became a window onto the other location. Over three days, the project escalated into a frenzy of homecomings, long lost siblings greeting one another, and transcontinental romances. *Hole-in-Space* sparked an interest in new genres of telecommunications art for the Internet, including MUDs, Net art, and networked installations. >>

Our original idea, back in the 1970s, was to create an electronic, multimedia composite-image space in which people separated by distance, language, values, and culture could come together to collaborate. The image itself would become a place that we named "virtual space," which differs from virtual and artificial reality because the people, places, and things are real-world items; they're not rendered by computer. Our original research was funded by Corporation for Public Broadcasting and National Endowment for the Arts, with support from NASA. ^{of a pl}
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We wanted performing artists to meet in composite-image space that mixed live images from remote places and presented the mix at each location so performers could see themselves on the same screen with their partners. That became the premise for our subsequent work and experimentation.

This sort of composite image space was explored in the early 1950s by Ernie Kovacs and Steve Allen. Kovacs would superimpose his live video image onto film clips and interact with the film characters. Allen would do improvisational comedy by superimposing his live studio image with live camera shots of unsuspecting pedestrians outside the television studio.

We first explored composite-image space because we wanted to create a performance place with no geographical boundaries, in which we could collaborate with other artists. We wanted to explore the aesthetics and sense of presence in a shared performance/multimedia environment, where people don't leave their indigenous environments. That way people from varied creative and cultural backgrounds could help create a new environment in which they would collaborate on an international scale.

In designing such spaces, we look not only at their qualities and aesthetics, but how people interact when they are disembodied and their image is their "ambassador." A virtual space creates social situations without traditional rules of etiquette. The absence of the threat of physical harm makes people braver. Virtual space diminishes our fears of interaction. Still, a person is offended when the virtual-space hand "touches" body parts that wouldn't be touched normally "in the flesh." In virtual space, we learn the extent to which we "own" our image. It relates to the beliefs of some cultures; if you take a photograph of people, they believe you capture or "steal" part of their essence or soul. This is a violation of one's image. Anyone can experience this in virtual space when seeing their image violated by a person or object that occupies the same image space.

If you define the aesthetic of the medium by defining the essence and integrity of the medium, then the creation of "good" art, in the case of telecommunications, means you create a situation that provides some form of communication between people and maximizes the technology's capabilities.

But there must be a quality of tension that defines the "communication." If you don't create tension in the work, you're not really looking at the qualities of the medium, or the qualities of the art. . . .

Hole-in-Space, from 1980, was a live two-way satellite connection using video screens to project life-size images. Without public announcement, we installed *Hole-in-Space* on the street near New York City's Lincoln Center and in a display window at a Los Angeles department store in Century City. Both screens could accommodate the images of about 15 people. People could converse with people in the other city as if they were standing on the same corner. *Hole-in-Space* took place over three evenings. On the first night, people simply discovered it. They went home and told their friends, who showed up for the second evening, when it was also announced on TV in both locations. On the third night, families from miles away drove into the cities with cars full of kids to meet up with relatives on the other coast whom they hadn't seen in years. . . .

THE CAFE AS CULTURAL COMMUNITY CENTER

*A physical space that
serves as a node for the
construction of virtual situations*

We wanted to create an environment for creative people to enjoy one-to-one and group-to-group exchanges. That's where Electronic Cafe comes in. The flagship cafe is in southern California, in Santa Monica, networked with Electronic Cafe Affiliates in San Francisco, New York City, Oakland and Santa Cruz, California, Santa Fe, Chicago, Pittsburgh, Vancouver, Toronto, Paris, Berlin, Japan, Seoul, Managua, Barcelona, and Budapest. We're building human networks on an international, cross-cultural, multidisciplinary scale. These networks consist of people who are getting to know each other and the technology that maintains their relationship. They're trying to creatively animate that technology by engaging in new types of conversation.

The point of Electronic Cafe is to create a community commons. The atmosphere encourages friendly conversation and serves as an amenity to the telecommunications technology. And our events typically cost \$3-\$5 to attend.

In 1984 we were commissioned by the L.A. Museum of Contemporary Art (MOCA) to create a seven-week project for the L.A. Olympic Arts Festival. This was the birth of the Electronic Cafe concept. We linked MOCA with five diverse L.A. communities through a telecom system, computer database, and dial-up image bank. People in the Korean community, Hispanic community, black com-

munity, and artsy beach community could send each other slow-scan video images, draw or write together with an electronic writing tablet, print pictures with the video printer, enter and retrieve information and ideas in the computer database, and store or retrieve images on a videodisc recorder that held 20,000 images. Electronic Cafe Artists-in-Residence helped people use the systems, solicit performance pieces, and transmit musical events.

These events propelled the network into a dynamic, inspirational existence. For example, Los Angeles's Korean community and black community traditionally are at odds with each other. As they met and got to know each other through the network, they wanted to visit each other! When you can make eye contact and establish a creative relationship with someone, you usually want to meet and touch them. At first people talked informally over the network, then created something together, and in many cases, ended up arranging in-person meetings.

Today, each Electronic Cafe contains the low-cost Commodore Amiga computers, which have audio and video capabilities. We also use black-and-white, still-frame videophones (we call them "vidphones"); color still-frame vidphones; video projectors; IBM PC-compatible and Macintosh II computers containing special circuit boards that capture video images; modems; computer printers; fax machines; and software for telecommunications, desktop publishing, database management, and graphics. We also have multiple telephone lines. Not all of the Electronic Cafes own video and color printers, but some locations consider them essential for documenting events.

All of this hardware and software lets EC Network affiliates exchange still-frame video images and computer graphics, enjoy video and audio teleconferencing and two-way drawing and writing in shared-screen presentations, exchange computer files, programs, electronic mail, and black-and-white images and/or text, and conduct real-time "chats" via computer. People who own videophones or computers are welcome to dial in and join the network. We invite people to come in and encounter the technology in a nonintimidating environment.

Our Robot Research 1200C video transmission system sends color or black-and-white images over phone lines (a color image measuring 256 × 256 pixels takes 36 seconds, while a black-and-white image of the same resolution sends in 24 seconds). Images are received by another Robot 1200C or Commodore Amiga with special software. Our vidphones transmit black-and-white images with an average 100 × 100 pixel resolution in seven or eight seconds. These vidphones (by Panasonic and Mitsubishi) no longer are manufactured, but other companies build similar systems.

One typical ECI event was *Earth Day Global Link '90*, the only truly inter-

active global event to occur on Earth Day. It involved connections and teleperformances with Moscow, Nicaragua, Berlin, and Japan. In the connection with Moscow, people discussed environmental problems and artists performed together. Children in L.A. asked the Russians, "Do you have holes in your ozone, too?"

In another Electronic Cafe presentation, a dancer named Dawn Stoppiello used technology to generate music on a Macintosh-based MIDI system and trigger vidphones that sent her image to a New York City site. Working with Dawn, computer musician Mark Coniglio of the Center for Experiments in Art, Information, and Technology (based at California Institute of the Arts) developed a Macintosh II program, MIDI Dancer. Using MIDI Dancer and wearing wireless motion-monitoring devices on her arms and around her waist, Dawn transmitted data about her movements to the Mac. Dawn's motions controlled the previously scored music, synchronizing it to her cadence, controlled the lighting and microphone levels, and determined when her image was captured and transmitted to the New York location.

In a current Electronic Cafe project, *The 21st Century Odyssey*, performance artist Barbara T. Smith is traveling around the world with a portable vidphone system to connect with Electronic Cafe and the artists and other people she meets in her journeys. Her virtual spaces also include Bio Sphere 2 resident Dr. Roy Walford, communicating with us and the world through his ECI vidphone system.

Today ECI is testing limited-motion video systems and groupware. We are exploring ways in which digital networks allow group-to-group activities and enable a person to control objects in remote rooms.

INTEGRATION AND ACCESS

Cultural integration

If there is one word that defines Electronic Cafe, it is integration: integration of technology into our social fabric; integration of distinct cultures and communities, the arts, and the general public; and integration of art forms.

When we put integration capabilities in a community center where people can witness the "creative animation" of technology, we can start to liberate people's imaginations. When artists explore this technology, we start pushing the limits of technology. We create a culture that defines how the technology can be used and encourages cross-cultural collaborations, problem-solving, and decision-making. Our hope is to create a cultural environment that helps people

around the world articulate what they want in their future and determine how to get there from here.

The ability to pick up a telephone and talk to a person is the most powerful magic created by contemporary society. It is the only mechanism that lets us manage a system as large as a planet. We must recognize that this is sacred, and become a "tele-species." Through Electronic Cafes and the use of telecommunications technology, we hope to foster new kinds of artistic collaboration and experimentation that will support the tele-species.

We want to make teleconferencing systems nonintimidating and accessible to people who don't work within corporations. We want to get the technology to as many people as possible, articulate the ramifications, define the aesthetics, and topple political roadblocks. Corporate culture is not going to provide models or applications broad enough to visualize the technology's cultural application. We must acculturate it ourselves.

If the arts are to take a role in shaping and humanizing emerging technological environments, individuals and arts constituencies must start to imagine at a much larger scale of creativity. If you look at the aesthetic quality of the communication and you're true to your art form and your art logic, then you naturally put one foot in front of the other . . . and the art logic marches you right out of the art institutions and into life. . . .