

VIRTUAL SPACE – The Electronic Environments of Mobile Image

Gene Youngblood

"We must create on the same scale as we can destroy", say the designers of ELECTRONIC CAFE. In collaboration as Mobile Image since 1977, Kit Galloway and Sherrie Rabinowitz have confronted that challenge through a series of works that address the "emerging environment" of electronic telecommunications. If these projects belong to any history, it is Art and Technology; but their value is precisely the extent to which they transcend the contradictions of that problematic tradition. Indeed, Mobile Image's singular enterprise defines new trajectories for both art and technology, revitalizing one while humanizing the other as they address the central cultural and political issue of our time.

The brief history of telecommunication projects by artists lives in the shadow of the Communications Revolution -that mythical transformation of culture and consciousness which, for at least a generation, has seemed perpetually about to happen. A communications revolution isn't about technology; it's about possible relations among people. It implies an inversion of existing social relations whereby today's hierarchical mass culture would disperse into autonomous, self-constituting "reality-communities" – social groups of politically significant magnitude realized as communities through telecommunication networks and defined, therefore, not by geography but by consciousness, ideology and desire. Only as constituents of such communities could we both produce models of possible realities (art) and also control the cultural contexts in which those models were published and perceived (politics). Control of context is the control of meaning, and without control of meaning there can be neither freedom nor creativity. Unavoidably, then, artists who work in telecommunications assume great ethical responsibility, for these instruments represent our only hope of effectively addressing the profound social and political challenges of our time. We must indeed create on the same scale as we can destroy, but this will not be possible if we can't control the cultural contexts that determine the meaning of our lives.

The ethical imperative above all else is to furnish alternative models for the deployment of these technologies by any community of desire as the central instruments in its social construction of reality. Unfortunately, the history of telecommunication projects by artists reflects little recognition of this responsibility. Most of these "works" have been either routine applications of satellites for teleconferencing,¹ or the equally standard use of computer, videotex and facsimile networks for "exchanges of work, information, and ideas"², or they have been broadcast events that delivered personality-oriented Art Star performances to cable TV subscribers or audiences gathered in museum auditoriums³. The pretension has been that something done every day in business and industry and by subscribers to computer networks, or employed every evening by networks newscasters, becomes special because artists are doing it. In fact nothing is revealed that is not already given, obvious, routine indeed, already politicized by commercial contexts.

In contrast, every Mobile Image project has represented a genuine alternative to existing practices in telecommunication. In what amounted to a manifesto similar in spirit if not in substance to that of the Italian Futurists, they proposed in 1975 to explore the unique properties of new technologies regardless of whether the results were art-like or not, or whether the art world acknowledged it at all. Indeed, the telecommunication project as Art Event represents for them a profound contradiction; it raises a basic philosophical question concerning how a work addresses the scale of creativity. Art understood as the prepared experience, the masterpiece, is the monumental version of creativity. "But there's that other quality of life that's left behind." Galloway points out, "the life in between one great spectacle after another. There can be a quality of art and life in between the great moments, but the

legitimacy of working on that scale is devalued by the emphasis on Art"⁴ – which thus becomes antithetical to the secularization of the technology. Thought they frequently invoke art metaphors to characterize their work, Galloway and Rabinowitz believe it is basically a trap. "As long as we talk about 'the artist' we're not really addressing the problem." Galloway asserts. "It sounds like we're addressing a problem: here's this undernourished, underappreciated subculture with this big burden on their shoulders, and everybody has to help their local artist. But the problem isn't an art problem. It's a problem of recognizing the value of creativity. across the board 'in a healthy society."

TELECOMMUNICATION AS ENVIRONMENTAL DESIGN

Their solution is the metaphor of environmental design. Essentially populist, appealing as much to engineering and the behavioral sciences as to art, it reflects the sociopolitical bias of their enterprise. "We see communication and information systems as environments people live in", Rabinowitz explains. "So we look at the aesthetics of that environment, the shaping of the space. The way you shape a space determines what can happen to the information in it." She invokes architecture: information environments can be exalting and inspirational like cathedrals (computer networks) or squalid and dehumanizing like ghettos (the mass media). As buildings are said to be democratic or oppressive, so the architecture of electronic space determines possible relations among people, establishes the contours of desire. But there are limits to the metaphor. The membrane isn't as corporeal as that of a building. The difference is that in electronic space the information becomes the environment. It's like a river: the technology that determines how information flows is the riverbed; but the water – the information itself – is the environment the user actually lives in, interacts with.

"This is uncharted territory", says Galloway, "a developing terrain. We're all spacemen learning how to live in a new environment. But learning and creativity are experiential: playing, toying with things, tinkering for a while where the pressure is off and you fall into a discovery mode. These values aren't recognized by the Judeo-Christian ethic of rationalization that dominates our culture. Most telecommunication experiments are over-rationalized. There's a lot of pressure to justify them because electronic space is very expensive real estate. But there's got to be a Central Park. If we rationalize our exploitation solely as art or commerce it'll be difficult to cultivate alternative models. We're into cultivating. There are all these possibilities and they're not being used, not being tested." Accordingly, the artists aren't proposing "design criteria for the perpetual". Their projects are to be understood as exploratory prototypes, environmental simulations, experiential laboratories where strategies for freedom and dignity in the information age can be tested in vivo. They allow us to "hang out in electronic space", as explorers of the emerging environment in which we all shall increasingly dwell.

In 1975 Galloway and Rabinowitz formalized years of thinking about the communications revolution and how to address it as artists: focusing on real time (live) telecommunication as opposed to "stored time" videotape recording, they proposed four projects designed to explore what they saw as the four most unique characteristics of satellite communications. Thematically, each project addressed some aspect of the idea of scale – for them the central philosophical and political issue raised by the communications revolution and the reason for choosing the satellite as their medium. One interpretation of scale was the notion of "a space with no geographical boundaries" (today, borrowing computer jargon, they call it "virtual" space). This became the subject of their first experiment, THE SATELLITE ARTS PROJECT, conducted in 1977. Another was the idea of scale as geographical connection: this was implemented in their second project, HOLE IN SPACE (1980), characterized as an "invisible sculpture" in which the connecting armature was important, not the resulting display. The third project would be an international variation on HOLE IN SPACE dealing with the scale of multi-ethnic or intercultural connections rather than geographic ones. Their

fourth proposal had to do with the scale of observation – using the satellite to see in ways otherwise impossible. This is the subject of LIGHT TRANSITION which, like the international HOLE IN SPACE, has yet to be realized. And now there is ELECTRONIC CAFE, a hybrid, multimedia computer/video network whose theme is political scale, the scale of social organizing. ELECTRONIC CAFE represents a logical progression in the works of Mobile Image toward the idea of electronic space as community, as a "virtual environment" in which to live. To understand its significance in the artists' agenda as well as in social history it is necessary first to understand the projects that preceded it.

THE SATELLITE ARTS PROJECT

The notion of electronic space as environment was most literal in their first experiment, THE SATELLITE ARTS PROJECT, conducted in collaboration with NASA during 1977. Using the US-Canadian Hermes CTS satellite, people 3000 miles apart were electronically composited into a single image that was displayed on monitors at each location, creating a "space with no geographical boundaries", or virtual space, in which a live performance could take place. Derived from the Latin VIRTUALIS, meaning "powerful capacity", the adjective "virtual" refers to phenomena that exist in effect or "essence" but not in actual fact the world in the mirror is the archetypal virtual space. Like three-dimensional objects in a computer simulation, a virtual space or virtual volume is a kind of phantom reality that's there but not there; it is real "for all practical purposes", yet it's not what it seems to be: for all practical purposes the image in the mirror is virtually myself, but it isn't really me. For THE SATELLITE ARTS PROJECT, Galloway and Rabinowitz proposed a "virtual telespace" as a new environment for the performing arts and a new model for two-way telecommunications.

The artists worked with NASA for most of 1977, pioneering techniques for creation of the virtual telespace and strategies for its "occupation" by performers. This involved two sets of live transmissions, the first in July with NASA personnel as participants, the second in November when four dancers – two in California, two in Maryland -explored the virtual environment six hours a day for three consecutive days. THE SATELLITE ARTS PROJECT was unprecedented in the history of both the performing arts and telecommunications. Previously, video had been used only for documentation, or as background in the performance space, or to electronically process the image of a live or taped performance. In this case video literally became the location of a performance that existed nowhere else but in that virtual space which determined all relationships and interactions. Dance no longer was an end in itself: seen as encompassing all physical behavior, it was employed as a supremely human test, the most rigorous and exhaustive method of investigating real time co-occupation of virtual telespace.

Dancers rehearsed in closed-circuit training sessions which began months before the live transmission. Their improvisations were designed around a series of tasks that addressed properties of the virtual space and the kinesthetic effects of the quarter-second time delay caused by the 44,600-mile journey of the satellite-relayed signals. "They had to adapt to the disembodied reality of that thin, two-dimensional space", Rabinowitz explains, "yet their interactions had a 'thickness' determined by the satellite time delay, a kind of molasses movement. It was thin space/thick time, like an out-of-body experience, the feeling of a transcendent dream. You give priority to your image as a kind of ambassador in virtual space. But even though you're separate from your body it's incredibly sensual. The sensor deprivation actually enhances your sensitivity, heightens your appreciation of sensual experience. You 'own your image' so completely in real time that it's like having phantom limbs. After living in that space a while you have to reorient back to bodily sensations."

The musician Paul Horn, who had been exploring acoustical delays in the Taj Mahal and Egyptian pyramids, was invited to participate in this exploration of "optical delay". He played

flute for the dancers, "bouncing his music off the walls of the satellite". In another experiment, six performers, three on each coast, were electronically inserted into a live transmission of a football game: they joined the action, their figures kept in proportion to the players. Perhaps the most extraordinary moment in the videotape documentation of the project is a dancer interacting with her own image in infinitely-receding layers of feed-back, each layer representing the signal having made another 44,600-mile loop. Medical telemetry devices measuring electrical activity in the dancer's muscles were used to modulate an audio synthesizer: she became her own environment inside an audiovisual echo chamber that encompassed the northern hemisphere.

HOLE IN SPACE

In November of 1980 Galloway and Rabinowitz realized the second of their proposed experiments, HOLE IN SPACE, whose evocative title summarizes a brilliant concept of environmental design: a "hole" in space/time, improbably configured as a feature of the physical urban landscape, through which people separated by a continent could interact in real time. Video cameras and rear-projection screens were installed in display windows at The Broadway Store in Los Angeles and at Lincoln Center in New York: for two hours on each of three consecutive evenings, the locations were connected by satellite, each screen displaying life-size, full-figure images of people on the opposite coast who thus appeared to be watching the watchers. The result was a kind of "virtual eye contact" that rendered the technology transparent: a "hole" indeed, through which each group could see and hear only the other, not itself. There was no advance publicity and there were no signs or instructions at the sites. HOLE IN SPACE had to be discovered by passersby who were suddenly confronted with the people on the screen. "They found themselves in this emerging environment without having been prepared, conditioned or sold", Galloway recalls. "We just handed the situation over to the people to acculturate, to humanize. What would be their reaction, their posture, their attitude in in this unprecedented social situation without familiar rules?"

LIGHT TRANSITION

Currently planned for September of 1985, LIGHT TRANSITION addresses the satellite as an instrument for grand-scale observation of planetary transitions. Unique among Mobile Image design, it is a broadcast event, not a participatory environment. But it's not really about the displayed image; rather, it's about extending the observational powers of the witness, whose purview is here conceived in sidereal terms, as containing planetary dynamics otherwise beyond perception. Cameras are positioned at the beach on both coasts, bringing the oceans together in a live split-screen image that is inserted briefly, without comment, every half-hour into the afternoon programming of a satellite superstation. Each transmission builds incrementally upon those precious, disclosing to our gaze those great cyclical patterns of shadow and gravity that mark the aspect and orbit of our planet through its circle of hours – until at last we behold the sun setting into the Pacific as the moon rises out of the Atlantic, live and in real time.

The first transmission, at noon continental time when light is equal on both coasts, lasts one minute: we see two synchronized 360-degree pans that begin looking north up each coast and end on stakes driven into the beaches. All subsequent transmissions except the final one appear for just 20 seconds at program breaks "like Zen TV commercials". Storyboarded, matched, static compositions, they compare the two environments shadows cast by the stakes, light on water, textures of rock and of sand close-ups of surf (are they in or out of phase?). A dozen or more transmissions occur over a five to eight hour period, the shift of light from east to west growing progressively more dramatic until the final transmission: a five minute, real time sunset/moonrise (the moon almost full), revealing that the heroic deployment of the vast assembled machinery of terrestrial and orbital transmission has been timed to the precise

clockwork of this celestial event.

For Galloway and Rabinowitz LIGHT TRANSITION represents an ancient view of the world, seeing Earth as the Egyptians, Babylonians, Druids, Mayans and native North Americans might have perceived it as they measured celestial dynamics with their astronomical architectures. The technological apparatus assembled for the project thus becomes a kind of architecture that measures time, like Stonehenge or the temple at Karnak, an electronic version of chronological stratagems that have descended to us from dim antiquity.

HUMANIZING TECHNOLOGY: ISSUES AND THEMES IN MOBILE IMAGE PROJECTS

These elegant virtual environments are designed to humanize the technology in two ways. First, by reconciling discontinuities of scale, that is, by collapsing large-scale phenomena into human-scaled environments, experience and possibilities. Second, by supporting cultural continuity through "re-entry" of rituals and myths that have fallen out of the culture been jettisoned and forgotten in the rush of purely technological progress.

SCALE

Our concerns today are about scale. Life is out of balance, we have become disoriented in a confusion of magnitudes. None of the now technological developments or consequences is on the human scale any more. How are we to reconcile ourselves to the scale of destruction, or of communication, or of microcircuits, or of space colonization, or the scale of managing the planet, the idea that everybody's responsible, that we have to create on the same scale as we can destroy? A central theme in their work is the attempt to reconcile these disquieting imbalances in a human way, by introducing people to viable scale. They employ large-scale technologies to "sculpt space/time" in a way that gives human scale to phenomena that don't really have it.

In their emphasis on scale. MobileImage projects reflect a sensibility that has been apparent in contemporary art since the 1960s, concerned with monumental structures and geologic environments; Michael Heizer's monolithic constructions, Robert Smithson's earthworks and James Turrell's geographical simulations are obvious examples, but Galloway and Rabinowitz are closer in spirit and intention to Christo. There's a parallel between the heroic beauty of Christo's monumental works and the scale of Mobile Image's elegant electronic spaces, both of which aim to reduce the monumental to the human.

All telecommunication systems collapse spatio-temporal dimension into the simultaneity of the electronic domain. Satellites lend a particular resonance to this fact through the sheer proportion of their orbit. THE SATELLITE ARTS PROJECT addressed this aspect of scale in two ways: by telescoping deep geographic space into "thin" virtual space where dancers were reunited in the dance, and by treating the Earth/satellite axis as a celestial echo chamber in which the velocity not only of sound but of light itself was made visible, malleable, transmuted into the materials of a shadow play. In contrast, HOLE IN SPACE collapsed the continent into a public meeting place on a street corner, demolished the myth that big technology sterilizes social intercourse, and reduced the cultural scale of the media event to an unannounced and unintimidating feature of the urban environment, as commonplace as a department store window display. LIGHT TRANSITION addresses the scale of observation. Satellites bring us the moon and the planets, but our image of the cosmos is Earthbound: we look at the sky; LIGHT TRANSITION amplifies that primal gaze, empowering us to experience somebody else's moonrise and our own sunset simultaneously. The mystical sense of that sidereal link is paraphrased from the cosmic scale to a localized phenomenon. Positioned in the ritualistic framework of the television program break, it evokes the space/time asymmetries we experience in the familiar routines of long distance phone call,

evening news and air travel.

CULTURAL CONTINUITY

Through these phantom architectures the artists seek to recover lost traditions, revive ancient rituals and myths, retrieve vernacular -possibilities that have been devalued and discarded in America's fateful ascendancy to industrial dominion. The projects have for Galloway a certain poignancy, the flavor of "old photographs of what the pure might have been". This is not sentimentality. He distinguishes between romanticism and the importance of reinserting these socializing, humanizing dynamics into the entire spectrum of advanced technological environments, eventually to include space colonization. Nor is it techno-atavism. The challenge is to constantly recreate "situations of support" that confirm the contemporary validity of ritual and myth, that revitalize symbols of human continuity so they possess an aliveness and vitality and relevance for us.

THE SATELLITE ARTS PROJECT addressed this issue through the ritual of the dance, but more importantly in its theme of reunion, bringing together in virtual space dancers separated in physical space. Galloway suggests the technique will be needed for spiritually gratifying contact between space station personnel and their loved ones, and might also be instrumental in humanizing the penal system: prisoners could maintain a nourishing presence in the lives of their families, and they might even confront their victims in ways otherwise unlikely or impossible.

Reunion was also an important aspect of HOLE IN SPACE. But the revelation of that experiment was the emergence of a collective intimacy that we associate with tribal cultures, a communal spirit thought to be lost in modern technological environments. The dramatic intensity of spiritual and emotional communion achieved in HOLE IN SPACE was a direct result of life-size, full-figure visual interaction that assured eye contact -the central premise around which the entire project was structured.

As the artists had anticipated, the three-day experiment was a microcosm of the process of acculturation. The first day was characterized by discovery and experimentation as people began to occupy this novel zone of social possibilities. The second day brought larger numbers, attracted by word of mouth, who came prepared for the experience: messages and phone numbers were exchanged, there were flirtations, lovers rendezvous, emotional family reunions, even a spontaneous "virtual party" between twin brothers who poured and drank a champagne toast from the "same" bottle though separated by a continent. The public nature of the situation introduced into the electronic domain the meet-you-at-the-corner ritual of a local gathering place – the electronic neighborhood, where telespace became a microcosm of cultural traditions: total strangers organized themselves to play charades, abandoning speech (anyone can talk by phone) in favor of visual communication appropriate to the medium. There was a bizarre sense of theatre: people were moving in front of the screen and watching something at the same time, like being actors while watching a play with actors in it.

The third day, publicized by mass media coverage, was chaotic, an "over-democratized bedlam" as excited crowds anxiously pressed for their chance to gaze through the electronic hole to meet a returning gaze from across the continent. Feeling transparent and anonymous in the surrounding din, shouting to be heard, people witnessed each other's emotional displays in a situation similar to airport reunions but much more intimate and intense. The videotape documentation of the event is a stirring and powerful montage of reaching-out gestures, hysterical recognitions and touching expressions of emotion, as when a woman who hadn't seen her brother for fifteen years leaves the site of their electronic reunion with tears of joy streaming down her face.

The proposed LIGHT TRANSITION would address the theme of cultural continuity by

reintroducing into modern life a primal sense of natural rhythms, unity with celestial forces. A "satellite sundial", it enlists advanced technology to celebrate a cyclical poetry more familiar in ancient times. "A certain poetry of natural cycles has been lost to contemporary culture", Rabinowitz observes. "We stop and watch the sunset, we have a sense of the full moon, but we've lost the cycle of it. Instead of 'Meet you when the moon rises' it's 'See you after the news'. We've given over that environment cadence to our technology, especially television." So LIGHT TRANSITION becomes a guerilla strategy to speak to the circadian clock in all of us by invading the environmental timekeeper we're accustomed to -interleaving the money metric of television with a more spiritual horology that might revive a forgotten harmony with celestial dynamics. Rabinowitz imagines a global version: at summer solstice, live transmissions from ancient astronomical architectures around the world.

THE ARTISTS AS SYSTEMS INTEGRATOR

For Galloway and Rabinowitz the posture or stance of their interaction with industry is as important as the structures which result. The social role they play becomes an ethical issue. Most artists undertaking telecommunication projects have accepted the passive role of the client who purchases (or is donated) a preexisting package of services that ultimately determines the structural nature of the work. In contrast, Galloway and Rabinowitz approach each project as "systems integrator" who work innovatively at the edge of the art and must therefore actively interface a multiplicity of tools, services and institutions to realize the nonstandard goals of their enterprise. Here again they reflect a general sensibility in contemporary art concerned with integrating various social and technological systems as raw materials for art-making. But whereas the theme of systems integration is usually implicit in such work, it becomes an explicit foreground issue in Mobile Image projects. This is another sense in which their work is analogous to that of Christo: for with, the socioeconomic and political processes involved in realizing design goals are as much the art as the structures and environments which result. Like Christo, the people with whom they work are most often not artists but scientists, engineers, industrialists and public officials with whom they establish collaborative relationships rather than conventional vendor-client roles. And since their practice is as much research and development as -design, they frequently come up with strategies and solutions that are subsequently adopted by their industrial colleagues. The vendor-client relationship is reversed: Mobile image becomes creative consultant to the telecommunications industry.

CONVERSATION AND CREATIVITY

All Mobile Image environments except the proposed LIGHT TRANSITION are conversational networks: this is significant insofar as they address "the scale of creativity" because creativity and conversation are directly linked -indeed, conversation, as a generative process, is the prerequisite for all creativity. This becomes immediately obvious if we distinguish between conversation and communication. Derived from the Latin COMMUNARE, "a shared space", communication means interaction in a common context or domain of consensus which makes communication possible and determines the meaning of all that's said: the control of context is the control of meaning is the control of reality. To create new realities, therefore, we must create new contexts, new domains of consensus. That can't be done through communication. You can't step out of the context that defines communication by communicating; it will lead only to trivial permutations within the same consensus, repeatedly validating the same reality. Instead, we need a CREATIVE CONVERSATION (from the Latin "to turn around together") that might lead to new consensus and hence to new realities, but which is not itself a process of communication. I say something you don't understand and we begin turning around together: "Do you mean this or this?" "No, I mean thus and such ..." During this no trivial process we gradually approximate the possibility of communication, which will follow as a trivial necessary consequence once we've constructed

a new consensus and woven together in a new context. Communication, as a domain of stabilized, noncreative relations, can occur only after the creative (but noncommunicative) conversation that makes it possible: communication is always noncreative and creativity is always non-communicative. Conversation, the paradigm for all generative phenomena, the prerequisite for all creativity, requires a two-way channel of interaction. That doesn't guarantee creativity, but without it there will be no conversation at all, and creativity will be diminished accordingly. That's why the worst thing we can say about the mass media is that they can only communicate: at a time when creative conversations are essential on a massive scale for human dignity and survival, our society is dominated by a centralized, one-way, mass audience communication system that can only speak a world that is already understood to be the world, can only address problems already understood to be problems, can only furnish models of behavior that are compatible with the world as it is already perceived by most people most of the time.

AUTONOMOUS REALITY-COMMUNITIES

Conversations are closed generative processes through which we create the realities we talk about by talking about them and thereby constitute autonomous realitycommunities. The observer as autonomous individual is a myth:

there is only the observer-community or reality-community whose constituents can talk about things (like art, science, religion) because they create the things they talk about by talking about them. Every reality-community is autonomous, self-governing, self-organizing, self-constituting. And every autonomous system is organizationally closed: realized through recursive, reciprocal, circular relations that may be characterized as conversations. Indeed, communities are indistinguishable from the conversations that generate them.

Telecommunication makes possible communities independent of geography, but satellites and telephone wires are merely conduits that operate only in real time with no stored time, no memory; the "virtual communities" realized through them exist only during transmission with no archival or historical perpetuity – unless the transmission is continuous and pervasive like that of the mass media, they are politically insignificant. But when the computer is introduced as a component of a conversational network the power of social organizing is entered; a perpetual universe is created, independent of transmission, and a new class of political entity becomes possible -autonomous reality-communities that are historically continuous and environmentally pervasive, accessible through any computer terminal anywhere in the world. This is the profound significance of computer networks in general and of ELECTRONIC CAFE in particular.

ELECTRONIC CAFE

Like all Mobile Image projects, ELECTRONIC CAFE is a human-scaled environment that allows one to step through a window into some larger-scale simulation – the screen as portal into virtual space. This theme of humanizing technology by reconciling discontinuities of scale becomes directly political in ELECTRONIC CAFE which, like computer networks, is about the scale of community and of social organizing. Moreover, as a result of the microelectronics revolution, it should be possible within this decade for almost anyone to operate their own information utility as a cottage industry on a scale that is affordable today only at the corporate level. Therefore, ELECTRONIC CAFE is not a rhetorical gesture but a practical model for a truly alternative networking/ archiving environment that can be implemented at ever decreasing cost. The duration of the project – six weeks instead of six hours, with the potential of continuing indefinitely – is significant in this respect. It becomes possible to speak of the scale of influence. "In order to create on the same scale as we can destroy we must be able to organize at the same velocity as corporate culture and its interests", Rabinowitz points out. "If we fail to confront that issue we're saying we have no

power. It's a difficult leap of faith for people to imagine having power. That's politics. People have always affected power through Politics and politics has always been about scale."

Embracing the ethical and political responsibility implicit in their project, Galloway and Rabinowitz set out to create the most fully humanized, most accessible, least intimidating yet most powerful information environment they could design – one that was optimized to cultivate creative conversations and to support autonomous reality-communities. From the beginning, they saw the design of ELECTRONIC CAFE as metadesign – they would create a structure that allowed its users the greatest possible freedom to design and control their own information environments, to construct their own realities. Such a system would have to include as many modes of communication as possible to support the maximum richness, variety and texture of cultural expression; at the same time, it would have to facilitate the most natural and simple forms of human interaction, requiring of the user no special knowledge or skills; finally, it would have to operate as a "public utility" whose terminals were all in public places so that personal equipment would not be required and transactions could be anonymous – the information environment as commons rather than commodity, equally accessible to everyone.

The achievement of this heroic design goal is a TOUR-DE-FORCE of systems integration, combining state of the art technologies that have never before been integrated in a single network. A hybrid, multimedia telecommunications system including a user-created data base and image bank, ELECTRONIC CAFE is far richer in possible modes of expression and interaction than any communication system that has ever been available to the public. Incorporating fully interactive computer text, hand-writing, drawing, animation and slow-scan video, with the ability to interactively combine these elements, it leaps a decade ahead in the anticipated convergence of data and image networks. On one hand, the slow-scan video system (necessitated by the narrow bandwidth of telephone lines) allows still images of anything in the environment, including broadcast television, to be entered into the network. On the other hand, the French-made Telewriter, an instrument -so simple to use that, in Galloway's words, "it is beyond ergonomics", allows handwriting and drawing on paper with a ballpoint pen to be displayed electronically, alone or in combination with video images, or to create electronic animations. The central data base and image bank (employing a laser optical disk recorder for the first time in a public network) permit all textual and pictorial inputs to be stored and retrieved by anyone at any time. And the video printer at each location yields high quality hardcopy printouts of the contents of the image bank, including handwritten texts, drawings and video stills.

Having assembled the hardware for ELECTRONIC CAFE, the artists began searching for data base software that would reflect their philosophical objectives and satisfy the exacting criteria for maximum flexibility and accessibility of their network. The solution was found in software developed by Lee Felsenstein and his colleagues for Community Memory, an electronic bulletin board in Berkeley. Like most bulletin boards, the contents of Community Memory comes directly from the public. There is no staff mediating between vendors and clients. Each user has full interactive access to the database, including the ability to contribute to it on an equal basis. Anyone can create files, post messages, read other communications and add comments or suggestions at any time through public terminals located in libraries, grocery stores, coffee shops and community centers. There is no censorship and there are no private files, but a message or file can be altered only by its author. Community Memory is characterized by its creators as "a shared community filing cabinet to facilitate public management of public information ... a way for people with common interests to find each other ... a-tool for collective thinking, planning, organizing, fantasizing and decision-making."⁵ The incorporation of Community Memory into the larger context of ELECTRONIC CAFE is seen by Rabinowitz as a natural synthesis of compatible

philosophies, a case of "communities of consciousness working together" toward a common vision of life in electronic space.

The environmental design of ELECTRONIC CAFE as a public utility whose terminals are situated in the public "commons" of the neighborhood restaurant is significant for several reasons. On one hand it's a humanizing gesture that introduces into electronic space the universal symbol of the cafe where the food ritual provides a foundation for 'all manner of cultural conspiracies. Users "hang out in electronic space" as the Dadaists and Surrealists did in the Paris cafes of the 1920s. "Society moves at such a velocity that there isn't time for that romantic idea of the cafe", Galloway observes. "It gets left behind in favor of fast food restaurants. Electronic Cafe re-enters those ideas, not to be romantic about them but to reintroduce them as ideas which are still available, still viable at the current velocity. Electronic Cafe is that phenomenon at contemporary velocity."

At the same time, the bulletin boards that display printouts from the image bank at each location establish a continuity between the de-materialized environment of ELECTRONIC CAFE and the physical, aromatic, bustling environment of the real world. They serve as a bridge or pivot point between virtual and physical space. This has several consequences. On one hand, the bulletin boards function as panoramic landscapes or mural maps that confirm the topology of electronic space, furnishing empirical "ground truth" for its phantom existence. At the same time, they constitute profiles of community identity at each location, mirroring local culture through its reflection in the network. Finally, the assembled artifacts constitute an inventory of ideas and possibilities that provoke response, stimulate dialogue and seduce the curious through the electronic portal into virtual space. As a result, the physical apparatus of ELECTRONIC CAFE is experienced not as an appliance IN the environment like, say, a video game -but as an environment itself, a constitutive component of the restaurant's ambience and social gestalt.

But the strategy of locating the network's access terminals in public places has a more important political consequence: the assurance that any transaction can be completely anonymous. "At home there's a wire right up your consumer tract", Galloway remarks. "You're a valuable commodity, you're the product, just like they say. There's no way you can be an anonymous participant. Electronic Cafe is the equivalent of the phone booth where you can be anonymous, where nobody knows your name, or what your income is, or the size of your family, or how many game points you have. This is a fundamental issue of liberty in electronic space. Democracy is threatened if we can't participate anonymously in communities defined by telecommunication, not geography."

The theme of systems integration is raised to a particular imminence in ELECTRONIC CAFE, which represents the integration not only of hardware and software systems but most importantly of SOCIAL systems – members of the ethnic neighborhoods that ELECTRONIC CAFE was intended to connect, who collectively designed the common virtual environment they were to occupy. Community members including artists, educators, children, computer buffs, and host restaurateurs began meeting with Galloway and Rabinowitz seven months in advance to "seed" the network so it would open "in progress" with a loaded menu of ways in which people might participate. The meetings became community events at which a great deal of serious discussion occurred among people who had never contemplated these possibilities before, and the identity of ELECTRONIC CAFE gradually emerged. Initial strategies included topics of discussion, solicitation of solutions to common problems, exchanges of cultural icons and symbols, translation on wit and wisdom from one language to another, photo dramas, collaborative pictorial creations, and various games intrinsic to the visual and simultaneous drawing/writing components of the network. This participatory approach to the idea of "human design" is as much the point of ELECTRONIC CAFE as the network itself: for the first time in the history of electronic telecommunications, the identity of a large-scale,

state of the art network issues from the vernacular language of indigenous culture, not the commodity jargon of corporate capitalism – an environment created and controlled by those who populate it.

The visual component of this environment is by far its most compelling feature, of which there are several consequences. First, barriers of literacy and language are transcended. "It opens a door into ancient modes of communication", Galloway points out, "allowing people from different cultures to do the same thing they do when travelling: draw a picture of the toilet". Second, personality can be projected into electronic space with far greater resonance than is possible through alphanumeric transactions alone; yet, users may remain anonymous by creating iconic "agents" or "personality tokens" that represent them in virtual space, like electronic Coats of Arms, without revealing their identity. On one of its myriad levels, then, ELECTRONIC CAFE represents a synthesis of the video game and the information utility, and to this extent is a forerunner of the labyrinthine simulation games that have long been a theme in speculative fiction – those virtual landscapes of vivid chimera in which adversary and ally are human intelligences, not preprogrammed entities. This provides a context in which visual artists may design and use the system without transforming it into an art event. Their presence in the network enriches the vocabulary accessible to all users, so that a visual sophistication is quickly reached, but in an anonymous, organic way. As a result, users are exposed to refined aesthetic sensibilities in a direct, experiential manner – by being in the world in the same way. "It's a kind of spontaneous encounter that can't be engineered or marketed", Rabinowitz observes. "The anonymity removes the intimidating label of artist; the concept doesn't stand in the way and they get the pure stuff." Since every image that is generated in ELECTRONIC CAFE is stored in the image bank and can be printed out and displayed on the local bulletin boards, the network becomes a kind of art museum, an electronic gallery whose "public collection" is the result of creative conversations among many different reality-communities and histories of desire.

Art is a process of exploration and inquiry. Its subject is human potential for aesthetic perception. It asks, How can we be different? What is other? As everyone knows, traditional forms of posing those questions and seeking those answers are no longer adequate. We approach the millennium with a particular sense of our fallibility as a civilization, our mortality as a species, our responsibility as a generation – and, alas, the inadequacy of our culturally limited imaginations in the face of prodigious challenge. The triumph of Mobile Image's heroic enterprise is that it reconstitutes art through instruments appropriate to our circumstance, demonstrating the means by which we may indeed learn to create on the same scale as we can destroy.

NOTES

1. Eric Gidney, "The Artist's Use of Telecommunications: A review", LEONARDO, Vol. 16, No. 4, 1983. pp. 311–315
2. Gidney, p. 311.
3. Gidney, p. 312
4. All quotes are from interviews with the author.
5. See THE COMMUNITY MEMORY PROJECT brochure (August, 1982), or COMMUNITY MEMORY NEWS, a periodical, both published by The Community Memory Project, 916 Parker Street, Berkeley, Ca. 94710.

AUTHOR'S NOTE:

This essay was written in 1984 for a catalog documenting ELECTRONIC CAFE, a telecommunications project commissioned by the Los Angeles Museum of Contemporary Art for the 1984 Olympic Arts Festival in Los Angeles. The catalog was never published: the essay appears here for the first time in print. ELECTRONIC CAFE was a real-time, multimedia computer/video network and public image bank that interconnected five

different ethnic neighborhoods in Los Angeles for seven weeks during the Olympics in July and August of 1984. This essay was written several months earlier, so I could only discuss the intentions and philosophical approach of the artists, not the event itself, whose details and consequences were of course unpredictable. The actual experience of ELECTRONIC CAFE and its political and artistic implications are described in a book currently being written¹ by the artists, to which I have contributed a chapter.

Gene Youngblood