BUT IS IT ART?

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THE CREATORS OF THESE DIGITAL WORKS SAY THAT BEHIND THE GEE-WHIZ GADGETRY IS A NEW, INTERACTIVE ART FORM

By Karla Loring.

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Imagine heading up the Art Institute's grand staircase toward the Post-Impressionist galleries to look at George Seurat's masterpiece "A Sunday on La Grande Jatte--1884," its familiar pastel beauty painstakingly rendered with tens of thousands of pointillist dots.

Something, however, is different about it today. There appear to be fewer people in the park, and they seem to be in different places. As viewers walk back and forth in front of the painting, tiny embedded sensors track their movements and alter the pixilated image, changing the weather and time of day. The well-dressed woman in front holds up her umbrella as the sky darkens and a light rain begins to fall. A closer inspection reveals that the figures in the painting appear to be breathing and you can hear faint snippets of conversation as they run for cover. Suddenly, someone presses a button near the painting, makes a printout of the rainy scene and carries it off.

Could this be the future of art? It's possible: The tools to build such interactive displays are at hand, and a growing group of artists is using them. But so far these "digital artists" show no inclination to tinker with Seurat or other masters; they are busy making their own visions come to life. They walk viewers through waterfalls of light, surround them with digital sound, create sculptures that seem to breathe and probe the artistic limits of the Internet.

"People are already obsessed with and fascinated by new technology and gadgets, so as an artist you can use that medium to engage them in a deeper experience," says Chicago sculptor Sabrina Raaf, one of several local artists in the vanguard of digital art.

No one knows for sure how many digital artists are working in the United States or elsewhere, but people active in the close-knit digital art community estimate their numbers in the tens of thousands, while those involved in the traditional arts believe the number to be much lower, perhaps in the thousands. Cynthia Pannucci, founder and director of one of the first art and technology groups, Art and Science Collaborations Inc., says that no matter what the number, "the growth in the digital arts has been exponential, affecting artists working in every medium across the board."

The term digital art was coined in the early 1990s to describe a wide range of works that combine art with the technologies of the Internet, visual imaging, digital sound and electronics to engage viewers in a multi-sensory experience. Many digital artists believe that their interactive and "immersive" work is the future of art and that traditional art is losing touch with an audience that is increasingly technologyoriented.

Several recent books, including Arthur C. Danto's "After the End of Art" and Robert C. Morgan's "The End of the Art World," have established that there is a disconnect between the public and an increasingly esoteric and commodity-driven contemporary art world. To create art that reconnects with the audience, digital artists say, they no longer focus on the object so much as the experience that their works offer the viewer.

"Competing with more engaging and accessible forms of media such as film and television have left traditional images even more static and remote," says Raaf.

Of course, the purveyors of those traditional images do not agree that they are out of touch with the viewing public. Nor do some leaders in the art world share the view that digital artists are fundamentally changing the way art is created, exhibited and perceived.

"Digital art is simply a new tool that will share space alongside all the other traditional arts," says Robert Fitzpatrick, director of Chicago's Museum of Contemporary Art. He considers the technology of such art a potentially powerful, but still embryonic medium, likening it to the evolution of photography in the 10th Century. "Photography began by simply capturing a building or a person, and it took decades for artists to develop the medium as a brilliant, original art form," he says.

Though he believes that some digital art techniques, such as virtual reality, "have artistic potential, right now the technology is primarily being used for Sony PlayStations and things like that, artistically it has not reached a level of meaningful content yet."

But others believe digital art is already having a profound impact on artistic expression. "Over the past decade the world of contemporary art has experienced the beginnings of a tectonic shift," reads the catalog for "010101: Art in Technological Times," an exhibition opening this week at the San Francisco Museum of Modern Art. "Digital technology has arrived as a component of everyday life and contemporary art on a global scale. Artists are adopting new technologies in the studio, deploying them in the gallery, inhabiting them through the Internet, and making artwork that reflects our technology-saturated society in a stunning range of ways."

Whatever its ultimate significance proves to be, digital art is raising important questions about how art is defined and displayed. For example, where is the "original" work that produces a four-dimensional virtual-reality space? How can a work of art created for the Internet be preserved when browsers update so frequently? How can one buy and sell such work?

A few of the prominent digital artists working in Chicago discussed these issues and their role in developing this new art's potential.

DANIEL SANDIN

Hanging on the wall in Daniel Sandin's office is a prototype of the original Death Star, the forbidding Empire fortress that Federation rebels destroyed in "Star Wars," one of many films for which he created animated effects.

Sandin now works in an artistic universe far, far away from those early days of digital technology, creating art that the viewer not only sees, but also steps into and experiences. His culminating achievement in virtual reality, after 27 years at the Electronic Visualization Laboratory at the University of Illinois at Chicago, is his invention known as the CAVE (Cave Automatic Virtual Environment). Stepping into a CAVE creation by Sandin is a merging of the sublime and the sensual. At one point you emerge from gliding over the placid lakes of Door County to a three-dimensional waterfall created in light. You can actually place your hand into the waterfall in front of you, reflecting and dispersing the liquid light into your own patterns in the air.

Instead of the usual head-mounted displays, the CAVE is projection-based, requiring only special glasses for tracking. "In the work that I am doing now," he says, "there won't be a need for glasses or trackers, but you will still have to travel to the space."

That's the greatest problem with the CAVE: finding one. The nearest public exhibit is in Linz, Austria, in the Ars Electronica center. The only other one is farther still, in the InterCommunication Center in Tokyo. Realizing that most museums would balk at having to fund and install a million-dollar-plus structure, Sandin and his partner, Tom DeFanti, devised the ImmersaDesk--basically a one-screen portable counterpart to the CAVE, designed to be easily shipped and displayed with its own audiovisual system.

But the reception by mainstream art institutions has been underwhelming. "The art establishment in this country has been particularly slow to catch up with electronic art," Sandin laments. "I don't know why. The result is that the United States, which had been a dominant force in art since after World War II, is not likely to lead art into the 21st Century because they are not accepting and supporting the latest art

forms."

The MCA's Fitzpatrick strongly disagrees. "This is just narrow thinking. At the MCA we have other priorities, so we are letting museums such as the Walker Art Center and the San Francisco Museum of Modern Art commission this kind of work and go through the growing pains. We would not reject something along the lines of the CAVE out of hand, but the work has to go beyond the whiz-bang element to offer something of substance."

Though his work is not yet readily accessible to the public, Sandin is content to continue working on developing the next technology and devoting more time to his own art. "My love of nature and my love of mathematics is the same thing: I see patterns in nature and I see patterns in the visualization of mathematics. I am just happiest when I can put all of my being into what I do: my interests in technology, physics and mathematics, with my love of the natural world."

ELLEN SANDOR

Surrounded by some of the most talented young digital artists in the country, veteran Ellen Sandor creates her spectacular three-dimensional visualizations in the innovative (art)n Laboratory she first built in 1983 and recently moved to a quiet stretch of West Jackson Boulevard.

Sandor's images, called PHSColograms, look like a blend of holography and virtual reality, extending into the space of a room and changing appearance as a viewer moves around them. As a major collector of fine photography, Sandor thinks of the PHSCologram "as a hard copy of virtual reality," much as a photograph is a hard copy of visual reality.

The laboratory is a cross between a warehouse and an artist's loft, packed with scientific equipment. The gallery glows with three-dimensional light forms: enormous viruses, virtual film-still portraits, images from NASA and a special series on the Holocaust for New York's Museum of Jewish Heritage. The team is just completing an enormous "Battle of Midway" project, commissioned by the City of Chicago and the Department of Aviation, for the new terminal at Midway Airport.

Sandor has been creating these virtual realities in Chicago since the early 1980s when she co-created the first large-scale immersive environment called "PHSCologram '83." Installed in an office building lobby on Wacker Drive, the show was a sensation to those who understood the technology, and Sandor believes it even had a domino effect on the burgeoning computer industry. "[It] led to NSCA's [National Center for Supercomputing Applications at the University of Illinois] interest in real-time virtual-reality technology. This, in turn, inspired the early browser Mosaic in Champaign-Urbana and from there, the development of the more popular browser Netscape. But essentially, it all started here." Sandor's devotion to scientific visualization technology makes her one of the few artists who work successfully outside the mainstream art world. She tries to "create pure scientific visualization, yet transcend the image from an object to an artistic icon. Scientists are the rock stars of the future."

Sandor thinks of her PHSColograms as fine art, and she regularly collaborates with other artists, including Chicago's Ed Paschke and Karl Wirsum, to create pieces that have sold well. "There are many advantages to collaboration," Sandor says, "Everyone brings his or her expertise to the table so you can learn from one another, and everyone walks away richer for the experience. It also allows you to do something on the level that it should be done, and can minimize costs."

Along with collaboration, Sandor and (art)n have pursued another goal central to digital art: preservation. Much of the lab's work has become difficult to see or replicate without a type of processing that is no longer being done, so Sandor acts as her own curator of the early development of this art form, keeping boxes filled with documentation in her office.

"There may not be much attention being paid to the beginnings of digital art and virtual-reality technology now, but when the time comes and the rest of the world catches up, we will be ready."

As one of the women who have basically "invented the game," Sandor knows that there is a long road ahead but is confident that her work can aesthetically hold its own. "There have been written references about Chicago's art and music scene in relation to adolescence. But just wait and watch as we mature with virtual reality into adulthood--both technically and aesthetically."

SABRINA RAAF

Sitting with Raaf in her open artist's loft, a visitor senses the intimate presence of an assemblage of circular wall sculptures that gently glow and recede like human breathing. The random, pulsing rhythm of "Breath I: Pleasure" (2000) makes it feel as if another person is in the room, someone quiet and relaxed.

How does a collection of wires and circuits become a sculpture that seems so alive?

"My works feel like children," Raaf says. "When you flip the switch, the work comes to life and becomes its own being, not just a piece of paper or canvas. It senses the world and responds to it, much like an artificial life form."

Having spent years learning the new tools of the digital artist's trade--mechanics, programming, engineering and biological processes--Raaf believes that "the relationship between art and technology is natural and symbiotic, and that by synthesizing and cross-pollinating the two, the result is a much richer

life form."

Like many digital artists, Raaf sees any division between artists and scientists as artificial. "We are all seeking a meaningful solution to a problem. Each side just has a different way of expressing the results. However, the contemporary digital artist faces an enormous learning curve in developing the technological skills necessary to carry out these experimental visions."

For "Breath Cultures" (1998) she worked with a microbiologist in Cleveland when she wanted to learn more about how to create cultures taken from people's breath in petri dishes. After Raaf photographed segments of the blossoming cultures under a microscope, she enlarged them and framed them in circular molds.

As opposed to the more traditional arts, which she believes can be overly conceptual and elitist, Raaf sees digital art as a great equalizer. "People relate to it on a fundamental level. There is an immediate connection, so they tend to interact with it longer."

Trevor Martin, managing director at the Betty Rymer Gallery, remembers the exceptional attendance numbers--4,300 visitors, compared with the usual 3,300 to 3,600--for last year's art and technology show "in::FORMATION," which featured the work of Raaf and others. "That show brought in our peak attendance numbers for the year, which was especially remarkable considering it opened during the middle of a Chicago winter."

Raaf is not surprised at the reluctance of museums to embrace new technologies. "It has been a typical reaction by art institutions to reject work produced by any new mechanical elements. Take photography: With the rise of digital imaging as the new kid on the block, it's suddenly elevated the silver gelatin print to the realm of fine art. Museums will have to change to accept the art being made today."

But Raaf is not idly waiting for mainstream acceptance. As a professor and curator, she has organized a group called sine::apsis, a collective of Chicago electronic artists who meet to share ideas and collaborate on projects.

SHAWN DECKER

The best place to experience one of Shawn Decker's sound installations is inside the center of the work. These digital sound "compositions" are meant to immerse the visitor in environments that act like mini-ecosystems.

It is this relationship between nature and the machine that often occupies Decker. He endlessly experiments with how our brains perceive and process sound through electronically programmed sculptures and installations. Using a repertoire of what he calls "found sound" objects, he takes viewers through rooms filled with motors hanging inside buckets of water, wires scraping against rusting steel plates, or metal paint stirrers that make an irregular clicking sound as they rotate. The motors are programmed to network and respond to the activity of their neighbors. So when one of them is triggered, it triggers more activity in response. "The piece is essentially listening to itself," Decker says. "And this behavior very much parallels nature."

In "Scratch Studies," recently shown at the Block Gallery at Northwestern University, Decker did the initial programming of the pieces but left the rest up to the random patterns of sound that self-generate during a cycle of activity. The devices either exactly imitate, simplify or elaborate on the patterns of one another.

One problem Decker runs into is that his installations are often too difficult for others to recreate, requiring precise placement of the pieces. Another quandary is how to sell a room full of programmed instruments that generate sound.

Decker isn't as concerned with selling his art right now; he just wants to get it shown. But the places that are most eager to show his work are not in Chicago, or even the rest of the country.

"Most of my work is exhibited overseas, especially in northern Europe, where my work has been very popular and well-received. Part of the reason for this may be because they have more extensive public funding. Here, we have a commodity-dominated gallery system, and my work is not really perceived as easy to sell at this stage of the game, so I go where there is more interest."

Decker's international reputation was solidified when he chaired the prestigious Inter-Society for the Electronic Arts conference in 1997 in Chicago, an event that he says established the city as an important venue for digital art. "In the past, San Francisco and New York got a head start in terms of media and technology-based work, but Chicago is now a center, with an important scene that is really beginning to emerge."

ANDREA POLLI

Andrea Polli is a digital pioneer in an art form that is taking performance to a new level--the streaming Webcast.

"Right now, the state of Webcast technology is similar to television in the 1940s," she says. "You try not to move very much on the screen and not do many fast cuts because that is going to slow down the stream. It will be something that really develops in the future. But in exactly what ways are still to be determined."

Despite the drawbacks, Polli is doing something that television has not been able to: bring the audience into the work. Last year, Polli was invited by New York City's famed performance space, Franklin Furnace, to take part in "The Future of the Present" Webcast project. Because Franklin Furnace was interested in having only a virtual audience, "I had to come to terms with only having an audience of people at home on-line looking at it. One way I dealt with it was to go and get a physical audience. The other was to think about audience feedback, so I developed a series of visualizations of the audience, whom we were able to monitor when they logged on."

After gathering data on the audience, such as where and when they logged on and what kind of machine they used, Polli assembled it into her visualizations. "In one case it looked like we were reconstructing the map of the world based on the people who were logging on. In another case, it seemed more like a biological organism with organic shapes that were color-coded. The audience actually became part of the work."

But digital art on the Web raises questions about the nature of on-line performance: If the performance does not take place in a traditional "live" venue, how does the audience know it really was live? And does it matter?

To Polli it does. "There is a lack of energy between physical interaction and mediated interaction. If I am in the middle of a performance, someone from the audience could decide to run up and slap me in the face. That potentiality, that energy that anything could happen, gives excitement to the physical performance space.

"I also think that there is a level of non-verbal communication and a subtlety with face-to-face communication that does not happen through any sort of mediated communication system."

But for some, just the ability to communicate at all can be enhanced through digital media. After collaborating with a disabled Lithuanian artist who used a wheelchair, Polli started to experiment with how to use computer interfaces to help people with disabilities communicate. "The first performance piece I did was with an eye-tracking device I developed where the camera was attached to my head and I was attempting to speak a sentence."

After that experiment, Polli began to see her eyetracking device more as a musical instrument, and spent the next four years exploring how to play and compose for it.

"Digital media has encouraged an expansive mindset, like creating a system rather than creating an object," she says. "If you have a collaborative mindset, you have to work with other people to activate the systems. It is more than just practical matters of, 'You know this software and I know that one.' Working with digital media forces you to think expansively in a lot of circumstances."

But for Fitzpatrick, "Looking at art on the Web is not a long-term satisfying experience. It exists for a moment and then is over. Its limited duration creates a very temporal experience, not anything like looking at an object."

Despite the difficulties of working on-line, including the problems of perpetuity and how to sell an on-line work, Polli has no regrets about using the Web as an artistic medium. "Information, like the Internet, should be free. Hoarding or hiding your ideas because you think there is going to be this big payoff is really limiting. It is better to get the ideas out there."

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