

GLDCE STAFF PHOTO / JOHN ELLIMACH

HIGH TECH Fascinated by how quickly technology is developed and discarded, MassArt student Ben Thompson turned obsolete computers into cyberbirds.

Digital art takes wing

From flying computers to virtual fountains, cyberpioneers unleash a cascade of creativity

By CATE MCQUAID

I'M FLYING. I tilt-a-whirl, heart in my throat, through red rings, vaporous like the rings of Saturn, setting off chimes and rustles. The atmosphere around me mists with green and mauve. A land mass below sits at the edge of the world. I flip backward and troll toward a hovering spiral, eager to see what sound it will emit as I fly through it.

I'm in a virtual reality designed by visual artist **Deborah Cornell** and **Richard Cornell**, her sound-artist husband. It's just one of the stops in "Spirited Ruins," an artist-designed virtual environment at Boston University's Department of Information Technology. I stand in front of

a large, 5-by-4-foot screen called an Immersadesk, and I'm outfitted with 3-D goggles and a joystick.

"Spirited Ruins" is one of countless computer-based and computer-generated art projects firing up these days around Boston, putting the city on the

map as a magnet for cyber-art.

Exhibitions featuring computer-generated art are nearly as common in local galleries and museums as are shows of paintings.

Cyber-galleries display art in a variety of forms: images, text, video, 3-D, and live performance (see accompanying schedule on page 14).

"When it comes to painting and sculpture, Boston has always had a poor cousin relationship with New York," said **Dana Mosor**, a computer artist and professor at Massachusetts College of Art. "But when it comes to electronic media, it's the inverse. People come

from New York to visit the MIT Media Lab."

George Fife, founder of the Boston Cyberarts Festival, a biennial celebration taking place next year, concurs.

"Boston is one of the centers of the world for this kind of art, for two reasons. This is a great town to be an artist in, and this is where the technology is. There are companies inventing new media for artists to explore," says Fife, a bearded, avuncular fellow who earlier this year co-produced "The Electronic Canvas," a half-hour special on WGBH about computer art.

One of the companies Fife refers to is ZCorp, which takes the specifications of a 3-D object and creates it. For her installation "Recoil," now up at the DeCordova, video artist **Denise Marika** had her body scanned in 3-D. ZCorp replicated the image in cellulose.

The 3-D "print," an 8-inch reproduction of Marika's body, formed in a box of the white cellulose powder. The information from the scan causes a fixative injected into the box to take a particular shape—in this case, that of Marika's body. When it was done, Marika reached into the powder and pulls out the model of herself, much like one would reach into sand for a buried stone.

She has some models in the basement studio of her Brookline home. They're chalk-white and break easily, but the detail is remarkable: You can see the tendons on the back of the model's hand.

"Recoil," a video projected into a metal basin, shows Marika nude, crouched in a fetal position to protect herself as she is pelted with mini-Marikas. She's trapped in the cold vessel, without even a stitch of clothing to shield her.

Marika turned technology into a tool to explore psychological issues—in this case, the constant assault on human vulnerability. The new medium adds a bonus theme: What does it mean to be processed by technology? Here, you end up being attacked by what you have spawned.

"We're all affected and processed by the technology," Marika said. "We're using it, we think we're using it, but it affects the way we think and the way we interact. So I put my body in that trajectory, gave myself up to it, have my body spit back out, and then have it thrown at me."

Michael Wenyon and **Susan Gamble** are better known as holographic artists, but their show at the MIT Museum, "Observing the Observers," turns the tools of science on the scientists. Their subjects were the astronomers at MIT's Haystack Observatory, who use digital equipment to scan the sky. Wenyon and Gamble used similar techniques to capture images of the scientists and their work spaces. The artists then used a software program to combine the images, creating panoramic and ringlike displays. Their presentation mimics the cool, impersonal process of a scientist scrutinizing an object, but in this



HOME-GROWN Deb Todd Wheeler started with acorns gathered outside her home and ended up with "space-age" sculpture.

case the object is the scientist.

Many artists who work in these new media take the sociological implications of the Internet as their theme. **Sarah Smiley**, whose "Virtual Beret Project" can be seen at Mobius through Saturday, is intrigued by "the social part of the Internet."

Since 1994, Smiley has been inviting her fellow travelers in cyberspace to invent artists, describe their portfolios, and describe their berets, the stereotypical symbol for an artist. Her goal is to find out how people perceive artists.

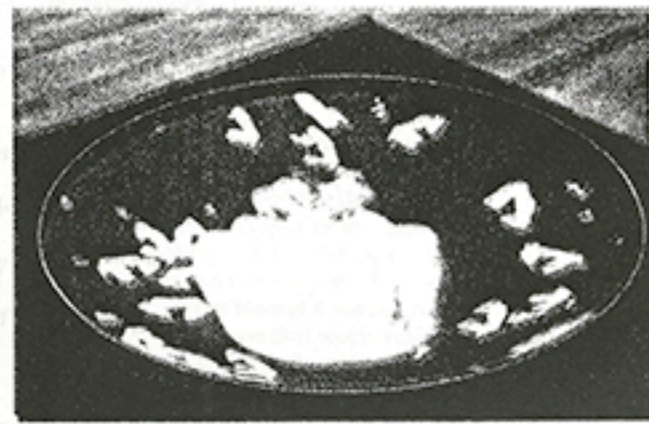
Initially, her contributors just wrote about their virtual artists. Over time, they started submitting images, both of the art and the imaginary artist. Some contributors have even written CVs and curated exhibitions—all in cyberspace.

One participant described his artist as "a dark haired bearded man, of unknown age" who "works exclusively with bananas as his medium creating ephemeral sculptures of great beauty and yellowness." The artist's beret: why, a banana, of course.

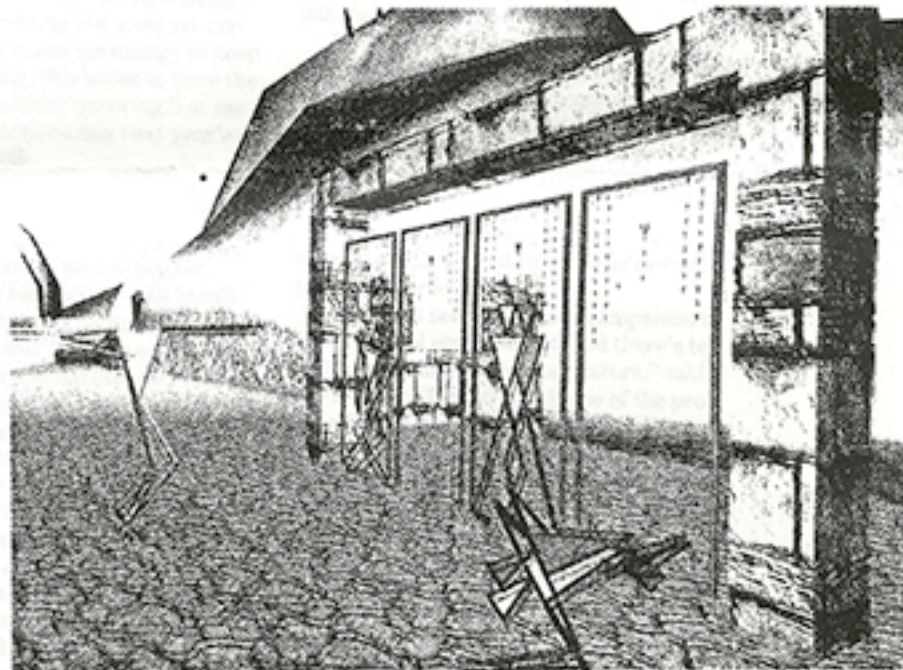
"It was as if the artist was another part of who they could be," Smiley said. "And I learned what people thought about art and creativity."

Like Smiley, **Carmin Karasic** has found a virtual community on the Internet. Karasic considers herself an art activist. She's part of a group called Electronic Disturbance Theater, which encourages civil disobedience in cyberspace. The group has organized virtual sit-ins, during which thousands of protesters log on to one Web site at a set time. They consider the sit-ins, like a recent one in support of the rebellion in the Mexican region of Chiapas, a form of performance.

Karasic also makes her own Web-based and digital art. She's developing a Web site that uses animations to examine lust, power, and violence from her vantage point as an African-American woman and



"RECOIL" Denise Marika had her body scanned to create a model (top), which is pelted by mini-Marikas (below).



WALK-THROUGH ART: Visitors can walk and fly through "Spirited Ruins," a virtual environment designed by artists and programmers at Boston University.

from that of her art partner, **Rolf van Gelder**, a Dutch white man. Their art will be on view at the Artists Foundation Gallery in June. After the show, she'll submit the work to the International Symposium of Electronic Art, a decades-old biennial event.

Karasic also curates a virtual art gallery, less austere and more interactive than the kind with stark, white walls. The Boston Cyberarts Web site, www.boston-cyberarts.org, features a gallery with work designed especially for the Web, like the Bali Highway, which takes the cyber-entourer into the dusty halls of the mythical Boston Museum of Natural History.

It's one of countless online galleries,

with links to individual art Web sites. "You can find all different kinds of art on the Web," said Karasic. "It can be time-based, political, personal." Many museums are now setting up Web sites that don't only archive their actual art, but link to cyber-art.

Ben Thompson examines the speed with which we develop and then discard new technology. Thompson, a student of Dana Moser's at MassArt whose thesis show will be up next month, has taken the husks of old computers, broken them open, and animated them into bird-like creatures.

"They'll have mechanical components that make them flap their wings and fly in

CYBER SOUNDS

Computers get rhythm
— welcome to the world of
electronic music. Page 15

formation," he said.

Thompson has learned how to run a microprocessor and design software, but he also works at the duller edge of technology: He loves using the obsolete hardware.

"Artists have never [before] had the availability of as much technology as there is out there now, and the high-end, graphic-oriented and cutting-edge fields generate lower-end trash that works fine for what I do," Thompson said.

For any art to be good, it must have conceptual grounding and not rely on the bells and whistles of new technology - what Marika calls "the wow factor." That's why **Jennifer Hall**, who for 15 years has run Do While Studio, a nonprofit agency that gives young cyber-artists a chance to spread their wings, doesn't like to talk about the hottest new technology.

"The cutting edge is not the most interesting place," Hall said.

"A new technology is made by an engineer in a vacuum, and he expects culture to fill the void. An artist grows technology from the culture. The newest evolution of things are slippery animals," Hall said. "If you're at the edge, you don't know if your work will survive the shifts of a changing culture."

Hall is working on a project of her own, programming robots to tend a garden of pea plants. "The peas generate power through their growth to run the robots," she explains, admitting she's not yet certain that peas have enough energy to keep a robot functioning. She hopes to have the garden up and running (growing?) at the DeCordova Museum during next year's Cyberarts Festival.

Traditionalists may resist the computer's mark on artwork. Even a vivid piece designed on a computer and reproduced on the artist's darling, an Iris printer, doesn't show the handiwork - the brushstrokes, the printmaker's impressions - that a computer-free artist boasts about.

Then again, traditionalists decried printmaking when it first came on the scene, and photography after that.

"It's a recapitulation of what has happened to other artists," explains the Cyberart Festival's Fifield. "But look at what you get on the computer: You find this virtual synesthesia. All media become one. You can print out a 3-D representation of a sound file, you can make a video out of 3-D objects. For the first time, sculptors have something as mundane and exciting to work with as 'Save As' and 'Undo.'"

The convenience of the new technology isn't lost on **Deb Todd Wheeler**, a new mother who found she couldn't spend as much time in the studio.

"I turned to the computer," Wheeler said. The resulting project, on view next month in a MassArt faculty show at the Federal Reserve Bank gallery, is "all about the computer, and working at home, making something virtual and having the UPS truck deliver it to your door."

Instead of making the trek from her home in West Roxbury to her South Boston studio, Wheeler sat down with some graphics software. She made a digital drawing of an acorn in three dimensions, then "unfolded" it onscreen as if the image was a piece of origami she was deconstructing. The computer-generated acorn patterns were sent to a metal shop, etched in copper, and folded up.

"They're supposed to be acorns, but they look like spaceships. I try to work always with nature - I got the acorns from the oak tree outside my front door. But for me this is the beginning of something new, fun, and space-age," Wheeler said.

Deborah Cornell's contribution to the "Spirited Ruins" space-age virtual environment at BU started out in life as a painting she made. She photographed the painting, scanned the slides, and then digitally manipulated what had been a flat surface into an airy, haunting 3-D space. A visitor to the space, then, is literally (or virtually) inside a painting.

"I used the same sort of critical judgment as I would in painting or printmaking," Cornell said. "What's different is the mechanics and the pace."

Ben Thompson and Dana Moser also designed parts of "Spirited Ruins." Their project involved networking the virtual environment to real sculptures in a gallery in another building. If, for instance, you were in the gallery and approached a fountain designed by artist **Harriet Brisson**, you would set off a sensor that would cause the water in the fountain to flow. At the same time, the water in the virtual fountain connected to the real fountain would also start to flow. The same works in reverse: approach the fountain in the virtual world, and the water in the gallery blocks away will start running.

The folks at BU who devised "Spirited Ruins," the Scientific Computing and Visualization Group, have also connected the environment to computers as far afield as Taiwan. Enter the virtual reality, and you'll see yourself represented by the tip of your joystick. Look around, and you might find someone else already there, in the form of a little blue alien, and the two of you can interact.

"You can see where your companion is in the virtual environment, and there's telephony to talk to other navigators," said BU's Laura Giannitrapani, one of the program's designers. "Unfortunately, there are only a few institutions around the world that have the high-speed network and also have Immersadesks."

What Cornell likes about "Spirited Ruins" is that "people don't go into it with an art expectation," so they don't have to work their way through preconceptions about how to look at art and what art means, the way they might when they walk into a museum. Here, you just dive in, and it's fun, and you may or may not know that you're surfing around the virtual insides of a painting.

That removes the onus of artiness from the experience, and opens up the virtual world, and the World Wide Web, to artists and viewers alike. The wall between viewer and artist collapses; the mediator of art dealer, curator, and critic is circumvented. A huge door has been flung open, and new art, new ideas, and new viewers are rushing in like whitewater.

It's as wild a ride as a virtual flight through the "Spirited Ruins."

When you step back into reality, you may find yourself dizzy or even queasy from the experience. But you won't be sorry you got your feet wet.

Cate McQuaid is a freelance writer who covers art galleries for the Globe.