

## 3D3K

● I slide my finger down the groove on the small, black, obelisk-shaped device, and the interface nodes from my temples and right hand disappear inside, the case once again becoming as smooth and hard as obsidian. My eyes reorient to the sunlight, and I look out

across the park. Ah, the island of San Francisco, one of the few real places I would ever want to be. Much of the world had become ugly and dilapidated because no one seemed to care much about the real world anymore. At least San Francisco, a bastion of high-tech for more than a thousand years, had been rebuilt with more splendor than ever before after The Big Kahuna, a nine-point-something earthquake that leveled the entire city in the late 2300s.

Most of my colleagues thought I was nuts to work outside, surrounded by actual trees, sitting on real grass, and breathing real air. I could have any type of office in any environment I wanted. I could build it myself, buy a pre-fab space from companies like Subject2Vue, or pick from literally thousands of free modules on the network. I could work on the top of the Eiffel Tower if I wanted, but there was only one problem for me—it wasn't real.

I'm a 3D Intellispace designer—and one of the finest around, if I do say so myself—at NeuroSpace Inc., one of the oldest and most respected creationist companies. (Their slogan is: "God is in the details, and we'll find him one day.") The entire earth is linked, everyone has free access, and computers are mostly disposable—you can grow new ones from simple sand as needed. Most people understand that the worlds they inhabit on the GaiaNet network are fabrications, but they're so real, so tactile, they suspend all disbelief. Some actually lose their minds in the artificial reality of the network, never to return.

That's my life, designing worlds that don't exist. I use a top-of-the-line 80THz CommDell neural tracer, an AI spatial and relational 4D database, and corneal 3D mesh generator implants to create my 3D worlds. Coders link it all up to GrayMatter™ data-mining servers at the core of GaiaNet. These units correlate human sensory needs

with the information being processed, simple by today's standards.

Technology to read and write neural impulses directly into the human brain has been available for centuries. Technology hadn't changed much since the early 2400s—quantum computing and artificial intelligence gave rise to machines capable of not only independent thought, but of self-replication. Only recently have we understood the intricacies of computers not invented by human beings.

The tricky part of augmented reality, though, had been figured out less than a hundred years ago: the ability to control nerve impulses the brain relays to the physical host body. After that problem had been solved, people disappeared into their altered existence by the billions, and the world became a much quieter place. At least this world; we lost contact with the outer colonies centuries ago. That alone has been the subject of many GaiaNet sims I have encountered in my travels.

The next step in this global immersion is something I am furiously working on: imagined reality transmuted into the virtual world. I've spent the last five years looking out through the eyes of others, piggybacking their neural traces, seeing what they saw, not what I thought they did. The experiences shared one quality: they were completely unique. The challenge: to turn those subjective, imagined visions into a tangible virtual experience. I had asked, What if the traces of neural data that allowed one to see into their imagined worlds could be recorded, processed, made three-dimensional, and projected directly into the mind of another? Once the issue of keeping the computers in sync with the brain were worked out (which was not easy, painless, or physically safe for some unwitting volunteers), we were ready to share minds, ideas, and thoughts on levels previously

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unexperienced. True harmony with everyone on the planet—that's the idea.

My job is to translate these visually warped two-dimensional images into fully realized 3D forms, ones that would be indistinguishable from reality unless dictated otherwise. I've spent years teaching the network about form, shape, and vision, tweaking thousands of datasets to build an intelligent engine capable of re-creating everything from fractal patterns of life to imaginary fantasy creatures. The coders would have to figure out the interface side. I help GaiaNet process and serve that 3D data out to others connected to the global whole.

We turn on Gaia's Ghost, as we call it internally, in exactly 71 days, at 11:59 AM., year 2999. I'm a bit concerned about my work and its implications for all of humanity, but I must go on. Perhaps I, more than anyone else, desire to see what's inside others' minds. I need to experience the unknown. Only time will tell, but I believe we are reaching a turning point, a place where I will help shape a future in which all of humanity benefits. Where people understand themselves and others on such a fundamental level that we can all share a collective consciousness and expand our minds beyond the confines of our own perceptions.

As we turn the page to a new millennium and seemingly unlimited possibilities, I find myself once again in the park, but not truly outside. This will be my office for the rest of the day, realizing as I look around that it isn't real. Or is it? Does it matter? That question will have to await analysis. I have tons of work left to do, and these 80THz neural computers are still too damn slow. ●

**Chris Tome is technical editor for 3D magazine and would like to thank Asimov, Clarke, Adams, and Gibson for many hours of fine reading. Tap into GaiaNet and email him at ctome@mfi.com.**

# Dark Day by the Bay

▲ The day was Tuesday, December 8, 1998, at 8:15 a.m. I was sitting in my house getting ready to go to work when all of a sudden, everything went dark. With an ominous buzz, all of the machines in my living room—my PCs, PowerMac, TV, and stereo—gasped

their last breaths of electric life and went down in a glorious rebellion of silence. At first I thought it was just a localized power outage, but I soon realized as I walked outside to catch the MUNI bus for work that the problem was far more widespread than I had thought. Far more.

Somewhere in the San Mateo area (20 minutes or so south of San Francisco), a couple of Pacific Gas & Electric workers (PG&E is the West Coast's major power supplier) had been doing some maintenance on the lines and forgot to remove some large grounding cables that were protecting them while they worked before they turned the juice back on. Like a chain reaction, the massive surge blew out power grids up and down the peninsula, leaving almost a million people without electricity. The public transportation system was in chaos, with electric buses and street cars blocking the way of the few diesel buses in operation. Traffic lights across the city were down, and there weren't enough police and emergency crews to help, which caused major gridlock all over the city. The Bay Bridge, a major entrance point to San Francisco, was a parking lot.

Many people chose to stay home that day, which is something I probably should have done. Being a model employee, however (ha!), I chose to tough it out and get in to work any way I could. After almost an hour and a half and a \$12 cab ride later, I finally made it down to the financial district on Market Street where our offices are

located. To my surprise, all the lights in our building were on! It seems that the building *3D Design* calls home, one of the larger structures in San Francisco, is one of only a few buildings that has back-up generators. This didn't mean we were in the clear, though. Our network servers—through which we access and transfer most data relating to the magazine—are located in the main offices at our parent company (Miller Freeman Inc.) several blocks away, in a building with no back-up generators.

Let's just say that nobody got much of anything done that day. People wandered around with glazed eyes, suffering from e-mail withdrawal. No amount of pleading, cursing, or crying would help. I personally tried to remember what life was like before e-mail, but being horrible at sending old-fashioned mail, my psyche just wouldn't permit it.

For many Bay Area residents, the power outage lasted more than six hours. In the electronic age, where documents are stored on servers, and where without power our very livelihoods are disrupted, this can be a devastating event—something we should all be prepared to face, whatever the cause. Without our network, we couldn't access or edit articles, we had no e-mail for most of the day, and even our voice mail system was affected, not allowing us to pick up or send messages. There's nothing like a lack of power in the information age to bring things to a grinding halt.

Many doom and gloom types pointed to the outage as a preview of what is to come

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when the Y2K bug hits. Some even spread the rumor early on that it was a Y2K test scenario that started the whole mess. Others called for the heads of the PG&E workers. Most people, however, were calm, and the chaos was kept to a minimum.

So what's the point, you ask? Who knows what the future holds, and how technology might be affected? What if an asteroid passes too close to Earth one day and the electromagnetic waves take out our power stations for days, even weeks? In addition to encouraging our building owners or managers to implement back-up power systems, as digital artists we should learn to keep and maintain current back-ups at all times, have uninterruptible power supplies for emergency situations, and make sure to have hard copies of all pertinent materials.

Without the juice to run the machines we use to empower our creativity, we'll all have to use our brains and be more creative in the solutions we come up with. Try going without power for a few days. Pick up a pencil and sketchbook, some modeling clay, or some oil paints. After all, the only computer we can constantly rely on without being a slave to a utility company is right between our ears. And there's nothing like a day-long blackout to help us remember that. ●

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