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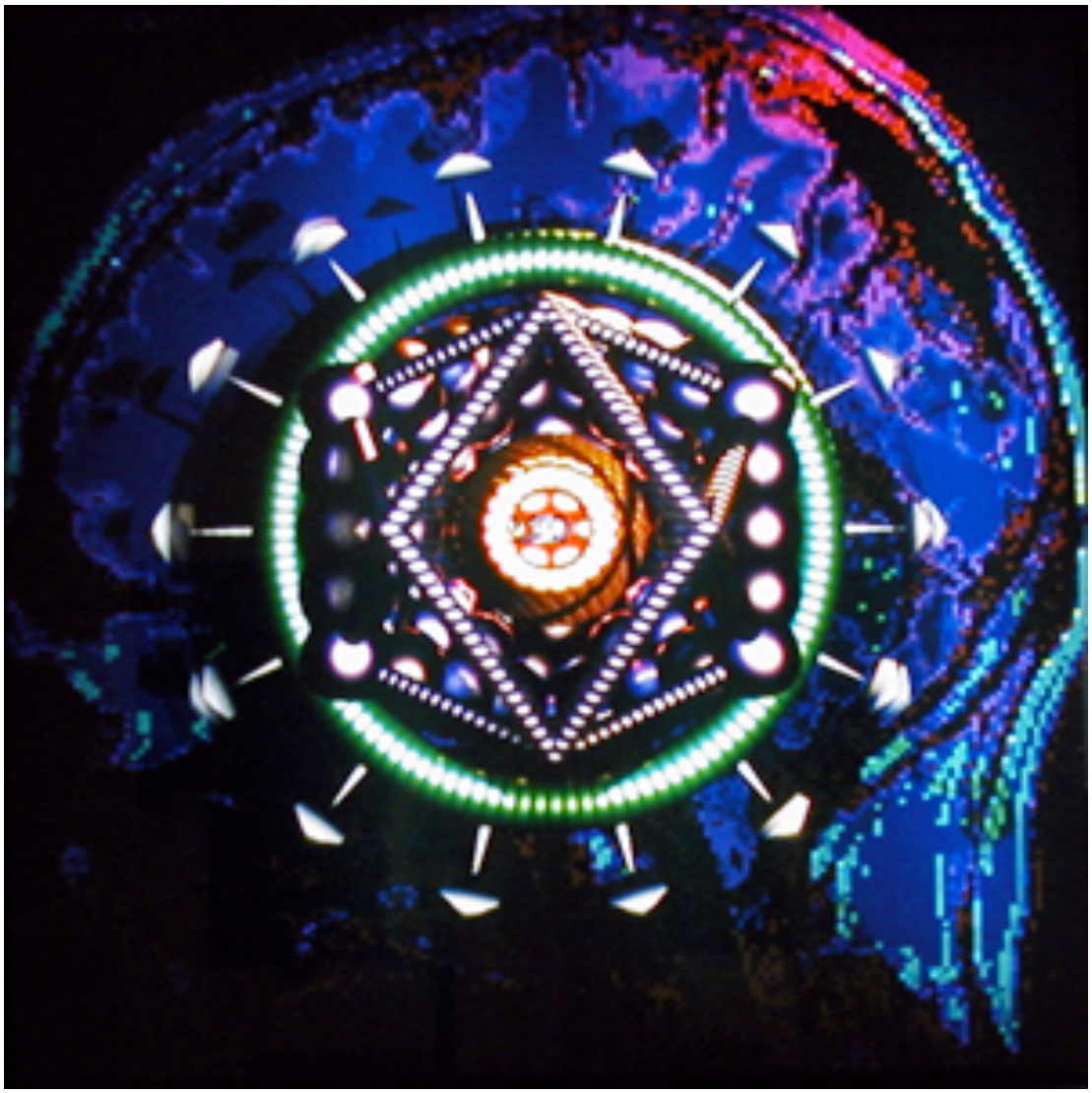


Courtesy of Ellen Sandor/(art)n
Ellen Sandor's 1989 3D virtual visualization of the AIDS virus embareked (art)n Laboratory on a pioneering exploration of scientific imaging.

Life - now in exciting 3D!

***by* JESSICA KRINKE**
Aug 27, 2010

Chicago artist Ellen Sandor has been bending the dimensions of visual art since the 1980s, creating scientific visualizations of everything from fractal math to viruses.

Driven originally by what she describes as “a healthy appetite for kitsch,” Sandor was fascinated by turn-of-the-century novelties such as lenticular postcards and stereoscopic films. She set out to develop ways to include similar alternative effects in her work.

Sandor, a pioneer the fields of digital art and virtual reality, founded and runs (art)n Laboratory, Inc., a Chicago-based collaboration of artists and scientists who produce original pieces of digital and three-dimensional art. They re-imagine deconstructed versions of

famous architecture and produce in-depth anatomical models for the sciences and medical fields.

The gallery in the West Loop fills a dark, cavernous room where walls are filled with glittering, back-lit works of art that leap out from their frames. The astonishing effect is achieved without the need for glasses. Sophisticated software prints out an image from 64 slightly different perspectives that fuse and dance to life when displayed behind a special barrier screen.

These are PHSCologrames, works that cross the boundaries between photography, holography, sculpture and computer graphics.

Her art hit a milestone during the explosion of the AIDS epidemic. “So many of our friends were dying, it was really scary.” Sandor was inspired to create a piece featuring a rendering of the virus cell itself. “It was amazing that we were able to take something so horrible and actually turn it into something quite beautiful,” says Sandor. Beautiful and, according to scientists who saw it, incredibly accurate.

Sandor and her group have also visualized the polio virus, DNA and, most recently, the human brain. In a commission for The Son-Rise Program at the Autism Treatment Center of America, (art)n mapped the brain of a man cured of autism. Sandor used several scans of his brain taken while performing certain activities, each firing neuron paths captured as light on film.

The result is a three-dimensional, transparent brain filled with colorful clusters as if everything were active at once. The model of Kaufman’s brain should serve as not only a beautiful artistic representation of the work done at the center, but also a valuable tool for the study of the brain.

Medicine’s love of 3D technology doesn’t stop there. Northwestern Memorial Hospital is among the first academic medical centers to implement 3D surgical technology in one of its neurological suites.

Surgeons can now watch what they’re doing on large screens in front of them that magnifies the surgical field with imaging from TrueVision Systems, Inc., a company based in California. In addiiton to aiding surgeons, the system allows the hospital to record procedures for the purpose of “presenting and streaming on-demand 3D surgical content” to places such as Northwestern University’s Feinberg School of Medicine.

But perhaps the most obvious news in 3D is the quantum leap it’s made in entertainment. While blockbusters such as James Cameron’s science fiction blow-out Avatar, due for another stint in theaters beginning this weekend, are impossible to ignore, it seems that every Friday brings with it the release of yet another 3D flick. Film-releases.com estimates at least 25 3D movies for this year alone.

Entertainment cynics point to the higher ticket price of the three-dimensional big screen experience as recession-driven hype on the part of Hollywood. Whether audience interest in 3D has influenced the film industry or vice-versa is impossible to know, but the increased conversation of adding one more dimension to life has caught the attention of the electronics field.

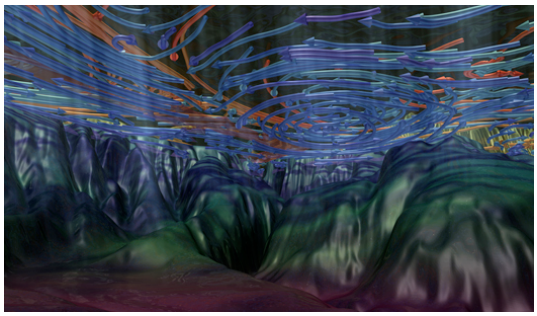
Most all of the major TV makers have debuted “3D-ready” models during this last year, meaning they still require 3D glasses. That change in television technology might not be enough to entice shoppers who just purchased a flat-screen, but Chinese TV company, TCL, may have found something people will want. It premiered a glasses-less model 3D television at the most recent Consumer Electronics Show in Las Vegas earlier this year.

And let’s not forget smartphones. Sharp Corp., Japan’s largest mobile maker, plans to try and one-up Apple’s iPhone with a 3D smartphone later this year, according to Reuters.

We on the consumer end may just now be reaping the benefits of imaging and visualization technology that the art and science fields have been taking advantage of for some time, but Ellen Sandor predicts that this is only the beginning.

“The content frankly isn’t the greatest right now. I’m sure Avatar will be remembered but they seem to make everything 3D regardless of whether or not it’s a good idea because they can charge an extra few bucks.” Okay, so maybe it’s a mixed blessing. “But everything has to start somewhere and there are people like Pixar doing great things. This really is the beginning of a world that will be much more virtual in the future.”

The characters in the wizarding world author J.K. Rowling weaves in her Harry Potter book series live in a reality where photos dance and move and painted portraits speak from the soul of their captured subjects. It might be quite a while before we’re able to shoot the breeze with the pictures in our wallets. But at the rate that art and science influence each other when it comes to visualization today, the possibilities definitely go beyond paper glasses with red and blue lenses.



By Ellen Sandor, Chris Kemp, Janine Fron, (art)n
"Oceans of Change," a virtual visulatization of the passage of time.