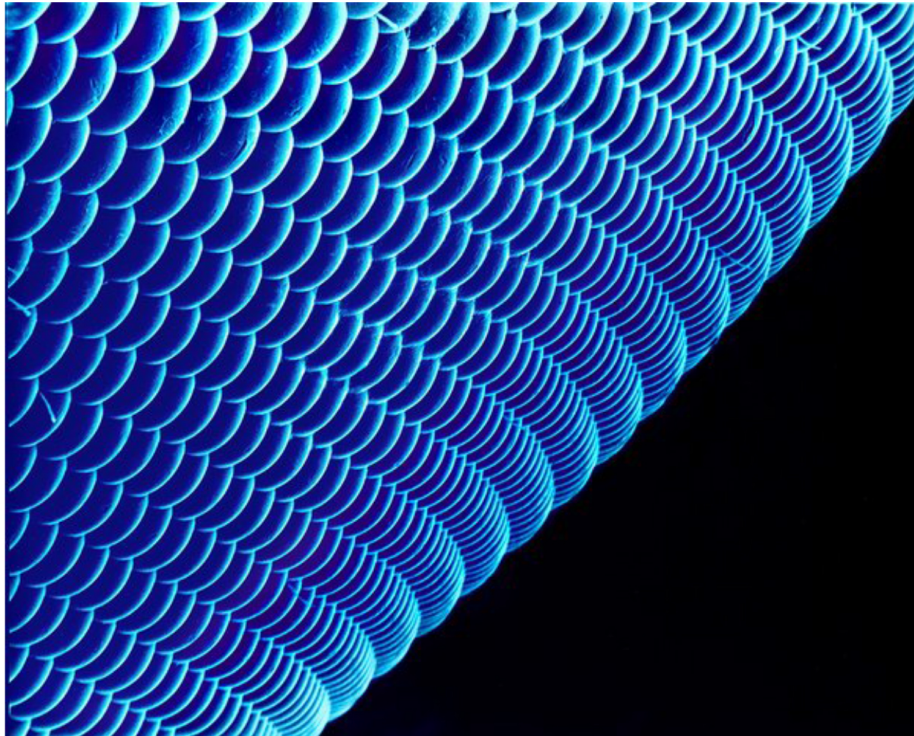


TURNING POINTS | CULTURE

Art and Technology



Susumu Nishinaga

"Hover Fly"

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'HOVER FLY' and 'MUSHROOM GILLS' By Susumu Nishinaga, Japan

I still remember the first time I saw an image taken with a Scanning Electron Microscope, or SEM. I had a job as a designer in an office at the time, and was overcome by emotion as I viewed a photograph by the Swedish artist and scientist Lennart Nilsson, who was famous for his work with medical subjects and extreme macrophotography. I knew then that I wanted to work with SEMs.

I wrote to universities around Japan, and in the mid-1980's was given an opportunity by professors 200 kilometers, or 125 miles, away to use an SEM, which can magnify objects one million times. Years later, with a sample device provided by an SEM manufacturer, I was able to explore

macrophotography from my own home. I soon realized that, ^{"Mushroom Gills"} with this technology, not only could I produce almost the same types of images at home as in a university setting, I could also add my own aesthetic considerations and imagination.

Viewing things with an SEM is like viewing the world for the first time. There is genuine excitement and surprise, which I try to express in the aesthetics of my images. Ideally, everyone would have access to SEMs — they could then see such wonders and rediscover the world with their own eyes. But until that is possible, I hope to share those wonders and that excitement with as many people as possible.



Aaron Koblin and Ben Tricklebank

'LIGHT ECHOES' By Aaron Koblin, California

The idea behind "Light Echoes" came from a question posed by Doug Aitken, an American multimedia artist who once spent three weeks on a train traveling from New York to San Francisco. "What would you do if you had a train?" he asked me. I answered that I would put a laser on it; I would try to turn it into a gigantic paintbrush of light.

"Light Echoes" does just that. My collaborator Ben Tricklebank and I placed a laser on a train and used it to project traces of light in the form of images, maps and even passages of poetry. As the train moved slowly through the terrain, the laser drew a single line of pixels across the landscape, a line that kept changing and updating. The laser projections left visual echoes on the surroundings, which we were able to capture through long-exposure photography.



Aaron Koblin and Ben Tricklebank

But that's just the beginning of what we can do, just the first incarnation of this project. I'd like to explore setting up a live music performance on a train, and projecting a visualization of that music onto the landscape — so that you could actually see the music evolving and unfolding as the train moved — a visual history. Ideally, we would compose sound pieces for specific locations — the iconic Salton Sea in Southern California comes to mind — and visually superimpose them on the locations that inspired them. The tracks themselves, how they juxtapose with the landscape and cut through the site-specific audio with the visuals — it could be amazing.



Aaron Koblin and Ben Tricklebank

'FÜR ELISA' Color Score By Neil Harbisson, Spain/U.K.

I see in black and white, but for the last 10 years I've had an antenna permanently attached to my head that allows me to hear colors.

Since I hear color, I paint music and play colors. I use canvases as scores and colors as notes. My works are based on transposing colors to sound and sounds to color.

The colors of my paintings are invisible to me and silent to the viewer. Therefore the artwork lies somewhere between both perceptions.

The relationship between color and sound is not arbitrary; the notes that I hear relate to the frequencies of light. If we could hear the frequency of red for example, we would hear a note between F and F sharp.

When I transpose music to color, I start by painting the first note of the piece in the center of the canvas. The shape of the color is based on the shape of the canvas. I paint the music note by note until the last one frames the whole piece.

When creating the piece, paint becomes liquid sound.

Beethoven's "Für Elise" comes out to be a very purple and pink composition. Who knows, maybe these were Elise's favorite colors.



Neil Harbisson

"Beethoven — Für Elise"



James Ewing

Rafael Lozano-Hemmer, "Open Air, Relational Architecture 19," 2012. Shown here: Philadelphia, Pennsylvania, United States. Commissioned by: Association for Public Art.

'OPEN AIR' By Rafael Lozano-Hemmer, Canada

"Open Air," an interactive light installation commissioned by the Association for Public Art, sought to transform Philadelphia's historic Benjamin Franklin Parkway from Sept. 20 to Oct. 14, 2012. Above all, the artwork made tangible the voices of thousands of participants in an urban scale.

First, we invited people to submit messages of up to 30 seconds — shout-outs, poems, songs, rants, dedications, proposals — via a free mobile app or the website www.openairphilly.net. We then used 24 powerful searchlights to create dynamic formations in the sky, linking light brightness and movement to the frequency and amplitude of

the recordings. For willing participants, the light rays followed their exact geographical positions, as determined by the GPS trackers on their mobile devices.

Depending on atmospheric conditions, "Open Air" could be seen up to 10 miles, or 16 kilometers, away from 8 p.m. to 11 p.m. each evening. It was at once a visible voice-mail system, rant line and a stage for free speech. The crowdsourced content was also mixed with recordings from individuals who have influenced Philadelphia life, including David Lynch, Sonia Sanchez, Sun Ra, Louis Kahn, M. Night Shyamalan, Tina Fey, Questlove, Marcel Duchamp, Buckminster Fuller, Jimmy Heath, Santigold, Maurice Sendak and Patti LaBelle. Intentionally departing from pre-programmed spectacles like fireworks or sound and light shows, the piece fostered a sense of connection and complicity among participants.

During the show's three-and-a-half-week run, 63,000 people from 92 countries visited the website, leaving almost 6,000 messages in more than 20 languages.