LUMINOUS FLUX

digital, electroluminescent and geometric art

ART
HOUSE

LUMINOUS FLUX
An exhibition of digital, electroluminescent and geometric art

Luminous Flux, the inaugural exhibition at Art House, features innovative computer, digital, interactive, video and electroluminescent art from the Thoma Foundation's collection. Included are works from computer art pioneers, as well as their precursors in systems-based abstract painting from the 1960s.

The concept of Luminous Flux derives from physics; it is the measure of light energy, or brilliance, perceived by the human eye from a light source. The exhibition adapts this term in order to highlight the physical experience of confronting optically stimulating artworks.

Visual artists have long mimicked the effect of luminosity using only colored paint pigments on canvas, but the digital technology boom hatched a new breed of artists who embrace high technology to produce live, interactive visual statements. They use the literal medium of light, and animate it with customized circuitry and computer code.

The evolution of algorithmic art, from Constructivism and Op Art through today's creative expressions in electronic media, is a story not often told in art history. Notable in this exhibition are the artists who have mastered the craft of computer art as an extension of the form-generating painting systems that motivated geometric art practices in the twentieth century.

Artworks chosen from the Foundation's collection shed light on topics such as color perception, the depiction of the human body via digital media, the computerization of drawing practices and the occasional anxiety induced by rapidly changing technology. In sum, the exhibition is intended to inspire viewers to think about life in the digital era.
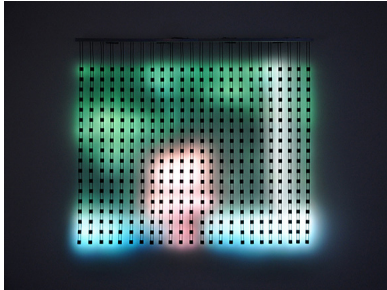
Exhibition runs September 24, 2014 - Spring 2015.

- Jason Foumberg, Thoma Foundation curator

Jim Campbell (American, born 1956)
Home Movies, Pause, 2014
LEDs, metal, wire, and custom electronics

© Jim Campbell, Courtesy of Bryce Wolkowitz Gallery

Jim Campbell's *Home Movies, Pause* is low resolution but high technology. The artist transformed Technicolor footage of family videotapes, including his own and some bought on eBay, into computer-driven LED animations. Each multicolor LED acts as a pixel to blend colors and display this very low-resolution image. By contrast, a typical HDTV contains two million pixels, whereas *Home Movies, Pause* contains only several hundred. Still, the human brain fills in the gaps to perceive the gestures, behaviors and relationships of the figures in the film. Campbell, who has degrees from MIT in both mathematics and electrical engineering, used to work as an engineer in Silicon Valley producing high-definition TV chips.

Daniel Canogar (Spanish, born 1964)
ASDF, 2014
Keyboard parts, wood shelf, projector, and multimedia player
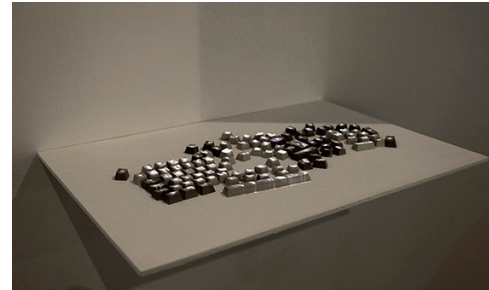
© Daniel Canogar, Courtesy of bitforms gallery

Phrases from Don Quixote, Abraham Lincoln's Gettysburg Address, essays by the philosophers Kant and Descartes, and lines from other notable texts jitter across the buttons in Daniel Canogar's *ASDF*. Significantly, none of those writers composed their essays using keyboards or even typewriters. Just as he uses found texts, Canogar scavenges discarded keyboards for his video sculpture. "I believe technology holds a strong grip on us because it gives us a sense of immortality," said Canogar in a recent interview.

Sarah Frost (American, born 1967)
Buy 5 yr, 2014
Discarded computer keyboard keys

This mosaic is comprised of reclaimed keyboard keys from anonymous sources, from personal computers to Fortune 500 company offices. Frost does not intentionally combine letters to create words or sentences; instead; she arrays the keys like an allover painting, respecting color, wear and stain patterns. You can easily imagine the many fingers that have touched this artwork. The Microsoft Corporation has similarly commissioned a keyboard mosaic from Frost.

Teo González (Spanish, born 1964)
Untitled #319, 2004
Acrylic polymer emulsion, pigment, and acrylic enamel on cotton

Teo González was born in Spain, studied in California, and lives and works in New York. His grid paintings continue the tradition of Minimalist art, but his hand-painted drops interrupt the machine aesthetic that Minimalist and computer artists favor. Using a pipette (a chemical dropper), González dripped 16,641 droplets onto this canvas, revealing the painstaking and precise labor of making art.

Rafael Lozano-Hemmer (Mexican, born 1967)
Pulse Index, 2010
Plasma screen, computer, digital microscope, industrial camera, metal enclosure, and custom software

© Rafael Lozano-Hemmer, Courtesy of bitforms gallery

Pulse Index invites you to scan your fingerprint and to record your heartbeat. These biometrics are then added to a visual database of past users' fingerprints. Only the last 509 participants are saved; each new fingerprint bumps off the oldest collected one. Accumulated, they form a group portrait. Lozano-Hemmer was born in Mexico City and teaches at Harvard University. He likens his artwork to throwing a party—and parties, he says, are only as good as the people who show up.

Howard Mehring (American, 1931–1978)
Untitled, c. 1961–62
Magna on canvas
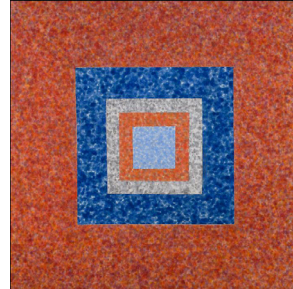
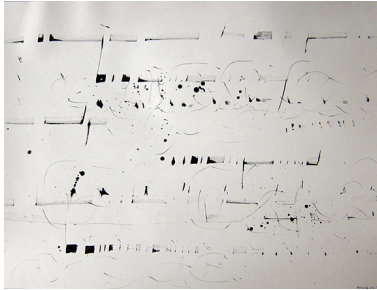© Howard Mehring, Courtesy of CONNORSMITH

Howard Mehring was a core but under-known member of the Washington Color Field school (based in Washington, D.C., including Morris Louis, Kenneth Noland, Gene Davis, Paul Reed, and Thomas Downing). To obtain the rigid, hard-edged squares in his painting, Mehring cut his canvases and glued them together, a technique he called "broken color construction."

This untitled canvas, painted with Magna (an early form of acrylic paint) was created soon after a 40-day tour of European museums. In an interview Mehring said he was inspired by the way Italian Renaissance painters used color: the browns and reds of Venice, and the atmospheric blue of the Old Masters. Both colors dominate this canvas. Mehring usually listened to jazz music while he painted.

Manfred Mohr (German, born 1938)

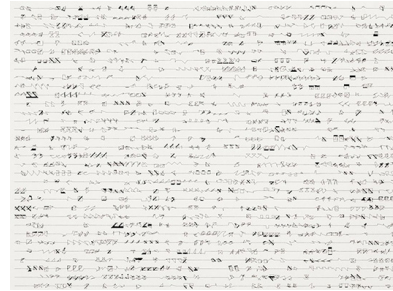*Homage to K. R. H. Sonderborg #2,* 1963
Ink on paper

Mohr came of age in Paris in the late 1950s, capital of the jazz intelligentsia. In his early twenties Mohr used a paintbrush the same way he played his sax, loose and loud, in spits and starts. *Homage to K. R. H. Sonderborg #2* looks like a musical composition of exploded notes. Within that seemingly random and discordant composition can be found a pattern of arcing lines and a progression of shapes. It is the result of improvised play. The drawing is dedicated to the experimental Danish musician K. R. H. Sonderborg.

Manfred Mohr (German, born 1938)
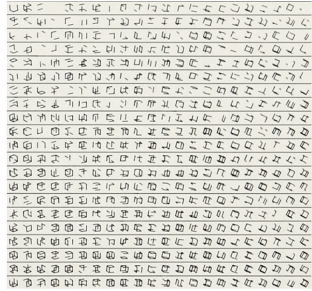
P-036 G / White Noise, 1971
Plotter drawing on paper

The "white noise" of the drawing's title references the "snow" on a monitor receiving no signal—a random, fragmented pattern that Mohr sought to re-create with his computer drawings. Mohr wrote algorithms for the computer and fed the code through a drafting mechanism called a plotter, which is essentially a robot arm holding a pen instructed by a punch card code.

Manfred Mohr (German, born 1938)
P-155-bb, 1974
Plotter drawing ink on paper

© Manfred Mohr (detail), Courtesy of bitforms gallery

This computer-aided plotter drawing explores various permutations of a hypercube, or a cube within a cube. The hypercube is a geometric construct used for mathematical modeling. Sol LeWitt in the U.S. was creating murals using the hypercube simultaneous to Mohr in Europe, a fact that unites the concurrent inventions of Minimalism and computer art.

Manfred Mohr (German, born 1938)
*P-777B,* 2000
LCD screen, computer, custom software

© Manfred Mohr, Courtesy of bitforms gallery

At the turn of this century, Mohr finally started introducing color into his artworks. He also decided to contain his drawings within the computer that created them, not printed or drawn with a plotter as in the past. In the animation *P-777B,* the evolving geometric shapes morph according to an algorithm, and they never repeat. The program gives the illusion that the computer has a mind of its own.

Paul Reed (American, born 1919)
Satellite Painting #5, 1963
Acrylic on canvas
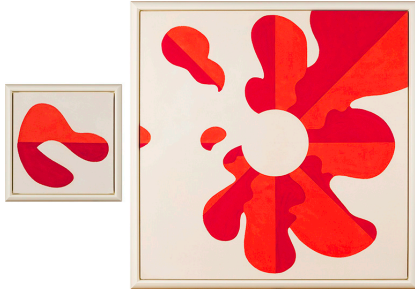
Like his fellow painters of the Washington Color Field school (Howard Mehring, Morris Louis, Kenneth Noland, Gene Davis, and Thomas Downing), Paul Reed applied paint onto raw, unprimed canvas, an experimental technique for the time. The process gives the painting a stained look, and Reed left large areas of the unpainted canvas bare to expose a tactile characteristic of this virtual image. Reed further innovated his medium by presenting two separate canvases as a single painting idea. On the back of the canvas he wrote the exact distance the main painting should hang from its companion. As such, the gallery's wall and, by extension, the viewer, become integral aspects of this painting's expanded composition.

Paul Reed (American, born 1919)
Margem, 1968
Acrylic on canvas

In the mid-1960s a group of experimental painters sought to blow apart the conventions of painting by introducing nontraditional shapes and materials. Paul Reed's irregularly shaped canvas, which he custom built, is a prime example of the innovative work of the Washington Color Field painters. The title, *Margem,* is a Portuguese word for the dividing line between land and sea. Like a variable coastline, the edges of *Margem* playfully shape-shift. *Margem* recalls the formal permutations that many digital artists are also interested in, such as seen in Anne Spalter's *Topío.*

Jason Salavon (American, born 1970)
<Color> Wheel, 2012
Inkjet print

To create *<Color> Wheel*, Jason Salavon conducted an internet image search on the website Bing for color terms. For example, "red" returned red-hued images. The images were arranged into the classic color wheel, a diagram used by artists to help them mix colors. Sir Isaac Newton invented the color wheel in 1706 as a way to organize the visible light spectrum. Shaped like an eyeball, it is also a snapshot of what Salavon saw on the Internet, based on Bing's search engine algorithms, at the moment he created the artwork. An accomplished software artist, Salavon has also worked as a video game programmer and is currently artist-in-residence at the Microsoft Research think tank.

Peter Sarkisian (American, born 1965)
Ink Blot, 2011
Powder coated steel and aluminum, ink bottle, tinted polymer resin, notepad, video projection, and audio

A 4-minute journey begins when a small man slithers out of an ink spill. His body becomes a brush, and his trail is an ink painting. He struggles to reach his goal, a nearby notepad. He lays down. His whole body, stained with black ink, then dissolves like water in sunlight. This looping display of augmented reality recalls the endless plight of Sisyphus.

Björn Schülke (German, born 1967)
Spider Drone #3, 2013
Wood, brass, steel, mirrors, camera, screen display,
propeller motors, paint, sensors, LED and custom electronics

© Björn Schülke, Courtesy of bitforms gallery

A surveillance predator, the spider drone captures your image. Its built-in motion sensors track your movement, and you are reflected in its live digital video feed. Since 1990, Björn Schülke has debuted a new drone sculpture nearly every year. Satellites, spacecrafts and space telescopes have all served as design inspiration for Schülke's robots. The spider drone, although whimsical, reminds that we are always under surveillance, our identities continually extracted as data.

John F. Simon, Jr. (American, born 1963)
Automata Studies, 2002
Custom software and Macintosh G3 Powerbook

© John F. Simon, Jr., Courtesy of Sandra Gehring Gallery

The patterns you now see in John F. Simon, Jr.'s *Automata Studies* will never end, and they will never repeat. Simon coded a generative algorithm to create an infinitely evolving composition. He titled *Automata Studies* after an important early book on cybernetics, or artificial intelligence. Simon says his image behaves "more like a plant than a painting," operating at a low level of consciousness. Simon's mother was a mathematician, and he earned a master's degree in planetary sciences before becoming an artist and software engineer. Simon is a leading practitioner of digital and software art, has worked with the electronic musician Björk, and was in the 2002 SITE Santa Fe exhibition.

Federico Solmi (Italian, born 1973)
Douche Bag City, 2009–2010
15 LCD screens and video

Douche Bag City is an animation of a first-person shooter video game in which the main character, Dick Richman, is a Wall Street capitalist with greed and anger issues. Richman has been exiled to a netherworld, called *Douche Bag City*, for his crimes against the economy that caused a global financial meltdown. Richman must fight zombies and burn a golden bull to win the hellish game. The 15-channel video was exhibited at the 2010 SITE Santa Fe Biennial.

Anne Morgan Spalter (American, born 1965)
*Topío: Digital Video Coffee Table*, 2014
Digital video, monitor, and table

Topío displays Anne Morgan Spalter's digital video *Chicago*. The artist records scenery during her international travels, then abstracts her footage using motion graphics editing software. Topío in Greek (ΤΟΠΙΟ) means land or landscape. As if seen through a kaleidoscope, the skyscrapers and lake beaches of Chicago morph and spin. A former mathematician, the artist may relate her work to fractals. *Topío*, writes the artist, takes her "art work off the wall and out of 'TV mode' to become the center of a room and integrate with its environment."

Roman Verostko (American, born 1929)
Y2K, 2,000 Improvisations Celebrating 2,000 years, 1999
Algorithmic pen and ink drawing
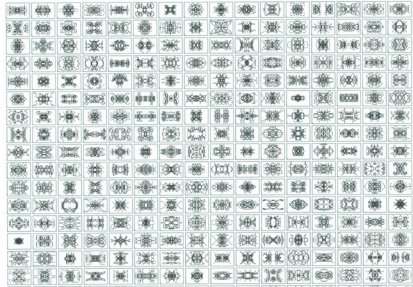
© Roman Verostko (detail)

In 1999, on the cusp of the second millennium, or Y2K, many people feared a global digital meltdown due to a date glitch in worldwide data systems. Meanwhile, algorist artist Roman Verostko paid homage to the cooperative intellect of humans and computers with a series of digitally programmed drawings. Verostko instructed a plotter pen to carry out the task directed by a mathematical recipe. "The stark logic of a coded procedure yields such surprising grace and beauty," wrote the artist. All of the 2,000 icons on this sheet are drawn from the same parent code, are symmetrical, and are unique. Verostko, along with Manfred Mohr, is a pioneer of computerized drawing practices.

Leo Villareal (American, born 1967)
Double Scramble, 2013
LEDs, computer, custom software, wood, and Plexiglas
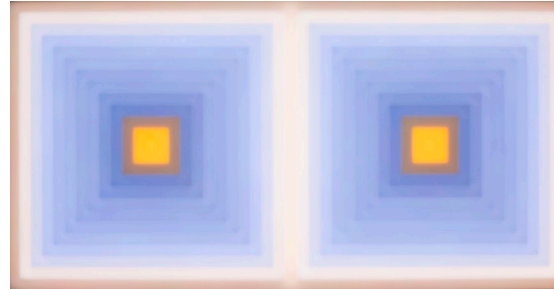
© Leo Villareal. Courtesy of CONNERSMITH. Photography: James Ewing.

Leo Villareal's *Double Scramble* is a direct response and homage to 1960s-era Hard Edge geometric painting, such as Howard Mehring's 1961–62 canvas, *Untitled.* Both artworks are composed of concentric squares, a favored motif of the Minimalists. A skilled computer engineer, Villareal programmed this hypnotic light animation for hundreds of LEDs using customized software. He attends the Burning Man festival annually, where he first conceived of creating programmable light artworks.

About the Thoma Foundation:
The Carl & Marilynn Thoma Art Foundation recognizes the power of the arts to challenge and shift perceptions, spark creativity and connect people across cultures. We lend and exhibit artworks from our collection and support innovative individuals and pivotal initiatives in the arts.

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