

MODULAR SOFTWARE

CREATING PERFORMATIVE TOOLS FOR ARTISTS

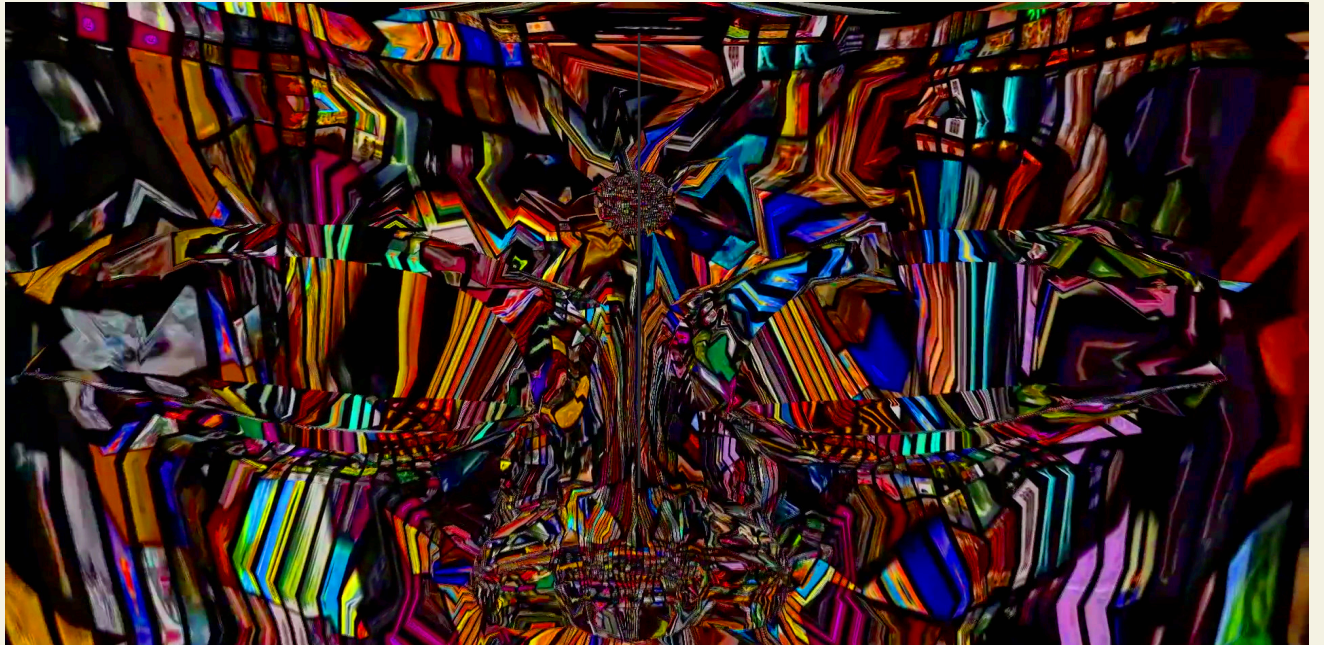
Eric Souther, 2016

Over the past two years I have become increasingly interested in the rich potential in working with hybrid analog and digital systems for real time performative processing. There is an interesting tension that occurs when combining the precision of digital with the unpredictability of analog. I used a hybrid setup for my recent performance *Multiplying Muybridge* where I used an analog synthesizer to create live sound that was manipulated by a thermion like depth sensor that outputs control voltage to the system. This instrument along with a hand full of oscillators are digitized in MIDI and used to generate patterns in Processing. Those patterns are then sent to Max via Syphon to chromakey 6 separate videos into the patterns. Each of the three patterns can be controlled via a USB MIDI controller, two knobs for each X and Y direction. I use OSC (Open Sound Control) to pass that from MAX to Processing.

Why describe this in such detail? I am interested in the notion of open modular systems of making hybrid works. Philosophically, this tool creation and workflow is inspired by the design sensibilities of analog video synthesizers created in the 1970's by toolmakers such as Dan Sandin, Bill Hearn and Dave Jones. The relationship of these systems had with control voltage interfaces for maximum variability stands in stark contrast to many of the professional software packages used today.

In December 2015, my friend and fellow artist Jason Bernagozzi, started a collaboration to develop software tools for time-based media artists as a way to support the fundraising efforts of Signal Culture. We wanted to make software that is inspired by the open systems of these early video pioneers and that is philosophically grounded in modularity. We are interested in creating tools that are real time, performative, modular, and exploratory. The first app Jason and I wanted to work on was a process inspired by the classic Frame Buffer created by legendary toolmaker Dave Jones of Dave Jones Design, who has made significant contributions to the history of video art. The Frame Buffer application saves a series of video frames into memory that repeat over one another within the keyed areas of either a luma-key or a chroma-key. The process is simple however, but what we wanted to focus on more is how to make the application control and be controlled by a wide range of sources.

The first thing we created was the capability to ingest a wide range of video sources, such as web cameras, external cameras (via FireWire or Thunderbolt), QuickTime movie files, and to or from Syphon. We designed it to cover a wide range of possible resolutions from Classic Frame Buffer 256 x 256 all the way to 1920 x 1080 HD. You can also control the frame rate of the video output, which can be sent out to external devices, recorded to a QuickTime,



SEARCH ENGINE VISION SERIES

INTERVIEW: ERIC SOUTHER

Search engines, icons, the White House, Buddha, real-time, viral memes, diffraction, and performativity...

July 11, 2020, via e-mail

Yizhuo Li: The themes in your *Search Engine Vision* series spans a broad political, cultural, and religious spectrum. How did you decide on them and their scope, specifically concerning "The White House" and "Buddha"?

Eric Souther: I tend to focus on recognizable icons of religion or culture because they provide assumptions knowing what they are. The *Search Engine Vision* Series works against that knowing by broadening our definitions and understanding of the icons via the masses. The White House was in direct response to the shifting political landscape in 2016 when President Trump took office. The scope of "The White House" piece, however, spans from 2000-2018, I plan to keep adding to the piece until the end of 2020. Many of my works deal with ritual and religion for ways to contextualize and humanize our ritualistic relationships with technology. The *Search Engine Vision Buddha* work is also a homage to Nam June Paik's *TV Buddha Series*. For Paik, the Buddha meditated on his real-time video image. For my piece, Buddha meditates on his online existence from a western search engine.

Y.L.: By clustering materials under the chosen terms, how do you see the inter-relations and intra-actions between the deployed video footages, in particular the ones gridded together into one recognizable pattern or structure?

E.S.: The clustering allows for a macro view of the database that is outside the norm of our consumption of YouTube. The gridded structure mimics the structural output of the search engine. However, the three-dimensional form disrupts and bends the grid around itself. I'm interested in this act being the material or matter that forms from the intra-actions of the collection. In all the pieces in the series plays a game of visually searching the database, asking the viewer multiple times, does this fit your definition of the icon?

Y.L.: You referenced Joseph Kosuth's *One and Three Chairs* for your inquiry into the "online social structure," and in my understanding, towards the generative condition and impulse of this structure. Can you elaborate more on the concept and purpose of your construction, which I find closer to the experiential process of meaning-making rather than extraction toward a psychological archetype or visual representation? In other words, can we perhaps say that the *Search Engine Vision* series brings forth a reflexive vision in search of its creative engine, instead of the vision itself?

E.S.: The construction of the work in the series is performative, created in real-time. I developed my software to move the camera, 3D model, and plane of 1,000 videos. These movements are related to gestures of searching i.e. looking side to side, up and down, and zooming in and out of the database. I search for the meaning of icon in question, then rest on videos that call for attention to spotlight them for a moment before the search continues.

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The meaning happens in-between the videos, an emergence that rises from the entanglement of intra-actions within the collection, and my performance. The process of meaning-making is more of diffraction than a reflection. Reflection is about representation that reinforces sameness and something that is fixed. Diffraction supports a closer look at the collection for similarities, divergence, and difference.

Y.L.: Can we talk more about the notion of "viral transmission" and an archival model that I consider central to this

A Medium in Between

syphoned out to another software application, or be full screened to be used for a performance. We wanted the process to be intuitive for the user, which makes for a difficult balance of fine tuning and narrowing down parameter ranges without making it so limiting that it acts like a filter you would apply in a nonlinear editing or compositing program.

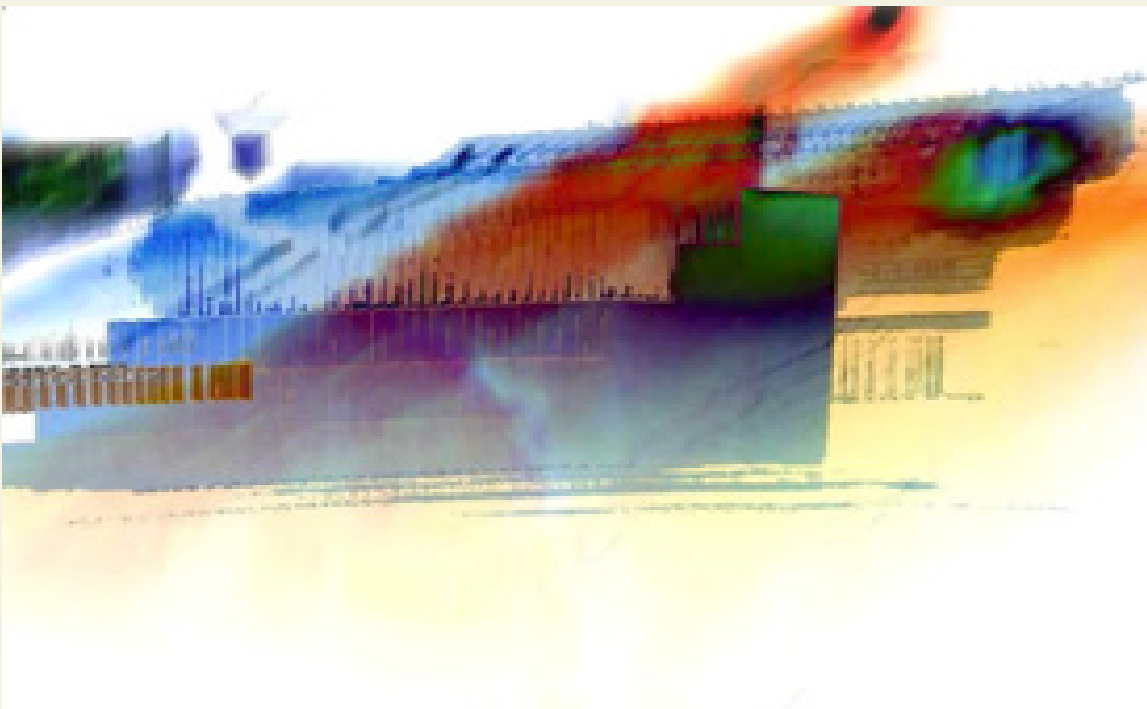
There are seven various parameters that can be explored in the app. Being concerned with performability, we made it so all the parameters could be controlled via MIDI or OSC. The user could have an analog synth control the parameters, hook in a CV->MIDI interface or use an OSC touch interface on your phone control the app, making it able to run video and control between several software packages such as Ableton Live, VDMX, Processing, etc all in real time.

We released the Frame Buffer app in January 2016 as a part of Signal Culture's sustainability fundraising campaign. Signal Culture is a nonprofit experimental media art organization offering residencies, resources, and exhibition opportunities. The Frame Buffer is the first of six applications we have planned for 2016. Check out the Signal Culture App club for more details. The exciting part of making these tools is seeing what artists make with them. I want to share two works by artists that have used the Frame Buffer in their new works, "Negative Vibes/////Rough Idol" by Patrick James Cain, a sound and video artist residing in Washington D.C., and "Mix Buffer" by Alan Powell, a Video Artist and Associate Professor at Arcadia University.

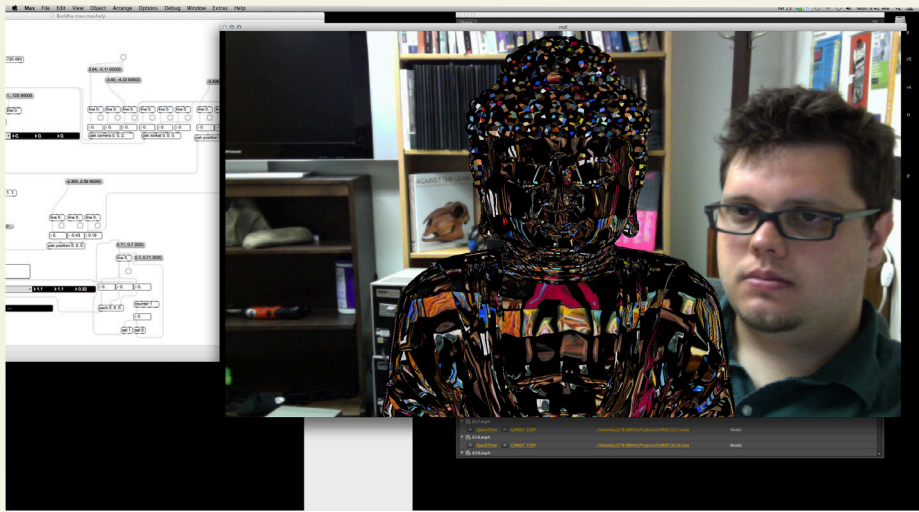
Jason and I are now finalizing our second app titled Maelstrom, which was based on a process I developed for a 2012 project "Life in the Maelstrom". Maelstrom combines real time lumakeying and pixel sorting paired with digital feedback to create repetitions into infinity. The app allows the user to control the direction of the feedback, zoom in and out, and rotate the angle of each repetition in space. During the development process of Maelstrom, I created a new performance titled "Synaptic Transmissions." Working with the app in relation to audio visual performance led us to new ideas for future apps, in particular methods that would help create audiovisual sync. A simple example of this would be to use frame difference and Image brightness average for MIDI or OSC output.

We are not alone in developing creative tools for artists. There is an exciting renaissance of artists and toolmakers sharing and creating tools. Our goals are pedagogical in nature, to think about process versus effects. An effect is meant as an illusion, a real time process however can be used to articulate new visual and aural metaphors that come out of discovery and a relationship between the artist and their tools. In many ways this connects real time media production to music, it is not the inherent sound of the instrument that is significant, it is the choices the artists makes that creates the melody.

MODULAR SOFTWARE, 2016



"Negative Vibes/////Rough Idol", Patrick James Cain, 2016, image courtesy of the artist



Screenshot, SEV Buddha, 2013
image courtesy of the artist

ERIC SOUTHER SEV SERIES

exhibition? You mentioned that much of your practice is aligned with new materialism, and among others, theories by notable scholars such as Karen Barad. In fact, Barad's agential realism might offer a profound update of Antonin Artaud's vision of the plague theatre, where he importantly emphasizes the theatre's capability of bringing out the latent perverseness of human mind like the plague, rather than an analogous contagiousness of the stage. How do you envision your position in a web of connected and mediated practice, as an artist who creates this series with Youtube videos, shares the collective memory with many of their authors, and again makes your work searchable, and potentially transmittable, under the relevant keywords?

E.S.: I am outnumbered in my own body, and my position on the web is constructed from those around me alive or dead, in person or in text. We are all mediated. The stage is full of viral memes (element of culture or system that transmit from one person to another) that for the vast majority serve as entertainment. I strive to create work that reveals unseen signals within our technologically saturated lives, with the hope they provide a pedagogical experience to be retransmitted into the culture.

Y.L.: You have been working with a number of media centers and institutes in upstate New York, whose close engagement of artists and technologists has made a notable impact on the new media landscape; I also find this integration a distinct quality of your artistic work and experiments. Where would you stand around this junction—if you agree, there is a meaningful junction—of a permeating digital network culture across socio-cultural, geopolitical borders and the historical, institutional legacy of a specific region that is oftentimes limited to its immediate communities?

E.S.: Absoulultiy, the historical junction in upstate New York for experimental media art in large part is because of the pioneering work of Experimental Television Center and their foresight and focus in toolmaking, Media Study/Bufalo (Gerald O'Grady, Woody and Steina Vasulka, and many more), Visual Studies Workshop, and the support of the New York State Council of the arts and its dedication to supporting experimental media art.

The lineage of these communities continues to be supported via the Institute for Electronic Arts (iea), Squeaky Wheel, and Signal Culture. Out of the three, Signal Culture has influenced my practice and life the most. The founders Jason & Debora Bernagozzi and Hank Rudolph continue to build communities between artists, toolmakers, and researchers. I joined the board of directors in 2016, to help develop experimental video applications for real-time video processing. This was our way of sharing the importance artist-made tools that used the guiding principles of ETC/SC studio's, which include modularity, performative systems, philosophical processes, and provide a way to give back to our artist community around the world. Making video instruments (real-time hybrid analog and digital systems) is a key aspect of the tools and work I make.

Y.L.: If incorporating the SEV series into an imaginary archive of your oeuvre decades from now, what information would be the most constructive and crucial? What unpublished materials might be included?

E.S.: I want to think that the works could be restaged if their data is not upsampled to current formats. In this imaginary archive, you could use a search engine within asocial visual platform for moving images for specific icons of the time, stream the first 1,000 videos or other future moving images like holograms in a grid (hopefully the internet is fast enough by then), map the grid onto a three-dimensional representation of the icon being searched, spend time searching the database via gestures of searching IRL, the soundscape should be a muted cacophony of 50-100 audio clips shifting across the 1,000 overtime, until a video is looked at (eye-tracking), then solo its audio, and then go back to searching. This may constitute a speculative software version of the Search Engine Vision series that would allow users to use as a real-time and generative experience. It would be nice to include unpublished sketches and expanded text, like this one. ■