2016 • Press

Golan Levin

Select books, critical reviews, published interviews, and press clippings.


007 Hagler, Juergen. “Animation, Art and Technology: Tracking Developments on the Fringe”. In Eckel, Julia et al. (Eds.), *Im Wandel: Metamorphosen der Animation*. Springer, 2016.


When Bruno (2005) in his Cosmolalia project refers to the role of words in “the circulation of information, desire and advertising,” it raises a few hypothetical questions: If (just if) words are bought and sold, and if (just if) they are pseudoautonomous viral entities moving between us as hosts, then isn’t it possible that words can be enslave?

Cayley’s *Pentameters: Toward the Dissolution of Certain Vectoralist Relations* (which examines the effect of Google on language and poetics, numeration as vectors, and the erosion by stats of the qualitative flux) expresses a parallel concern. In this incantatory poem, Cayley speculates about the impact of search engine technology on our own writing that is given to it free of charge. He continues the long tradition of bard as critic, polemically exposing the implicit assumptions that erupt from the infrastructural underbelly of culture. Cayley’s (2012) poem opens as follows:

Language is a commons, and yet by contrast  
With first nature’s free resources, it is constitutive  
Of culture while all at once incorporate within  
Those cultures it enables. As language is a commons,  
To use it, we need not agree to terms.  
Now, counter to our expectations and our rights,  
Agreements as to terms of language use  
Are daily ratified by the vast majority  
Of so-called users—you-and-I—by all of us  
Who make and share our language on the Internet.

*Pentameters* is worth reading in its entirety, since it isolates clearly the intricate paradoxical permissions (in the implicit EULAs) that invoke our agreement in a power dynamic: the ownership of language (analogous to land or livestock) is an ownership of life and lived thought. As search increases in its anticipatory power (its intelligence powered by our contributions), the dynamic may shift from one of service to bubbled guidance, linguistic kettling, co-opting modes of forbidden thought before they can occur; corporate computational autosuggestion capable of subconscious programming; poetry metapater.

**Golan Levin** and Jaap Blonk: *Ursonagrophy (2005), and Levin, Kamal Nigam, and Jonathan Feinberg: The Dumpster (2006)* Since the physical language workshop at MIT, Levin has been at the forefront of programmatic explorations of typographic space. Interspersed with visual art interventions, he sporadically returns to typographic explorations that usually involve text

Volume and intonation activate physics emulators. The body becomes the source of an information visualization residue. It interacts with this history—gestures destabilizing avalanches. With “the help of computer-based speech recognition and score-following technologies, projected subtitles are tightly locked to the timing and timbre of Blonk’s voice, and brought forth with a variety of dynamic typographic transformations that reveal new dimensions of the poem’s structure” (Blonk and Levin 2005). Schwitters screaming at the top of his lungs probably imagined his gutteral morphemes spattered against clouds, strewn across buildings, diving through screens. Levin’s Ursonate approximates chthonic hallucinations within pristine geometry and a physics engine. Cadence maps onto gravity and incoherence coheres.\footnote{Stephanie Boluk and Patrick LeMieux: Dwarf Fortress (2013)}

In Levin, Nigam, and Feinberg’s (2006) The Dumpster, blog posts are dynamically searched, and the ones that refer to romantic breakups are injected into a visualization. Brokenhearted bloggers become collective authors in a speech mashup. Texts that were once announcements of isolation enter into a massive herd of blobs that fall in a sinuous heaps. The Dumpster exemplifies the uncategorizable object that lurks at the edge of poetic discourse: simultaneously infographic and crowdsourced, it is an immense reservoir of phrases orbiting love, and as such constitutes a dynamic, sprawling networked poem whose form echoes geology.

**Stephanie Boluk and Patrick LeMieux: Dwarf Fortress (2013)**
The history of the twentieth-first century will not be written by human hands alone.

—Stephanie Boluk and Patrick LeMieux, 2013

When Boluk and LeMieux analyze esoteric fan-cult text-game Dwarf Fortress, they explore not narrative or conventional poetics or writing but rather lived play, fan-fiction tendrils, and game mods (modifications). In spite of J.R.R. Tolkien, dwarfs are not what spring to mind when one thinks literature. And a geeky game that requires arduous devotion to intricate procedural choices, while providing glyphic instead of graphic feedback,
rather than an aberration.47

If the German photographer August Sander were alive today, he would have to include digital work in his series People of the 20th Century. And the French philosopher of the Enlightenment Denis Diderot would have to add volumes to his Encyclopédie.

Free labor itself is not a problem outside of extractive platform capitalism; it can in fact be a site of resistant subjectivities and emerging forms of solidarity. My own proposal of cooperative ownership models on the Internet, formulated in chapter 7, adds to this vision of the Internet as a commons, theorized by Michel Bauwens (P2P Foundation), David Bollier (Viral Spiral), Yochai Benkler (Wealth of Networks), and many others.

Various platforms and projects support citizen or governmental initiatives that aim to orchestrate and channel everything from civic crowd funding to information crowdsourcing, sharing among peers, democratic decision making, and data access. Projects include FixMyStreet, SeeClickFix, Lenddo.com, Kiva, and tools coming out of Civic Hall48 in NYC and the Center for Civic Media at MIT, to name but a few.49

In 2015, artist Golan Levin and developer David Newbury called on creative volunteers to contribute a drawing to their Moon Arts Project.50 Golan Levin prompted prospective participants by stating: “your doodle will be etched on a sapphire disc, sent to the (real!) Moon, and potentially traced by a rover into the Moon’s soil — where it will remain for millennia!” To be sure, such virtual volunteering has a much longer history.

As early as in 2000, Distributed Proofreaders started to provide error markup support for e-text publications by Project Gutenberg (PG), which transfers public domain books into digital format. Distributed Proofreaders, while not directly associated with Project Gutenberg, is assisting PG with the creation of proofread versions of scanned books. Books are scanned, analyzed with Optical Character Recognition, and then converted into text characters. To date, Distributed Proofreaders has helped to publish over 28,000 books.51

Volunteer crowd work, however, has also been put to controversial use. An infamous example is the Blueservo/Texas Virtual Border Watch. In 2008, a company called BlueServo introduced real-time crowdsourced surveillance of the Texan border with Mexico supported by a $2 million grant from Republican Governor Rick Perry. “Virtual deputies” monitored CCTV cameras, installed all along the border region and anonymously reported sightings of undocumented immigrants to the United States Border Patrol. Two years after its inception, participation in the site dwindled and the site was shut down.52

**Crisis Mapping (Ushahidi), Co-Research (FoldIt!, eBird)**

The mapping project Ushahidi (Swahili for “testimony” or “witness”) was designed by a not-for-profit company in Kenya. Ushahidi is a free and open source crisis mapping software tool that uses the organizational logic of crowdsourcing for social activism.

To make aid efforts easier, Ushahidi allows large crowds of participants to contribute eyewitness accounts of conflicts such as the 2014 attack on the Westgate Mall in Nairobi, Kenya, or the 2010 earthquake in Haiti, and then visualize them on a Google map. Local observers can report election fraud or text-in verified reports of violence. Ushahidi analyzes these reports and once it has two verified accounts of the same incident, it adds them to the map.

Crowdmap, another platform built by the Ushahidi team, allows users to set up their own instances of Ushahidi. The global Occupy movement was one of the deployments of Crowdmap.53

While not primarily based on crisis management, Open Street Maps54 is also a collaborative mapping project. The ambitious goal of this “co-researching project” is to create a free map of the world that can be edited.

Open Street Maps makes free geo-data available, which then allow the creation of maps that can be used for navigation. Sometimes local contributors organize mapping parties as part of which data about pubs, schools, or hospitals in a specific area are collected and then collectively entered into the Open Street Map Database.55

Other examples of such co-researching/citizen science initiatives include GalaxyZoo, EyeWire, Linux, Wikipedia, Science Commons, NASA’s Clickworkers, Challenge.org, and GuttenPlag. Discussing all of the examples is beyond the scope of this chapter.

FoldIt! is one such crowdsourcing initiative. It started with the work of the biochemist David Baker who also founded Rosetta@home, an adaptation of a distributed computing software created at the
Im Wandel ... Metamorphosen der Animation
Die Kategorie ist offen für eine große Bandbreite von Kunst bis Kommerz.


4 Computeranimation: Raum und Interaktion


8 FORMS (Quayola, Memo Akten), GN in der Kategorie CA 2013. CAPTIVES (Quayola), HM in der Kategorie IA 2014.


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experimentelle Verhandlung von Animation im Vordergrund: eine Art Verschiebung von einer "Illusion of Life" zu einer "Deconstruction of Animation".

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**Medienverzeichnis**


*The Abyss* (USA 1989, Regie: James Cameron, VFX: Industrial Light & Magic)

*Augmented Hand Series* (USA 2014, Entwicklung/Produktion: Golan Levin et al.)

*Box* (USA 2013, Regie: Bot & Dolly, Produktion: Julia Gottlieb et al., Creative & Technical Director: Tarik Abdel-Gawad, Design Director: Bradley G Munkowitz)

*Broken Heart* (USA 1988, Regie/Animation: Joan Staveley, Produktion: Ohio State University)

*Catalog* (USA 1961, Regie/Animation: John Whitney Sr.)


*Don’t Touch Me* (USA 1989, Regie/Animation: Jeff Kleiser und Diana Walczak)

*Flying Logos* (USA 1989, Regie: Peter Conn, Animation: Peter Conn et al., Produktion: Homer & Associates)

*Forms* (UK 2012, Künstler: Quayola und Memo Akten, Produktion: Nexus Interactive Arts)

*Liquid Selves* (USA 1992, Software/Animation: Karl Sims)

*Luxor Jr.* (USA 1986, Regie/Animation/Modellierung: John Lasseter, Technische Leitung: Bill Reeves, Produktion: Pixar)

*Madame Tutli-Putli* (CA 2007, Regie/Animation: Chris Lavis und Maciek Szczерbowski, VFX: Jason Walker)

*Mental Images* (DE 1987, Künstlerische und technische Konzeption: John A. Berton Jr. und Rolf Herken, Produktion: Mental Images)


*Panspermia* (USA 1990, Software/Animation: Karl Sims)

*Particle Dreams* (USA 1988, Regie/Animation: Karl Sims)

*Rear Window* (USA 1954, Regie: Alfred Hitchcock)

*Rear Window Loop* (LU 2011, Regie/Animation: Jeff Desom)

*Shadowland* (JP 2013, Regie/Animation: Kazuhiro Goshima)

*Temps Mort/Idle Times* (BE 2013, Künstlerin: Alex Verhaest)


*Time as Code: Chronokratie* (AT 1988, Regie/Animation: Peter Weibel)

*Under An Alias* (TR 2012, Künstlergruppe: NERDWORKING)

*Urbana* (IT 1987, Regie/Animation: Mario Canali, Musik: Riccardo Sinigaglia)

*Walking City* (UK 2014, Creative Director: Matt Pyke, Animation: Chris Perry, Produktion: Universal Everything)

*Zoom into Seahorse Valley* (DE 1987, Software/Animation: Hartmut Jürgens et al.)
At its best, creative inquiry can offer intellectual nourishment, empowerment and solace. At the end of 2016, we need all of those, which is why remembering – and celebrating – the outstanding work done this year is all the more important. From devices that measure microclimates, to super-fine 3D printed particle clouds, to recreating cinematic space in VR: we added so many great projects to the CAN archive. With your help we selected some favourites.

Editors’ Choice

Choosing eleven favourites from one-hundred noteworthy projects unsurprisingly leaves many great works unchecked. In addition to our reader selects, we recommend giving the following six projects – or thorough articles – another look:

Jller by Prokop Bartoníček & Benjamin Maus

Using computer vision and a robotic arm, this machine takes an unusual measure of pebbles (collected from a German river of the same name) and methodically sorts them by geological features – rendering the history of the river visible.
Politics of Power by Automato

How does power get distributed across various systems? These custom-designed triangular, circular, and trapezoid-shaped power bars elegantly demonstrate hierarchical, egalitarian, and even humanitarian models of resource allocation.

Data-Driven Material Modeling by Mediated Matter Group (MIT Media Lab)

Seeing heavy use in the production of 3D-printed objects and structures, this exploratory workflow approach to the process of material modeling and fabrication draws on complex point-clouds, scalar and vector fields, and hierarchical meshing, to produce elaborate multi-material 3D prints.

Terrapattern by Golan Levin, David Newbury, Kyle McDonald

Water towers, tennis courts, rooftop solar panels! Harnessing the power of machine learning, this web application allows for bespoke searches of satellite imagery to find visual (and infrastructural) patterns across several major cities.

Our Time by United Visual Artists

Commissioned by MONA as part of Dark Mofo, in Hobart, Tasmania in June, UVA explored the subjectivity of the passage of time with a matrix of mechanical pendulums that hypnotically swung back and forth at varying tempos, shifting back and forth between order and disorder.

Behavioural Complexity by AADRL

An overview of recent work within the Architectural Association’s Design Research Lab, a post-professional program focused on mobility and self-organisation as explored through weird architectural machines emerging from contemporary software and fabrication workflows.

2017 can’t come soon enough! Still: we at CAN would like to thank you – the readers, the voters, the many artists and designers – for another inspiring year of (dis)covering amazing work. We’ll be back in early January doing just that.
Facets of 'New Making' – Tektonics at ACT Festival

written by Greg D Smith

Huge trophic data streams, hypnosis by humanoids choreographing a cacophony of Korean, Japanese, English, German, and French – ten weeks ago, from November 25th to 28th 2015, an unlikely cross-cultural exchange took over the new ACT Center in Gwangju, South Korea. More than a hundred artist, designers, curators, and educators – local, regional, international – had answered our invitation to add their work and voice to the inaugural edition of ACT Festival, a four-day opening celebration of the center's monumental building and the first of many programming highlights to come. The goal: have the world's best and brightest discuss the state of craft and creativity in the digital age.

"Making begins in the mind's eye – with the conception of an idea or a possibility. The references our imagination draws on, however, are not only defined by aesthetic preferences, cultural imprints, and historical precedents, but the technologies that underpin them; technologies that are evolving rapidly and exponentially increasing our creative power. We now control light and matter with equal measure, we program space, cultivate life, and have machines perform with a human touch. We hack, we code, we fabricate, and all the while tools and methodologies hum in a state of constant flux. Machine learning, mass-customization, synthetic biology – as we embrace a wave of new and unfamiliar paradigms, the lack of guiding principles looms large. Where are the fault lines between the digital and the physical? How does experimentation atop these unstable 'tektonics' alter how ideas are born and realized? "You can't have art without resistance in the material," nineteenth century craftsman William Morris observed. Now, what does that statement mean in the twenty-first century?"

Loosely organized around the theme of 'tektonics' (from the Ancient Greek noun for artisan/craftsman), ACT Festival was fit with opportunities to experience 'new making' firsthand: an extensive exhibition landscape featured installations by Rojoji Ikeda, ART+COM, Carsten Nicolai, Kimchi and Chips, LAHI, Jürg Lehni and Alex Rühl, Nobuteru Nakanishi, sevens, and Ralf Sauter across multiple spaces and venues. A series of nighttime performances had Diamond Version, Roshi Honda, Rhizomatik x ELCID/PLAY, Jonas Lemer and others fuse image and sound live on stage. A total of seven workshops led by participating speakers and exhibiting artists such as Yuri Suzuki and Hart Corren, Tae-woo Choi, Iona Gavankar, Manuel Abendroth and Ei Iii, and Chris Coleman had dozens of attendees build interactive sculptures, musical instruments, or experimental narratives. The heart and soul of the festival, however, was this symposium: over the course of 1.8 carefully curated as all 75 lectures such as Golan Levin, Mathew Clark (United Visual Artists), Regina Galbally, Karen Schley, and Dali Wanas shared ideas on everything from 'spatial arithmetic' to 'tools, craft methodology' to 'instruments of change.'
8/12/2017

Facets of 'New Making' – Tektonics at ACT Festival 2015 / @act_center

Undoubtedly ACT Festival has been our biggest programming effort (see more of our initiatives at CAN events). And in the end, the hard work paid off seeing this being laboratory spring exchanges and collaborations take as cultural time and discipline within a new landmark institution’s inspiration for months to come. And whilst the conversation around Tektonics is far from over, we and about 100000 visitors emerged with a more tangible sense of what it means to ‘make’ today. Here are a few insights:

Installation artists don’t just work spatially, they engage perceptions. Within the forum, a session on ‘spatial arithmetic’ brought together projects with Joanie Lemercier, Mimi Mon and Elliot Wood of Kimchi and Chips, and ART-COM’s Joachim Auter to discuss methodologies for manipulating light, sound, space, and material within installations. This is especially true on the latter to listen to and it revealed many details about how multi-sensory experiences are engineered, adding considerable manners to audiences and developers of the ever-evolving works in ACT Festival’s flagship exhibition, ART-COM’s ‘LR’ 2014. Recent and Carsten Nicolai’s ‘unicolor’ both offered contemplative spaces for engaging with the colour spectrum but were distinct in their approach. The former utilized an array of suspended metal discs that moved around in a controlled choreography causing hand-reflections onto the floor, while the latter presented a panoramic inflated view of colour modules that – thanks to a pair of mirrors reflecting its projection surfaces – expanded into infinity. Oh! In our view were a display of metal and wood pieces and a re-enactor of the NTSC color standard while Ralf Haecker’s ‘Mirage’ deployed an elaborate optical illusion that manipulated a mirror sheet based on fluctuations in the Earth’s magnetic field, on which an illusionary landscape-like form was reflected onto a far wall.

Varied perspective and productive friction:

To kick off our conversation, we turned to a trio of practitioners who have spent their careers at the forefront of interdisciplinary practice. Artist and educator Zach Lieberman, We Make Money Not Art’ Régine Debattut, and the purveyor of the digital sublime Ryoji Ikeda all summarized their work and interests. The challenge and reward of transforming post-secondary education proves, the cold hard truths about the geological and sociopolitical underpinnings of our tech-infused lifetimes, and war stories from a life spent perfecting a singular aesthetic – their divergent perspectives and priorities captured the breadth of the broad spectrum’ of ACT Festival’s participants.

Creator are setting up shop in labs. Fluids and programs are the same huge time on how those that distinguish themselves in context, scope, or ambition are the ones that deserve the most attention. We excitedly announced the ACT Center’s call for submissions to the ‘Creator in Lab’ initiative last July, as we felt the impressive facilities and generous old support were sure to foster strong work. The first ‘Creator in Lab’ residents were present at ACT in fall and they provided a glimpse at their promising work in progress. Amongst those sharing projects and insights were the electro-acoustic musicians we will discuss later, along with artist Bencich Pohle, and the media artist’s Bero Gschier.

http://www.creativeapplications.net/can-events/facets-of-new-making-tektonics-at-act-festival/
With residencies programs there are two sides to the coin: occupant and hosts. Speaking out of expediency on the latter is, we were thrilled to hear Golan Levin dedicate a portion of his talk to discussing his work directing the Frank-Ratchlus Studio for Creative Inquiry at Carnegie Mellon, where he helps cultivate "atypical, anti-disciplinary, and inter-institutional research projects." Channeling a range of perspectives from Leah Ruechle to John Maeda, Levin outlined how his lab works between disciplines, courageously exploring the use of emerging technology, and stresses to cultivate a "what's in the cool side" – the only artists can deliver.

The notion of 'craft' in the twenty-first century is only beginning to come into focus. William Morris' adage about there being no art "without resiliance in the material" was on our mind heading into ACT, and we dedicated a portion of this programming to help figure out how to rework with contemporary thinking about the design of objects and decorative objects translate into a milieu where software and hardware intersect, and digital fabrication is evolving rapidly. The Code, Craft, Methodology brought SungHeum Kim and Hwaida Kim of Protoroom, and computational artist Karsten Schmidt and Marius Watz together to discuss how computational tools can serve as a medium unto itself. Marius Watz speculated that "code is a material to be manipulated, with its own artifacts and idiosyncrasies" and – taking advantage of ACT Center's facilities – he led an intensive workshop that had participants go from learning the basics of 3D printing to learning and outputting generative data sculptures all within three days.

Contemporary practice is as equally invested in re-contextualizing existing tools as making them from scratch. If the prototypes and residencies in materials, many artists' practices are forged in the thick of critical making. The Fabric of Change session brought together sound-centric practitioners to discuss the creation of musical hardware and digital art for both the concert hall and the gallery. "Soft Synth" #1 and a pneumatic sculpture in the back of the room was from designing innovative instruments for却不 and co-Balder, ranging from the Japanese composer/performer troupe Muyo Gikaku to the Detroit techno legend Jeff Mills, and Marius Watz offered a technical and conceptual breakdown to a grass-roots sharing (aka the Soft Revolution, with which he is a key performer in the performance program) that function as a multi-channel media play. Wildly, Sam Conran channeled just about everything from Lee Ufan's study of objects to 1/0 system sounds when tracing the research around his music with the phenomenon of Autoconstructive Synthesis.
Some related highlights from the workshop offering: Do-jo-Y and Wiping 50th of Diana Band had a team of students rig up their own laptop and smartphone into 'sound guns' with some clever surgical prosthetics. Zach Lieberman used code to put an age-old medium — drawing — under the microscope, whilst Elliot Wood and Joanie Lemercier rolled up their sleeves and grafted a few projectors while demonstrating the black and bright hack.

Regardless of its ephemeral and immateriality, the digital envelops the body. The human body is the most enduring subject in art, but novel mediated experiences can help us see or experience it anew — many of the works showcased at ACT Festival are a testament to this. Ryoji Ikeda's ongoing series of projection-enveloped massive spaces around the world for ACT, and the eighth iteration of the projection-based work, he took over the 1,300 square metre space The Ground and turned it into a stroboscopic datastream. Stream is not hypermedia, siblings who ventured into this expanding and alluring work were required to take their shoes off, and in moving through the piece they resembled those striding along the edge of the sea during low tides.

Ikeda's detailed waves were complemented by other considerations of this interplay between the human form and technology. This mother dazzled a rapt audience with their most recent collaborative work ELEVENPLAY, which saw four dancers and twenty-four drone wolves around an audience in a field dance routine. Three pieces from CARMEN's Body Paint (exhibit) were on display in the exhibition; and on each of the LCD displays stood as played of near (but not quite) still painted near-naked person posing with the screen 'painted' over around their silhouettes yielding nostalgic, hybrid and evocative portrait of the mediated body.
Cultural producers should lead, not follow. ACT Forum brought together a number of international organizations to compare notes, strategies, and tactics. From MIGZ festival, Alexey Shcherchina summarized his last several years developing programming for various museums and events within Russia, including the educational and symposium components of the public media showcasing “Circle of Light” Festival that went onto Moscow’s public space. Published digital art and music hub in Nantes, France discussed the organization’s philosophy that revealing the process that yielded work is as important as its aesthetics, as a driving force within their artistic schedule— which as such toted about 300 events and the 12-phones festival each year. Delio Ogasawara presented on the “ecosystem” of venues, events, and programs as branching out of the Ars Electronica event in Linz, which notably included her organization’s partnership in the COLLEGERIP program, which puts artists in residence as cultural agents and the large Hadron Collider in Geneva.

Scaling down from the big picture of festivals and museums, artists have a place at this table when it comes to directing cultural conversations—and many of them organize their practices around reconstituting the image and modalities we live by in a world of evidence. Rogers Dickey came together with designer and engineer Raula Berkovich (of internal horizon) here and Thimus Theather, who summed up the need to “pass” as a goal and fill with things to discover how art can be as social commentary and its ability to interact with the political realm.

The future leaks into the present. Fittingly, ACT Festival’s final forum session was dedicated to interpreting the future. Delio Manabe and Mihail Genov (both ACT Media Art Lab Fellows) reflected on how usable and accessible some of the processes behind their recent motion capture and drone work, methodically demonstrating how artistic processes are both hybrid and uniquely suited to arts in the intersection of emerging technology. Jean Prosper of Google’s Advanced Technology and Projects (ATAP) group made the case for a digital or digitarian ‘designer’ whose practice is “tapping into interaction off screen and into the world.”

In discussing the interactivities behind his AMO Project and the radish wound gestural control tool ProjOut Bull, finally, given the considerable impact the design duo Dunne & Raby (of RCA Design Interactive Labs) have had in the past few years as an absolute must have Anthony Dunne one of the ACT Festival forum. Organized around the lab’s “not only, now now” he walked through a number of projects that illustrated design outcomes conceived in relation to tactile, digital, or physical, and ‘whack’, including the hyper-interactive ‘Digitalme’, from United Fibro Magnifier and the “The Art of Confronted Reading is Koffman: design school,” which was presented at the The MAB DesignLab Shout in 2016. 

Seventy five Finnish wrap-ups with two radical visions of the present and a catalogue of studies possible futures was a sliver finish to the proceedings.

ACT Festival culture is already coming into view. The Centre’s 2016 programme is ramped up focus on the stage and outputs and bolster collaboration with international researchers and the commercial sector. We will share new about residency opportunities in the coming months—and we sincerely encourage artists and designers interested in this festival and our ability to apply and get involved. Additionally, ACT Centre will be working to develop relationships with like-minded organizations throughout Asia and the rest of the world, ensuring the second edition of the festival will be even more at an international and evolving the minds.

Website | Twitter | Facebook

Organized by the ACT Centre with support from ASC (Asia Culture Center), Asia Culture in Abroad, and MCCF (Korean Ministry of Culture, Sports and Tourism).
In late February 2016, a group of openFrameworks users and educators gathered in Denver Colorado to work on improving the ways people learn and use openFrameworks (OF). They worked intensively for 5.5 days, 12 hours per day, collectively committing more than 800 people-hours to creating and improving openFrameworks learning resources. This openFrameworks Education Summit was a "doc sprint" (the largest event of its kind) was hosted by the Emergent Digital Practices Program at the University of Denver. It brought together artists & educators from the University of Denver, Carnegie Mellon University, The School of the Art Institute of Chicago, The School for Poetic Computation, Parsons School of Design, The School for the Visual Arts, Microsoft, Carnegie Museum of Art, and internationally from Vienna Austria, and Dresden Germany. The participants worked together to improve the approachability of OF that helps students around the world learn how to create with this powerful digital arts and design tool.

The Whys of Documentation

As with most open-source projects, there is a core of amazing people working in close concert to make OF happen and evolve. Known as the "TAZ" in the community, Theo Watson, Arturo Castro and Zach Lieberman spend endless hours shaping and shepherding the direction of OF in consultation with the broader community. Oftentimes they and many many others have commented on the fact that if you know how to look, the documentation page of OF were left fairly barren, with just 30% of the functions of OF having any description of what they do. This is not uncommon in open-source projects as it takes massive amounts of time to upkeep the software, much less the documentation. It also requires a set of standards that contributors will follow over the long term. None of this would be very surprising except for the example set by Processing: it is not uncommon for creative coders to move to OF as they move outside the boundaries of Processing, but the stark difference in the usefulness of the documentation has made that transition difficult for many of the OF community. Understanding that in some ways, much OF is too complicated to be documented within the same format as Processing, the challenge of the summit was to figure out what could be successfully accomplished with 18 people over 4 days. The larger group split into three subgroups focusing on the book OF learning materials, the documentation of the classes and functions, and the final editing and sharing of eBooks.
Documenting the Documentation

The most obvious changes to the basic learning material can be seen with the “learning” page on the openFrameworks website. There you will see a major re-organization of previous links as well as many new sections. The “Getting Started” section now leads brand new users to the right resources, and in the order they will need them. The “External Resources” section directs you to other tutorials, shops, and a wiki where OF users and other resources are pointed elsewhere on the web. The new “how-to” section offers short instructions and code samples for common tasks. This is our result of feedback from many OF educators who needed to be able to point students to quick and concise examples, and answer some of the most frequently asked questions for OF.

The “learning” page now also hosts the newly completed ofBook of contents, which links to a collection of carefully written topical tutorials spanning more than 175 pages. ofBook has been a massive multi-year undertaking by many influential OF artists and users, explaining everything from drawing lines, using shaders, to memory structures in C++.

Taken as a whole, the “learning” page is now the most robust and accessible resource for all levels of OF users.
A significant amount of time was also spent looking deeply at the examples that ship with OpenFrameworks and how they function as a major learning tool. Many of the examples were refined and new standards were set on how these examples and those that are part of OfxAddons might look and feel to better communicate what is happening in them. This new standard (already implemented in the OF Core examples for the next release) includes adding a readme file for each example with images and text describing the ideas behind the example, adding meaningful code comments to the examples to help explain the pieces of the code and what they are doing, and adding more overlaid text to the examples explaining what you are looking at when running the program.

The last effort is still underway — that of writing useful information on every class and function in the OF Core Documentation. First, a set of processes were put into place and adjusted to clarify the guidelines and workflow for writing documentation. Part of this is the decision of the documentation behind the scenes to separate the longer class explanations with images and links from the function definitions and parameter descriptions that are part of the tooltip in your IDE. The process was then applied to many of the major OpenFrameworks classes to begin to make sure that all methods in OpenFrameworks include documentation. The process is ongoing but many parts of the documentation are now carefully and meaningfully explained. This will not only aid the rest of OF release and it should help the documentation pages become much more useful.
Bringing people to the Table

In planning the event, careful thought and funding was applied toward the goal of inviting new voices and ideas deeper into the OF community. Some of the participants were in positions at institutions that could support their travel and lodging for the event while others did not have the resources to make the trip on their own. More than half needed assistance to fly to and stay in Denver, and these are a lot of the same people that are likely to be part of the next generation of contributors and educators of openFrameworks.

This is why these events require an inversion of the typical model where the more established you are, the more financial support you receive from the hosting institution. It also points to why a different kind of funding is required, as it is harder to raise money for emerging artists and teachers. Additionally, because this was held at an educational institution, it was foreign rock stars and openFrameworks in the field, and not open significant time interacting with students. It required longer-term thinking to see how the work done at the event will have benefits to students at the institution for years to come.

The participants ranged in age and background, some having extensive experience coding openFrameworks and ofxAddons, while others had never used the tool. This created a broad range of perspectives in the room to discuss the approaches and process being followed. This meant that many voices were heard and change could happen quickly, pointing to why such events should happen every year for open-source projects like OF.

Support and Research

The Emergent Digital Practices program hosted the OF Educational Summit just one year after hosting the Processing Development Team for the development of Processing version 3. These efforts were spearheaded by the EDP Director, Christopher Newport, in part to give back to the open-source community that its program and artists work with. These events have been modeled after similar events at Carnegie Mellon University’s Frank-Ratchye Studio for Creative Inquiry, The Art and Technology Department at the School of the Art Institute of Chicago, the Interactive Telecommunications Program at NYU, and The School for Poetic Computation. Free creative coding packages like Processing, P5, and OF have not only opened up worlds of possibilities, but also freed up money that was previously spent on paid software packages. We would encourage every research institution in the US (and beyond), who uses these software tools in their classrooms to find ways to support their continued development. This support might include donations, making open-source software contributions a viable research path towards tenure, or hosting events like these where massive leaps forward are made.

Many thanks to the participants: Christopher Baker, Chris Coleman, Christine de Carteret, Gannon Dore, Sarah Goldsmith, Andrew Hieronymi, Anika Hirt, Zach Howorka, Golan Levin, Zach Lieberman, Nicole Meister, Caitlin Morris, Stacey Musialy, David Newbury, Caroline Record, Deborah Schmitt, Goshzilla Silver and Dan Wilson.

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シークレット・ライヴズ・オブ・ナンバーズ 2002
The Secret Lives of Numbers 2002
ゴラン・レヴィン
Golan LEVIN

この作品では、1から100000までの数字の使用頻度やパターンがウェブ上のデータから収集され、その統計値が動的なインターフェイスとして提示されています。数の使用パターンが、私たちの社会や文化、そして歴史をいかに反映しているかを、マウスをドラッグすることで知ることができます。

私たちの世界は、さまざまな数字によって構成されています。数字はふだん無機的に扱われがちで、あまり気にとまれない存在ですが、各数字がどのように使用されているかを膨大なデータベースに統計学的に分析し可視化してみると、世界がふだんと異なる様相として現れ始めます。1997年以降、ウェブ上に現われる1から100000までの整数値を統計的に集め、人気度によって分類しそれを表示することで、この作品は、人間の指の数由来する十進法を基盤に、数学が歴史やさまざまな社会的現象や人間の行動を自動的に反映するだけでなく、その使用パターンが一種必然的に決定されていることを教えてくれます。この作品ではまた、それらの数字が一般的に連想されるフレーズや既存の固有名詞等も、検索し表示しています。さてあなたは、数字にまつわるどのようなパターンや秘密を見いだすのでしょうか？[SY]

この作品のオンライン・バージョンは以下で体験可能です。
http://archive.turbulence.org/Works/nums/

This work collects the use frequency and the patterns of the numbers from 1 through 100,000 over the web, and presents the statistics as a dynamic interface. By dragging a mouse, we can see how the use patterns of numbers reflect our society, culture and history.

Our world is composed of numbers. We tend to handle numbers as inorganic objects without paying them much attention. However, when we statistically analyze and visualize the use of numbers based on huge amounts of data, the world looks different. Based on the decadal system, deriving from our ten fingers, this work statistically collects integers from 1 through 100,000 that have appeared on the web after 1997, classifies them according to popularity, and displays the results, in order to show that the numbers reflect history, social phenomena and human behaviors, and that a usage pattern is determined somewhat inevitably. This work also searches and displays phrases and existing proper nouns that are associated with these numbers. Please try and see the patterns and secrets hidden in the numbers. [SY]

You can experience the online version of the work.
http://archive.turbulence.org/Works/nums/
Day for Night in Houston has invited 14 artists to create interactive art installations at the festival which celebrates sound and light.

Approaching in less than two weeks is Day for Night, the weekend-long music and art festival in Houston. Musicians from Blood Orange to Butthole Surfers fill its lineup for the event’s second coming, but while the concerts may be the main draw for many, there’s also a number of immersive and interactive art installations for those looking for a little respite from the packed crowds or perilous mosh pits.
Curator Alex Czetwertynski has selected 15 international artists to contribute new media works that all involve light manipulations (did you really expect oil paintings to feature at a music festival headlined by Aphex Twin?) — a nod to the festival’s name, which refers to the cinematic techniques used to present the illusion of night even while shooting during the day. Day for Night is held this year at the former Barbara Jordan Post Office, which was designed in the ’60s and boasts a beautiful concrete facade. We’re looking forward to seeing how these technology-based installations will look in its now empty, mid-century spaces; here are six that have already caught our attention. And don’t sleep on entering Hyperallergic’s giveaway to win two tickets, airfare, and hotel accommodations for the festival. Hyperallergic is a media sponsor for Day for Night.

**Children of the Light, “Reflector Suits”**

It’ll be hard not to spot the Amsterdam-based visual artists Christopher Gabriel and Arnout Hulskamp, together known as Children of the Light: just look out for a pair of dudes in near-blinding, illuminated attire. Shining bright white, these “Reflector Suits” make their performers appear as mysterious, invisible men clothed in dynamic suits, caps, and perfectly round sunglasses. Gabriel and Hulskamp’s will be staging improvisational performances at the festival, moving through spaces like living sculptures; specters with offbeat sartorial sensibilities.
Björek, “Björek Digital”

Björek, in one sense, stunned the art world with her retrospective at the Museum of Modern Art last year. That was, simply, Björek. But now we also have Björek Digital, which premiered in Sydney in June. The exhibition itself manifests in physical space, IRL, but its five rooms are filled with digital and video works all experienced in virtual reality — which has proven to be pretty much the hottest artistic medium of 2016. They all accompany songs on Vulnicura, the Icelandic musician’s album that was released last year. I’ll let Björek herself take it away:

```
i feel the chronological narrative of the album is ideal for the private circus virtual reality is . a theatre able to capture the emotional landscape of it ive put importance in the exhibition on the interactive element , that folks can watch vulnicura on vr and try biophilia w ipads and a cinema room with all my videos in 5.1
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Shoplifter, “Nervescape” (2016) at the Queensland Art Gallery & Gallery of Modern Art in Australia

**Shoplifter, “Nervescape”**

Hair is the medium of choice of the Icelandic artist Hrafnhildur Arnardótti, who goes by Shoplifter. The 2011 recipient of the Nordic Award in Textiles, she makes work of all scales, from small, delicate objects she calls “nonsicles” to pieces that consume entire
spaces. For Day for Night, she’s created a work that will literally consume and get bigger — according to a release, “Nervescap” is a “living, breathing interactive sculpture that feeds on sounds, growing inside a large cage.”

Golan Levin, “Ghost Pole Propagator”

Last time we checked in on new media artist [Golan Levin](http://golanlevin.com), he was busy developing [Terrapattern](https://golanlevin.com/terrapattern/), an absorbing visual search engine for urban aerial patterns. At Day for Night, he presents a project that focuses on the expressive potential of the most minimal of human forms: the stick figure. “Ghost Pole Propagator,” which Levin first developed in 2007 for an exhibition in Newcastle, England, responds to its observers movements, with a setup capturing and translating gestures into simple but evocative lines. At Newcastle, Levin had projected these resulting figures on the walls of an old, 13th century castle, where they resembled cryptic petroglyphs; we’ll see what the effect is in Houston, where the mood will undoubtedly be quite different.

**Damien Echols, “Sigil Room”**
You may recognize Damien Echols as one of the West Memphis Three, but since his release from prison five years ago, he's focused on writing and making art. Glyphs and sigils feature strongly in his visual work; at the festival, he will immerse viewers in a room illuminated with these magical signs, where he will also stage a performance.

Alex Czetwertynski Blurware

**Alex Czetwertynski, “Blurware”**

Czetwertynski has described his contribution as “an excavator wrapped in white pillows” — and I’m really hoping it involved a real life, true-to-scale piece of heavy construction because that would just be absurd, especially if it actually moves. Whatever the size of this swaddled work, the artist and curator will use the blank surfaces as screens, projecting videos on them to explore “the blurry line between soft(ware) and hard(ware), body and mind, solid state, and immaterial aspiration.” But remember: while under the influence, do not operate heavy machinery.
A live music festival that makes digital, multimedia and light art a vital component of the event is something of a rarity in the United States, but a music and visual art festival produced in the dead of winter, well that’s uniquely Houston. After a successful debut last year, Day for Night (http://www.dayfornight.io), the three-day music and art event presented by Free Press Houston and New York-based creative firm Work-Order, makes a venue move to the Post HTX (http://houston.culturemap.com/news/city-life/09-16-16-post-office/#slide=1) space to light up downtown Houston this weekend.

With four stages and every hour from afternoon until dead of night filled with music, you might be tempted to spend the weekend running from one favorite musician or band to the next. But on your way from stage to stage, don’t forget to feed your eyes. Day for Night offers some of the top national and international artists working and creating at that blurry, but often beautiful
edge, where technology and traditional visual art meet. Curated by Day For Night co-founder Alex Czetwertynski, this impressive offering, which they’re calling the Light lineup, should not be bypassed on your way to that favorite band. Take time out to wander upstairs where many of the installations and immersive art experience are located.

Don’t know where to begin your art journey? Here’s a quick don’t-miss list to map(http://www.dayfornight.io/wp-content/uploads/2016/12/DFN_2016_map.pdf) your way through some of the art highlights.

**Björk Digital**

Just one installation from the international renowned musician, visual artist and occasional fashion icon would never be enough; instead, as both a sound and light headliner at Day for Night, Björk brings with her an entire exhibition. This five gallery exhibition will feature immersive digital and video work that fest-goers can experience in virtuality. Yes, you’ll strap on the sci-fi, VR headset to go into Björk’s weird and wonderful worlds. The rooms will include the MOMA commissioned *Black Lake* and its views of the highlands of Björk’s native Iceland and *Mouthmantra VR* which takes you inside Björk’s mouth as she sings. Björk will also perform live DJ sets at the Friday night preview party as well as on Sunday.

**Musica Universalis by United Visual Artists (UVA)**

For your pre-fest homework brush up on Pythagoras’s theories on harmonics because, appropriately enough for an art and music festival, United Visual Arts invites viewers and listeners to explore the music of the spheres. The internationally influential London-based art practice combines kinetic sculpture, music, light and color in their latest work as UVA delves into resonance and harmony in the universe.
**SHIRO by NONOTAK**

Last year, NONOTAK’s massive light, sound and scaffolding installation Volume was the art hit of Day for Night and garnered the duo many local fans. So, of course, fest programmers brought the Paris-based team of illustrator Noemi Schipfer and architect and musician Takami Nakamoto back to wow crowds again with a site specific version of their work SHIRO, which becomes both an installation and a stage for live audiovisual performances. They’ll also debut the brand new work created for Day for Night, Highline.

**Crimson Lotus by Damien Echols**

Painter and sculptor Echols is also the best-selling author of the memoir *Life After Death* which chronicled his early life and then 18 years on death row after being wrongly convicted for murder as one of the West Memphis Three. Echols’s spiritual Magick practices sustained this innocent man awaiting his execution, and now Magick has become a focus of his art. Early word on Crimson Lotus is that the installation will be a collaboration with art curator Alex Czertwertynski who will create a sigil light room based on Echols images that will also become an immersive space for live performances from Echols.

**Ghostbeast by Shoplifter**

Björk won’t be the only Icelandic artist bringing quirky installations to the festival. Take a break from light, video and digital art to visit Shoplifter’s caged sculptural beast. The artist, who works in human hair as well as other natural fibers, creates playful and humorous sculptures. Step up and give her Ghostbeast a sonic treat. The interactive hair creature growing in a large cage feeds on sounds.

**Art Unbound**

Head outside into the winter air – which will probably be warm and humid, knowing Houston – for some outdoor art and sample the work of one pioneer of digital and computational art, Golan Levin, and one very young and rising artist in the field, Ezra Miller. Viewers
of Levin’s Ghost Pole Propagator become the artwork as their images are transformed into stick figures and then projected onto an 180-foot wall opposite the Day for Night food court. Meanwhile around the corner, near the Red Stage area, 20-year-old Ezra Miller’s Warp Transmission interacts with the music artists and bands on the main stage by combining a live video feed of the performance with his own visuals.

**The Venue Formally Known as the Barbara Jordon Post Office**

Once upon a time, people used to send these objects of communication called letters at an office of posting. In downtown Houston that letter relay station was the massive Barbara Jordan Post Office. Built in the early ’60s, the five-story building sitting on 16 acres of land holds lots of raw, industrial and perhaps even eerie space most Houstonians probably never really thought about during those begone days when they stopped to mail a package or buy a stamp. Day for Night 2016 gives us a back (postal) stage look at the facility and allows us to see it transformed by light and sound.

How much will this venue add to the Day for Night experience? Well, during a recent conversation I had with one of the Day for Night music artists, Houston’s own Fat Tony(http://houston.culturemap.com/news/innovation/12-07-16-houston-public-media-joins-vuhaus-music-platform-fat-tony-live-performance/#slide=0), we discussed his preparation for the festival and his own excited reaction to getting an early look and feel for the venue.

“We did a run through to check it out, and it was really scary,” Fat Tony described. “It looks like a great place to film a horror movie. It’s dark, squeaking and creaking. It’s definitely haunted, I’m sure.”

Day for Night(https://www.eventbrite.com/e/day-for-night-aphex-twin-odesza-travis-scott-kaskade-bjork-tickets-27587614297) runs Friday, December 16 until 2:00 a.m. Monday, December 19. Read this
Events and Parties

Four Questions for Day for Night Festival’s Visual Art Curator, Alex Czetwertynski

Björk Digital, Golan Levin, and Shoplifter are on the roster.

Brian Boucher, December 15, 2016

Houston is revving up for the second edition of the Day For Night music festival, which this year will include some 15 site-specific commissions and new media installations. Co-founded by Alex Czetwertynski, who is curating the visual art presentation, the festival takes place December 17–18 and touts musical acts such as Aphex Twin, Jesus and Mary Chain, Butthole Surfers, Blood Orange, and Mykki Blanco.

On the roster as part of the visual arts show are creatives including AV&C + Houze, Björk Digital, Damien Echols, Golan Levin, NONOTAK, Shoplifter, United Visual Artists (UVA), and Various Projects.
At Day for Night Festival, a Surreal World of Light Provides Respite from the Music

In a modernist complex in downtown Houston, artists transform the dark corners and rooms into a light-filled cluster of art.

Claire Voon  |  December 20, 2016
HOUSTON — For over 50 years, postal workers scuttled through the concrete building once known as Houston’s Barbara Jordan Post Office; but with last year’s closure of those mail operations arrived an opportunity to breathe new life into the hulking, modernist edifice. Now a multipurpose space saved from demolition, the structure last weekend blinked with colorful lights for its first function: Day for Night, an annual music and arts festival anchored right in the city. Although it just turned two, it is already establishing itself within the crowded sphere of its kind as a small but highly considered event, contained to not overwhelm but still offering plenty to impress.

Part of why Day for Night stands out stems from its organizers’ strong efforts to give visual artists both equal and distinct footing to the musical lineup — the main draw for most attendees (Aphex Twin, Run the Jewels, and Blood Orange were among this year’s roster). Aside from one stage, all musical performances occurred outdoors while two floors of the former post office became the vast, open setting for curator Alex Czetwertynski’s selection of projects to overtake. The space is an empty warehouse, and organizers kept it dark and fog-filled, with pretty much only the art serving as light sources; the resulting mood edged on dystopian, introducing an unexpected, almost sinister thrill to what could have simply been a big warehouse rave.

The artworks fill main hallways but also side rooms, inviting exploration of the historic building. Day for Night, is, of course, fundamentally a party, so all the art was light-based and highly sensory. But while a number did follow the obvious route and cater to a drug-addled crowd (a frenzied mirror-and-light show begged for selfies; colorful projections floating above cushions was a space to chill or trip), many were impressive technical feats that contributed to the ominous setting, together creating a wholly different experience from the typical concert experience outdoors.

Whether intended or not, Michael Fullman (of VT Pro Design), for instance, presented a lightshow that evoked many current conversations about surveillance. “Bardo” consisted of dozens of stage lights that tracked attendees on a dance floor-like stage; at its weakest moments, the lights bounced around to loud music so the space simply resembled an enclosed party, but when they moved slowly in careful,
deliberate paths to focus on individuals, the beams recalled eerie search lights, inescapable in that space. Standing in them, you feel vulnerable and exposed as everyone around you holds up a phone to snap photos.

I encountered a similar sense of entrapment at “Outlines,” another beam-heavy installation by St. Petersburg collective TUNDRA. About 400 lasers shot to the ceiling from the ground, turning on and off to sync with a thunderous soundscape and form a shocking, endlessly shifting grid of red light. A viewing platform sandwiched viewers between the menacing lines so from afar, people appeared as part of the installation, trapped in a futuristic, self-controlling prison. This was a darker echo of the cage-like setting near the building’s main entrance by Icelandic artist Shoplifter, which overtook a small space bordered by chainlink fence. “Ghost Beast” arose from her signature medium of hair, here technicolored and appearing alive from abstract projections covering the textured strands. Intermingled with ripped up fence, the cottony masses seemed like a monster slowly consuming the building, reminding in playful form of the structural demolition that was once its near-certain fate. Nearby, an excavator parked in the darkness, still crusted with dirt, seemed to quietly celebrate this escape. It was installed by Czetwertynski, who had masked its cold metal with the inviting cushion of white pillows. In this surrealist form, the vehicle served as an absurd canvas for another series of colorful projections, like a relic of a not-so-distant past in need now of new purpose in our world of digital constructions.
Where truly breathtaking beauty shone amid all this looming darkness was in a long room transformed into the universe. A row of spheres each surrounded by small, swirling orbs of light extended its length in a neat row, recalling planets dancing together, in precise synchronization, to a deep, ambient soundscape. The series of endless eclipses, designed by United Visual Artists (UVA), was hypnotic, drawing you deeper into meditation the longer you remained. But this otherworldly ballet was slightly eerie, too, suggesting human ability to restage nature’s most wondrous mysteries.

People were so curious to experience UVA’s “Musica Universalis” that it constantly witnessed a long, static line outside its entrance even though musical performances outside offered other entertainment. This was not the only Rain Room-like queue at Day for Night: the festival also hosted Björk Digital, a five-room installation offering a series of virtual reality music videos featuring the Icelandic artist. The entire experience amounts to roughly 80 minutes, if you linger in the final rooms where you have the option to play with an app or watch videos for as long as you desired.
This, to me, seemed incredibly demanding for a two-day festival — I personally asked to leave after two rooms, feeling antsy — yet hundreds of attendees waited patiently to enter. One man I spoke with said he had spent the entire day in line — missing all of the day's musical acts. There was a clear appetite for this particular technology, one that is especially uncanny when you consider that some people are actually waiting in line to see — or are seeing — Björk Digital while Björk IRL is DJing on stage in the next room. These lines exemplified Day for Night's success in bringing art to the general public, in drawing out the curiosity of people who may not necessarily seek out art experiences. Every installation also arrived with wall text (some very extensive) to provide context for those wanting to learn more.

Such order in the foggy, dimly lit darkness introduced yet another strange layer to an event where you expect chaos to reign — particularly when you invite thousands upon thousands of young adults to run around an old building with drinks and joints in hand. Yet, even when you went outdoors, the dreamlike atmosphere of the interior never quite faded; the entire complex felt very much like its own contained world, the only place alive in downtown Houston, where many businesses were shut down for the weekend. The building itself breathed with energy: aside from lights pulsating across its gridded walls, one of its sides became the canvas for Chicago artist Ezra Miller, who projected colorful, ever-shifting animations on it that corresponded to the live music from the nearby stage.

When I observed them at one point, they resembled a blanket of clouds, painterly due to the building's subtle texture. The swirling lights stood out against the darkening sky next to the city's own rows of electric squares, but they were far more arresting. The pastel forms recalled an Impressionist's handiwork; and in that moment, I nearly forgot the colors had come from code. Miller's mural showcased the potential range of Day for Night’s future exhibitions, asserting that even traditional aesthetics may shine bright here.
At Day for Night Festival, a Surreal World of Light Provides Respite from the Music

Golan Levin, “Ghost Pole Propagator” at Houston’s Day for Night Festival 2016

Day for Night took place on December 17 and 18 at the former Barbara Jordan Post Office (701 Franklin Street) in Houston, Texas.

Editor’s note: The author’s travel expenses and accommodations in Houston were paid for by Day for Night.

Correction: This post originally misstated the name of the post office where for Day for Night took place. It has been fixed.
Now, programming robots is not just for those with years of coding knowledge, it's for anyone who wants to experience what it's like to simply wave at a robot and have it wave back.

Gannon designed Quipt, open-source software that turns a human’s motions into instructions a robot can understand. She designed it while in residence at Autodesk Pier 9 in San Francisco.

When she left for her residency, she had been working with industrial robots at Carnegie Mellon University for a few years. She was close to making a big change.

"I wanted to invent better ways to talk with machines who can make things. Industrial robots are some of the most adaptable and useful to do that," she said.

But they are also some of the most dangerous. The U.S. Department of Labor has a special Web site devoted to "Industrial Robots and Robot System Safety." These robots are big, and they have to be programmed by people with years of training.

That programming takes place "basically with a joystick," according to Gannon. Programmers move the robot to a place, record a point and iteratively build up a motion path for the robots to remember.

"Then the robot will repeat that task 24/7. That is their world," Gannon said.

But not anymore. Quipt replaces the joystick technique. Its software stitches together the robot with a motion capture system, which are cameras that look into a space and let the robot see where it is.

"I gave this robot — this big, powerful dumb robot — eyes into the environment," Gannon said.

When the robot looks with its motion-capture eyes, it sees tracking markers on a person's hand or clothes. Now, it can track a person while remaining a certain distance away, it can mirror a movement, or it can be told to avoid markers.

Which means that potentially these robots are a lot safer — and a lot smarter. Gannon imagines a world where they aren't just welding parts on an assembly line.

"I think what's really exciting is taking these machines off of control settings and taking them into live environments, like classrooms or construction sites," Gannon said.

Gannon collaborated with visiting artist Addie Wagenknecht and the Frank-Ratchye STUDIO for Creative Inquiry to develop a robot that could rock a baby’s cradle according to the sound of the baby's cry.

This software is a cousin to another of Gannon's projects that makes technology more hands-on — last year Gannon released Tactum, which takes the software guesswork out of 3-D printing. In fact, Tactum projects an image directly on your body, and with your own hands you can manipulate the image to make it fit or look exactly how you like. Together with a projector, which produces the image on your skin, and a sensor, which can detect your skin and how you're touching it, the software updates the 3-D model that you're creating. When you're ready to print, you just simply close your hand and your design goes to the 3-D printer.

Gannon was drawn to CMU's College of Fine Arts when the School of Architecture added new fabrication equipment.

"I felt like I had the keys to the candy shop," she said.

"My research is really playing in the field of computer science and robotics, but the questions I'm able to ask those specific domains is conditioned by my architectural background. It's really a spatial answer, how to control or interact with a robot. That, in my mind, is an architectural answer to this problem," she said.

Golan Levin, director of the Frank-Ratchye STUDIO for Creative Inquiry at CMU, is one of Gannon's doctoral thesis advisors. He thinks her work could change how people design architecture, clothing and furniture, as well as influence industrial design and the arts.

"Madeline is remarkable for the way in which she brings together an acutely sensitive design intuition with a muscular ability to develop high-performance software," Levin said. "The kind of work she is doing could not be achieved by a collaboration between a designer and engineer; it takes a single person with a unified understanding of both."

Stephen Lee, head of CMU's School of Architecture, has a philosophy that students learn best when they learn by making. He has attended Gannon's presentations and hired her to teach undergraduate architecture courses.

"I think project-based learning and the maker culture are revolutionizing both the academy [K-12 & university] and practice [more slowly]. She is front and center in these new ways of learning and doing," Lee said.