ISEA2016 HONG KONG - WELCOMING ADDRESS

THE LANDSCAPE OF ELECTRONIC ART

ART AND TECHNOLOGY, A PERFECT COMBINATION FOR INNOVATION

HKU WELCOMES ISEA

R>CONNECTING SENSES

CONJUNCTIONS AND DISJUNCTIONS.

RESONATORS AT THE EXHIBITION

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The landscape of electronic art has over the years produced certain ‘must see’ loci of which ISEA is certainly one of its most important points of convergence. Instigated in the Netherlands in 1988, ISEA has managed to maintain currency and urgency by so far travelling to twenty-one cities across the world and continuously being reinvented and reinvigorated by the passion of its organizers in those cities.

The landscape of electronic art has undergone remarkable transformations and evolvements over the last 50+ years. This has been driven by artists’ perennial urge to renew (to regenerate and rehabilitate) the practice of art, in conjunction with the exceptional flourishing of new media resources and new modalities of intercommunication. ISEA, together with the other landmark institutions, festivals and exhibitions that have sprung up to celebrate this efflorescence of creativity, constitute vital communities of practice that consolidate and replenish the aesthetic and conceptual vigor of this hyperbola.

It is Hong Kong’s privilege to host ISEA in 2016 – to take its place and to contribute to the current and future trajectory of electronic art. It is also an opportunity to promulgate and integrate its own proud traditions of media art that have been a dynamic feature of Hong Kong’s cultural landscape for over 30 years. The Asian contribution to the history of electronic art is paramount – its luminaries and singular formations have inculcated media art with many of its most essential aspects.

Each ISEA is a fortuitous concatenation of the enthusiasm (and hard work) of those persons who pull it together, and the ardent engagement (and hard work) of those artists and writers who give content to its body of programs and exhibitions. It is also the purposeful platform for a community of zealots and supporters (and critics) to come together from all over the world and share and learn from direct experience.

Electronic art today operates under the sway of
the global entrancement with the ever more ‘out of this world’ prospects of an electronic future. The allure of the new, of ‘innovation’, goes without question and is an infatuation that underpins economic and social policy almost everywhere. The philosopher Bernard Stiegler talks about the immense transformation that is currently underway “…that is leading globalized consumerism to liquidate all forms of knowledge (savoir vivre, savoir faire and savoir conceptualiser, knowledge of how to live, do and think).” If our academic and artistic project is about ‘creating new knowledge’, then in Stiegler’s words we need knowledge that “…enriches and individuates the social organization in which (we) live without destroying it.” This at heart is the project of ISEA2016 ‘Cultural Revolution’.

**Jeffrey Shaw**
Artistic Director ISEA2016
Chair Professor of Media Art
School of Creative Media
City University Hong Kong
PolyU Design opened its doors to an ever wider range of international and local initiatives as we moved to the Jockey Club Innovation Tower designed by Zaha Hadid in 2014. Building on both strong commercial collaborations and significant social innovation projects, we aim to better the world by the means of design. It is our great pleasure to be part of ISEA2016 team this year as we see value in working side by side and collaboratively with artists with overlapping values and goals. Artists have the power to push latest technologies, while our goal is to find sustainable and practical uses. Design and art can go side by side when major corporations invest in experimentation and interactive and electronic art often serve as inspiration for our students working with technology. We find ourselves sharing the goals of various artistic pursuits when the local society and social concerns are addressed by creative processes of the two kind - art and design.

Developments in all kinds of technology fields are providing a mere-a-boire of possibilities to enrich our lives and to save the planet. Compared to any other discipline, the art field remains to be the most liberal of any types of conventions, with the exception of the mastering of some technical skills, in terms of selecting the topics to work on and in terms of choosing the form of expression. Artist, be it in film, poetry or installations, have always been able to carve out human feelings and emotions and they have been most sensitive to changes in society. The marriage of art and technology, as we will see in the ISEA conference, will inform us about who we are, about what we feel and about our common future.

In the 2016 ISEA conference, CityU with a strength in media art and PolyU with a strength in design are the hosts. The conference provides a platform for the two universities to collaborate on bringing the marriage between art and technology to Hong Kong. Where media art is a source of inspiration, design thinks about how to take the inspiration further in to valuable products, services and systems further to the benefit of individual, organizations.
and society. Hong Kong is a special place with its own characteristics. Technologies are universal and travel for that reason, but art and design often have a local touch to it. They are about creating meaning that is embedded in social and cultural layers. Hong Kong being one of the most densely populated cities in the world, with a creative reputation that was built from the 70’s and 80’s of the last century is going through major changes in the transformation from a British colony to becoming one of the many cities in China. It fights to keep its identity and its uniqueness. The 2016 ISEA will be a massive expression of feelings, emotions and it will also show and inspire many new possibilities. That will stimulate many discussions on the real issues, with inspirational pathways to a better future.

Cees de Bont and Hanna Wirman
School of Design
Hong Kong Polytechnic University
ISEA 2016 impresses with a multifaceted visual arts programme that engages an unprecedented number of international artists and displays throughout Hong Kong. Masterminded by Dr. Harald Kraemer and co-organised by City University and Polytechnic University, The University of Hong Kong is thankful for the opportunity to participate and to display four innovative and thought-provoking projects on our campus. The overall selection of artists and works stimulates a discussion on public art and the meaning of and necessity for an enhanced engagement of our students and the local public with high-quality art. We are grateful for being part of this process.

Florian Knothe
Director, Hong Kong University Museum and Art Gallery
For the second time the artists-in-labs program from Zurich University of the Arts is present at the ISEA symposium which is hosted in Hong Kong in 2016. Artworks and experiments of six artists/artist groups from East Asia and Europe will get presented at Connecting Spaces Hong Kong - Zurich. R<CONNECTING SENSES focuses on perception, the relationship of art, science, technology and sensory systems. Oscillating between kinetic mechanics, material collages and poetic acoustics, the artists share a strong interest in experimental concepts and transdisciplinary encounters. Thus, the exhibition functions as a laboratory by way of discussions and interactions. Artistic practices, aesthetic strategies and situated knowledge are presented and shared among the artists of the exhibition and the ISEA participants and visitors, who are more than welcome to challenge the visible and invisible. Together we aim to create new ideas and new artistic outputs by crossing, blurring and re-connecting the borders of art and science, cultural perspectives and the human senses.

Since 2004, the artists-in-labs (ail) program has been facilitating artistic research through long-term residencies for artists in scientific laboratories and research institutes. The program is part of the Institute for Cultural Studies in the Arts ICS at Zurich University of the Arts ZHdK. It promotes sustainable collaborations between artists and scientists of all disciplines, in Switzerland and across the world. These transdisciplinary and cross-border collaborations provide artists with an opportunity to critically engage with the sciences and their experimental and aesthetic dimensions. The artists have the possibility to explore the lab site as well as a vast range of scientific topics, methods and technologies. The collaborative residencies of the ail program are presented at various national and international exhibitions, symposia, workshops and performances. They are introduced and documented in books and short films, in order to share explorations, ideas, discussions and aesthetic experiences with a broader audience.

Irène Hediger
Director, artist-in-labs program,
Zurich University of the Arts

Nuria Kraemer
Head, Connecting Spaces Hong Kong – Zurich
Nearly 700 submissions. 129 reviewers. 140 artists. 4 locations. Like any large scale group exhibition, the challenge in curating ISEA Hong Kong was how to create a cohesive experience from such a profoundly diverse set of work. To begin, we attempted to situ-ate the pieces within a framework of dialogues and confrontations, of responses and reflections. We were inspired here both by the “Conjunctions and Disjunctions” of Octavio Paz, and Italo Calvino’s “Six Memos for the Next Millenium”. In these works, Paz and Calvino explore the diversity of difference and its contribution to productive discourse. In similar fashion, we attempted to create dialogues between sets of works, with argument and refutations, point and counterpoint, all leading to some kind of compelling harmony, however dissonant at times. This strategic frame has, we hope, helped to bring the range of these works into some sort of order. The four locations of the exhibition (the Run Run Shaw Creative Media Centre of City University, the School of Design at the Polytechnic University, the Chi Wah Learning Commons of the Hong Kong University and Connecting Spaces of the Zurich University of the Arts) each feature different applications of these conjunctions and disjunctions. The works of art and the four architectures equally serve in the broadest sense as ‘resonators’.

RUN RUN SHAW CREATIVE MEDIA CENTRE (CMC)
When putting together a show of this magnitude, selecting the works is only one of the challenges. Another is the design of the exhibition itself. The impressive geometric exterior of Daniel Libeskind’s Run Run Shaw Creative Media Centre encloses a set of inclined walls and tricky corners which make the endeavor more difficult still. Thus the group of works displayed in the CMC leverage the building’s open balconies as a vertical axis, with spaces on the 3rd, 8th and 9th floors providing horizontal counterpoint. Don Ritter and Tobias Gremmler engage
directly with Libeskind’s architecture by projection-mapping its contours. Gremmler’s work engages the unique interior angles of the lobby space while Ritter’s ‘Burning Too’ grapples with the facade itself. Ascending through the lobby, the 3rd floor gallery presents an overview of the vast diversity of work featured at ISEA. On one side of the central wall we find the interactive and responsive objects, while on the other we encounter audiovisual interpretations of signal and noise. On the first balcony, ‘The Useless Machine for Democracy’ hints at Hong Kong’s recent Umbrella Movement and acts as a base for the vertical axis which rises through a range of artworks also engaging critically with socio-political issues. The 5th and the 6th floors explore different forms of communication, from Goldfish dialogues via the BBC and Baidu News to ‘Memento Mori’. While the Mini Cinema Studio and the immersive panoramic Gallery360 on the 7th and 8th floors invite the audience to discover narratives, documentaries and visualisations, the 8th floor balcony showcases money and sex, with works reflecting on cybersex and its relation to capitalism. The 9th floor showcases the diversity of video forms, exploring immersion, engagement, and disorientation. On the final balcony of the 9th floor, Fleury/Fontaine’s ‘Wait and See’, a work of generative data visualisation, and Van Eenoo’s ‘Rain and Sea’ (both also shown at PolyU) serve to link the two architecturally distinct locations.

THE JOCKEY CLUB INNOVATION TOWER
AT THE HONG KONG POLYTECHNIC UNIVERSITY

While different thematic discussions are situated on the various balconies of the CMC, the exhibition at PolyU flows more smoothly between positions. Through the creation of dialogical pairings, the conjunctions and disjunctions we found in the work are made more explicitly apparent. Both harmony and discord are manifest in a variety of ways: in the rep-
etition of narratives; in the flow of visual language to be found in the animations; in the way that cultural heritage is playfully documented and transformed. The more open space of Zaha Hadid’s impressive building allows for the presentation of larger environments and installations. And finally, from an apparent dead-end, the viewer encounters ‘Ouroboros’, Moebius and a ‘Mirror’, and is guided back to the start, this time in reverse, allowing for a second storyline to unfold.

**THE UNIVERSITY OF HONG KONG**

Next to the bookstore of HKU, four pieces related to language, gesture, signs and their complex relationship are situated. These works explore the analysis of sign systems via gesture, communication as a means of understanding cultural heritage, the power of performative reading, and the challenges of constantly mutating and transforming texts.

**CONNECTING SPACES OF ZURICH UNIVERSITY OF THE ARTS**

For this location, a special form of cooperation has been planned. The artists-in-labs program of the Zurich University of the Arts promotes collaborations between artists and scientists of all disciplines and will focus on perception, art, science, and sensory systems. The collaboration between the three artists from Switzerland chosen by Irène Hediger and the three artworks juried by ISEA will function as a sort of laboratory for the exchange of practices, strategies, and situated knowledge to be found among the artists of the exhibition and visitors to ISEA. Connecting Spaces will host these intercultural and transdisciplinary encounters focusing around creative production and methodologies that cross borders to connect art and science.

Parallel to the exhibitions, there are ISEA ’s Juried Performances and Events in Public Space which take place at a number of different venues. These demonstrate both the strong influence of electronic arts in these disciplines, and the continual erosion of
boundaries between them. Under the umbrella of electronic arts, any form of engagement is now thinkable. Take for instance the Open Sky Gallery Project for ICC, a joint collaboration between ISEA, the ICC Tower (Sun Hung Kai Properties) and the Hong Kong Arts Development Council, showcasing artworks on ICC’s vast 77,000 square meter LED façade. In response to an open call for artworks posted in 2015, 70 submissions from around the globe have been received and an official selection of the top 6 artists and 22 honorable mentions was made by an international board of expert juries through a blind review process.

In assembling this group of works from the nearly 700 submissions we received, we found a range of powerful voices remarkable as much for their diversity as for their cohesion. And what could be more appropriate for Hong Kong, a city of interminable contradiction and dizzying multiplicity, from which a peculiar harmony is able, somehow, to emerge. We welcome you to Hong Kong and invite you to discover the conjunctions and disjunctions of this city and this show; we hope that you enjoy both as much as we do.

Harald Kraemer, Kyle Chung & Daniel C. Howe
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And all the participating artists of ISEA2016 Hong Kong.
The experimental video “Hive”, takes a look at the unplanned urbanization, which has been paraded under the guise of “urban renewal”, Istanbul has been undergoing for many years. This unplanned urbanization creates mega cities made out of concrete, by destroying the existing historical and cultural legacy. Today, Istanbul has become a giant construction site where the terrifying reflections of the applied urban politics can be seen through the disappearance of ethnic identities, and the gap in the living conditions of individuals.

This situation is conveyed through the visualization of Marx’s bee and machine metaphor. This metaphor exemplifies how, due to the heavy work load, the workers become mechanical; how they are not only exposed to the adverse effects of this workload but even pay for it with their lives. The workers are
forced to work at such a speed and yet this speed leads to the creation of both abundance, but also nothingness. At the same time, the metaphor represents the impossibility for the workers to own the very building they help produce.

This video collage is a surreal visual representation of a skyscraper which consists of 160 videos containing eight horizontal and twenty vertical. It has an experimental language, leaving the traditional horizontal video format behind for a vertical design. The framing and point of view aim to create an illusion. Reality is broken in this new form created through documentary footage, where micro human figures move at a rapid pace, reflecting the speed of the world in which we live in and creating a façade of time. The momentary black pieces shows up to symbolize the death of each worker because of the security gap which is a huge social problem encountered in Turkey. And then they appear so fast with a worker again which is too easy to replace with. In this sense, “Hive”, focuses on the workers’ working conditions, contract labor, human rights and urban renewal.

DUYGU NAZLI AKOVA is an artist and researcher based in Istanbul. As an artist, her work aims to create a dialogue rooted in critical discourse focused on political authority and general social issues, through the use of photography, video and installation. By using the experimental language that puts viewer perception and the plurality of these media in the center, she examines issues such as human rights, freedom, social inequality, consumerism, urban life, urban renewal, immigration, media and justice. She experiments different hybrid forms by turning images that have documentary nature or found footage into metamorphosized images. At its core, she works with real elements like historical documents, archival imagery, cultural research or found footage images like television or media videos, photographs used in newspapers, flea markets, family albums or documentary footage she shot. After the manipulation of the visual material, the final form of the piece becomes completely different. She examines the structure of traditional video aesthetics and her videos usually have an experimental language, leaving the traditional horizontal video format behind for a vertical design. The framing and point of view aim to create an illusion.
In her recent experimental videos, she aims to create a view of the transformation of Turkey, especially Istanbul. Her own shots are also becoming historical documents day by day and belongs to an archive of memory. She compares the older video and photography footage to today’s chaotic and complex city by using the different mediums which belongs to different period of time of the city. It makes the viewer to face a new reality about the social, political and cultural problems in their daily lives. During the video, the artist leads the spectators to discover various movements in different points of the frame. The close up view and the view from a distance gives the spectators two completely different experiences. When the spectator see the video close up, they realises the micro human figures representing the social role of people living in Istanbul.
The “Internet of Shoes” is an experimental swarm light installation and part of an ongoing research project at the University of Michigan. In this installation, a group of pedestrians can perform collective actions on the street using interactive LED shoelaces that communicate with each other in a wireless mesh network. With the dawn of the Internet of Things, more and more people and their devices are becoming tied together with wireless network technology. Some estimates predict that there will be about 26 billion devices on the Internet of Things by 2020. Yet little do we know about how this world of smart objects that is just unfolding will actually look or feel like for the everyday user on the street. Much less do we know about the big data and the use of
This data that all these connected objects will generate. This project explores how the Internet of Things, or what is also called the second digital revolution, can shape collective actions on the street. It builds on the power of self-organized mesh networks that wirelessly connect people and their devices directly to each other without passing any centralized organization such as a phone of Internet provider. However, this project also highlights our massive data trails that we leave behind when we walk in cities where everything – wearables, homes, environments, etc. – is smart and connected turning our bodies into nodes of a control and commodification system.

The objective for the installation was to develop interactive shoelaces that can easily be threaded in a shoe or tied around feet or arms. Each shoelace consists of a custom-designed transceiver unit with two LED's that are coupled with a flexible plastic fiber that serves as a light guide and shoelace. All components are powered with a miniature battery and sit in a small weatherproof and easy to attach plastic enclosure.

With this interactive shoelace network the public can experience the world of connected things on their own body. For example, the network can be set to trigger a light wave if a “critical mass” of participants stand very closely to each other or if they perform collective actions such as jumping or stomping on the ground collectively. Alternatively, the network can be programmed to give participants certain time windows (e.g. indicated by blinking light) within which they can press a bottom on the shoelace to trigger a light wave that then takes hold of the participating crowd. The color, speed and frequency of each transmitted light wave can be controlled, too. For example, when a green and a red light wave interfere, the resulting light wave can be programmed to turn yellow. The only instruction for the wearer is to stay in the neighborhood or in close proximity to each other in order to stay within the wireless network range of the shoelaces.

For the final installation, we envision a scenario in which the individual becomes part of a larger swarm of light and merges to a giant “metazoan” that moves down the street. One of our goals is to find out what collective actions such a network or “organism” can provoke – and what reactions will occur. For example, how will the coordination, cooperation, and communication work in this network? Can
waves of joy or protest be visualized with it? What moods can spread like a virus and affect the whole crowd? What forms of collaborative intelligence or foolishness will emerge? The big vision behind this research project is to create an entirely human-powered internet (i.e. peer-to-peer network) combining a wireless mesh networking platform with a swing-harvester in the shoe sole. In other words, the idea is to develop a street-level version of google’s experimental balloon-powered internet project. In Hong Kong, we will show a first prototype of the Internet of Shoes project – a first artistic attempt to visualize data transmission and ad-hoc networks not just as a graphic on a screen, but as a visual effect on the street, where crowd interactions happen, unfiltered and in real time.

**ASSOCREATION** is an international artist collective whose members work anonymously on a wide range of interactive installations and urban interventions. In this collective, they conduct future research on space, technology and human interaction. They create experimental interfaces that engage the public with new modes of human to computer, human to nature, and human to human interaction – often manipulating the ground the public walks on. Most of Assocreation’s work is the outcome of speculative experimentation trying to get a better grasp on emerging technologies or societies they occur. For the “Internet of Shoes” project, they collaborate with Lab 11, an embedded systems research group at the University of Michigan. In general, Assocreation is less interested to make commentaries with their work. Instead, they seek to create platforms or interactive experiences for larger audiences that enable us to listen to the conversations that emerge from it.

Friedrich Achleitner

“Assocreation deals with networks and their transitions to tangible realities. One of their materials is the ground under our feet, which it manipulates and networks in order to make it palpable.” Friedrich Achleitner
The “Soundscapes” series is part of Bar-Shai’s body of work “Objectivity [tentative]”, a series of experiments and interventions that explores the intersection of Art, Science and Technology. Bar-Shai applies traditional lab techniques as used by scientists and artistic inquiries to visualize the “chemical tweets” of microorganisms as exceptionally beautiful and rare image patterns, while drawing a link between microbial morphogenesis and designed ecosystems. Taking inspiration from the work and research of Prof. Eshel Ben Jacob who studied “The Social Life of Bacteria”, this body of work explores the complex network and communication systems of “smart” microorganism known for its advanced social behavior, reflected in development of colonies with highly
complex architecture structures. It looks into biological systems of self-organization and collective decision making, the immense complexity within seemingly simple structures, creativity and problem solving among billions of microorganisms and the process of achieving dramatically varied results with slight alterations in initial settings.

In addition to the advanced social and morphological abilities, as well as the patterns and unique structures that these microbial colonies create, what fascinates Bar-Shai is that eventually, the outcome we witness here is a visual representation of a communication system. Microbial conversation that generates an image. An ever changing, developing, evolving image. A language? A map for communication? A story? A poem?

The “Soundscapes” series, on display at ISEA2016HK, part of the body of work “Objectivity [tentative]”, looks into morphogenesis, complex social behavior and decision making of microorganisms, using pure sound waves and a range of frequencies as a variable replacing traditional scientific factors (such as temperature, moisture, nutrients and antibiotics), to initiate the growth of complex compositional structures among bacteria colonies.

The “Soundscapes” installation on display here, consist of petri plates with lifeless microorganisms. These living maps of bacteria social and communication systems are created using scientific technique and creative experimental practices. Audio waves are transmitted through liquid agar, a bacterium growth medium, as it solidifies, forming sound-generated topographies for the bacterium to grow on. Each outcome is unique and directly conditioned to the initial settings introduced to the bacteria – a collaboration between the microorganism and the artist.

**NURIT BAR-SHAI** is an interdisciplinary artist who works at the intersection of art, science and technology. As an artist and educator working with biological systems, she conducts experiments through creative collaborative inquiries and address the ethics and the emerging practices of Do It Yourself biology and citizen-science. Bar-Shai’s artwork looks into microbial social networks and communication systems, collective collaboration, emergence, SGM (Soft-Genetic Modification) and novel biomaterial fabrications. As an artist, educator and co-founder off
Genspace, a community biotech lab in Brooklyn NY, Bar-Shai values cross-disciplinary practices and see the significance of creating an environment in which artists and scientists can exchange methodologies and practices, and thus provide a platform for collaborations, innovations and critical dialogue.

While Bar-Shai have collaborated extendedly with numerous scientists, she has also been developing programs to link art-science programs at community labs, at universities and within her own artwork practice.

Over the years, Bar-Shai have witnessed the urgency of creating accessibility to science, while building a platform that provides a unique studio-lab space, a rich Art & Science educational outreach and cultural programming for artists, scientists and the general public. A physical space to practice scientific knowledge, acquire new skills and techniques - making science tangible, accessible, affordable and fun.

Bar-Shai believes that the arts community is in a unique position to explore the social, moral and ethical questions related to new biotechnologies through their artworks, and she feels this is an integral part of public engagement in the sciences.

Bar-Shai’s body of artwork spans from bacterial colonies emergence, social networks and communication systems (Objecticity [tentative]) adopting scientific techniques and artistic inquiries using sound (soundscapes, Sound to Shape), 3D agar forms and custom-made petri-plates (Morphoeology) to explore microbiome morphogenesis in designed ecosystems, which she often share with the public through exhibitions, live performances, lectures and hand-on workshops. To Biomaterials modification adopting tissue culture techniques into her work to create lab grown bone buttons (The Passing), and collaborations which raises ethical and esthetic awareness to the personal and collective biome (NYC BiomeMAP).
“Consumption, Hong Kong (Volume 1)” is a research-based project, which traces the relationship between private sphere of individual decision making (e.g. what to buy for dinner) and the public sphere of aggregated socioeconomic effects which we get to know from the news (company revenue, stock price, GDP, unemployment, etc.) in the specific circumstances of Hong Kong. The work is part of an ongoing series of works, united by method and book form, but diverging in presentation formats ranging from digital data visualization (as in this case) to architecture photographs (Bares, Consumption, Taiwan 2014, http://goo.gl/Xrlkos) or handwriting (Bares, Consumption, Korea 2015, http://goo.gl/Gx3ysl). The understanding of attention-directing and knowledge-producing cognitive faculties as a form of intangible
capital has strongly shaped our lived experience of the last decades (Davenport & Beck, 2001). The trends went hand in hand with info-technological development (Zwick & Denegri Knott, 2009), leading to a decoupling of consumption from the materiality and use-value of the products consumed (Baudrillard, 1996). Yet despite these developments, semiotised and financialized consumption is driven by our material bodies, needs and desires (Deleuze & Guattari, 1983) that are all manifested through idiosyncratic coping tactics of everyday practice (De Certeau, 1984). The work takes everyday consumption as the starting point by and through which to conduct research. Consumption is used as a hinge that allows for hyper-reflexivity, while staying true to an art practice-based approach where experience is transformed into expression, taking yet a step closer towards life and engagement with the everyday, while at the same time keeping a critical position that sets art apart from live itself (Ranciere, 2006). By linking the facts that everyone is a consumer and that consumption is creation, the approach exemplifies the enduring significance of everyone’s potential to act as an autonomous creative individual, while questioning the mechanisms of the market economy. Economists like to use term ‘dollar voting’ to explain an analogy between consumer decisions and political decisions: In the same way citizens select between a number of political candidates, consumers use their dollars to select products and companies which will be the ‘losers’ and ‘winners’ of the market race (von Mises, 1951). Theoretically, this example is used to highlight the ultimate power of consumers over producers.

‘Consumption: Hong Kong (Vol.1)’ traces the author’s consumer decisions during 12 months of his stay in Hong Kong (Sept. 2013 – August 2014) and relates them to news items. It thus documents a personal narrative of a visitor, which can however be related to a more general experience of living in Hong Kong: For example the market concentration means that most people buy groceries in one of the two major supermarket chains as the author does. Also the average monthly expenditure level documented in the work is similar to that of the majority of Hong Kong households (Census and Statistics Department, 2014, http://www.censtatd.gov.hk/hkstat/sub/sc60.jsp). The project uses a ‘decision recycling’
process, where previous independent consumer decisions (decisions made during a period preceding the project itself) are used to determine the selection of the news item of each day within the monitored period. Within the data set, each purchase (‘consumer decision’) is associated with a retail company where the purchase was made. These companies are grouped according to company holdings. News items published on the same day when the purchase was made are selected by searching for keywords like company name, holding company name, company owner name or, when no news item can be found, more generic terms like “Hong Kong economy”.

The book presents the data set in a linear narrative form. It documents the consumer decisions and associated news items day by day, including the full text of the news item. The book is a thick paperback printed in black and white, 826 pages long. It contains a preface (explaining the context) and introduction (explaining the method), followed by the body of the book, which lists the author’s daily consumption in Hong Kong and one daily news item. The book is a physical manifestation of the slow process/experience of reading and connecting disparate pieces of information relating to Hong Kong, its corporations and the world economy.

The video is a condensed visual counterpart to the book. It is based on the same data set, displayed in the form of a virtual 3D data sculpture consisting of a spatial arrangement of white spheres and news headlines in an infinite black space. Each sphere represents the spending on one day in one specific company group, the diameter of the sphere represents the amount spent. The spheres are ordered horizontally according to spending type and company group (14 categories) and vertically according to time. Each vertical layer represents one day and is associated with one news item headline (the associated news articles can be found in the book). The fast-paced video makes it barely possible to read the news headlines. The soundtrack of the video mirrors the visual pace: It consists of a voices reading out the news headlines, overlapping one another so that only fragments of the voice can be understood. Different channels of the video show different points of view of the data sculpture.

‘Consumption: Hong Kong (Vol.1)’ proposes a model of how everyday personal consumer behav-
Your data can be employed within a creative practice. It is also a model that provides some insight into what it means to conduct research through artistic practice by balancing on the line between the everyday and art, the micro- and the macro-economy, or, in Ranciere’s words between two different aesthetics. The work shows the gap between data visualization and the source data contained in the physical book by placing them next to each other. The data collection process for this work highlights the cognitive labour executed by the consumer in the process of decision making. The data appears to be “useless” to the consumer, while the very same transaction records are being aggregated, data mined and monetized by marketing research specialists. The question regarding the effectivity of dollar voting is left open.

**JOSEF BARES**’s area of interest lies in systems of signs. He uses different ways to visually convey the processes taking place in signification – the creation of meaning. Bares is especially interested in relationships between city and language, space and semantics: How we do ‘read’ our urban living environment and how do we shape it in this process of reading. Recently he has focused on the process of consumption as a process that is not complementary but equal to creation: Consumption as creation. How do we position ourselves within the realm circumscribed by knowledge, affect, attention and cognition – terms which more and more frequently appear as differentiating adjectives of the term ‘economy’?

The Consumption Series project re-appropriates personal consumer decision data, which would otherwise be silently forgotten by the consumer while actively data mined by the merchant. Furthermore, the consumer decision data is re-used as a compass to navigate lived mediated experience represented by news items, images, etc. resulting in a vast yet consistent data sculpture, reflexive of the conditions of its own creation.
Referring to the metaphorical bond between technology and nature, the film questions the realities we create using constructed and very similar illusive imagery that erase the line between real and artificial, obvious and mysterious, finding beauty in synthetic experiences. It questions our current obsession with a memory, which often becomes more important than the event itself. The title suggests the idea of neglected moments being put together to create, morphing from one form to another, the thread of digital existence. “Synthetic Curiosities” is an exploration of the contemporary friction, made through repetition and slight shifts. Our common contemporary identity is formed through repetition of events, blurring the line between the real and digital.

ZINKA BEJTIC is a Canadian visual artist, filmmaker and educator interested in exploring contemporary culture and social theories through experiments in time-based and digital media. Her main interest lies in critical reflection on the implications of new technologies on social behaviors. Her work is based on a wide range of modalities ranging from design, experimental film to video art. Specifically, through experiments in editing and sound design Zinka’s work combines equal measures of the provocative and the sublime in a wide variety of time-based and installation media. Her works have been presented internationally in various exhibitions and festivals.
In “Hong Kong Algorave Performance, 160520” improvised programming generates danceable percussive music emphasizing generative rhythms and their variations. All of my interaction with the system is projected for the audience to see. The custom live coding system, a Haskell language library called Conductive. It triggers a software sampler built with the Haskell bindings to the SuperCollider synthesizer and loaded with thousands of audio samples (as many as 18,000). Through live coding, I manipulate multiple concurrent processes that spawn events, including the number of processes, the type of events spawned, and other parameters.

At least two methods of generation of base rhythms are used: stochastic methods and L-systems (an algorithm describing plant growth). In the former, sets of rhythmic figures are generated stochastically. From them, figures are selected at random
and joined to form larger patterns. In the latter, L-systems are coded live and used to generate patterns. These patterns are then processed into a stack of variations with higher and lower event density. That stack is traversed according to a time-varying value to create dynamically changing rhythms. Simultaneously, patterns in which audio samples and other parameters are assigned to sequences of time intervals are generated through similar methods. The concurrent processes read the generated data and use it to synthesize sound events according to the rhythm patterns described above.

This performance also uses additional agent processes which change system parameters (conductor agents) run alongside sample-playing agent processes (instrumentalist agents). These conductor agents are the result of my recent research into how autonomous processes can complement live coding activity. These conductors stop and start instrumentalists, as well as change the other parameters used by the instrumentalists for sample-triggering, such as which sample to play and which rhythm pattern to follow. The live coding involves not only the patterns for rhythms and samples but also the algorithms which the conductors use during the performance.

My interaction involves activities such as generating data, continuously reselecting which data to use throughout the performance, changing the number of running concurrent processes, and determining when changes occur. By manipulating both instrumentalist and conductor agents and the data they read, a rapidly changing stream of rhythmically complex bass, percussion, noise, and tones is improvised according to a rough sketch of the overall performance structure. This improvisation crosses the genre boundaries of bass music, noise music, and free improvisation. The projection shows all of my activities, including code editing and execution of code in the interpreter. When I press “Enter” on the keyboard, the line under the cursor is sent to the interpreter and immediately executed. Pressing F11 causes the code block under the cursor to be sent and executed. Text output of functions is printed in the interpreter.

The primary technologies used include:
- Conductive, a library for live coding in Haskell
- the Haskell programming language, through the Glasgow Haskell Compiler interpreter
- the SuperCollider synthesis engine (but not its programming language)
- hsc3, the Haskell bindings to SuperCollider
- the xmonad window manager
- the vim text editor
- the tmux terminal multiplexer
- the tslime plugin for vim

Other open-source tools are essential for the performance, including:
- an Arch Linux computer
- jackd
- the Calf Jack Host
- patchage

**RENICK BELL** I improvise music performances through live coding using a software library that I have written called Conductive. Live coding, or the performance through programming, enables a performer to manipulate symbols rather than use physical gestures to carry out a performance. For me, physical gesture is more limited in expressivity than manipulation of symbols representing abstractions; while humans have learned to use a complex vocabulary of gestures to produce art, the realtime manipulation of text-based symbols may increase the range of what is expressible. I also feel it is more convenient than typical graphical software that a user manipulates with a mouse. Through live coding, I achieve a text-based control center. I can specify complex parameter changes to be executed simultaneously while using a variety of existing programming tools to increase efficiency. From another perspective, live coding extends algorithmic composition and turns it into a live performance rather than a write/compile/run loop from traditional software development or electronic music composition. Because the music is generated algorithmically, I am often surprised and challenged by the resulting output. With these tools and methods, I can explore combinations of sounds and rhythm patterns, most of which I could not achieve without the use of my software. I am seeking such experience for myself in performances. At the same time, I want to continually make the code that I use more expressive. Exploration of these areas fascinates me.
“Panopticon” is a continuation of an ongoing series of digital still and moving image works which feature groups of digitally generated and animated groups of figures engaged in often complex activities, frequently in relationship to specifically created digital environments. These works create views of intricate digital colonies from elements which are produced in a professional 3D animation software program. Here an endlessly rotating point-of-view of a circular panoptic structure is presented, exploring conceptions of the utopian and dystopian, constructs of order and control, and the spaces between human and technological agency. The panoptic construction is populated by an ever-expanding taxonomy of animated figures, plants, objects, and architecture which interact, assemble and re-assemble, simultaneously fixed and unstable, trapped in ceaseless loops and cycles in a form of animated stasis.

The Panopticon was an institutional design concept created by 18th century English philosopher Jeremy Bentham, wherein a single watcher is able to
observe all the inmates of an institution simultaneously. Inmate knowledge of this surveillance would be an effective means of self-monitored behavior control. Originally considered a progressive and enlightened solution to societal problems, the Panopticon has come to be read as a central metaphor for modern “disciplinary” societies and their pervasive inclination to observe and normalize, most notably by French philosopher Michel Foucault in his work Discipline and Punish (1975).

A generic animated figure is employed as a building block in this creation. The replicated figure is assembled and reassembled into units of performed actions, loops and cycles, creating ongoing series of patterns of movement vocabulary. These bodies’ movements are brought to a form of uncanny life using two methods, activated either by hand using key frame animation, or by the use of digital motion capture whereby a live performer’s bodily motion is recorded as 3D movement data, and then applied to a digital character’s skeleton. The combination of fluid captured motion with the generic digital form can lend an eerie ‘liveness’ to the figures, creating ambiguity around their status as performers with inherent agency.

Natural elements such as plants are animated using dynamic simulation tools whereby natural phenomena such as wind, gravity, bounce and friction are generated algorithmically, and can be customized by altering numerical values via software interface controls, replicating a convincing realism in natural movement which is extremely challenging and time-consuming via traditional key frame methods.

The corporeal body is transformed into proliferating avatars whose resistance to the panoptic structure seems negligible – they exhibit a range of responses from resignation, to ecstatic ritual, to enacting seemingly mindless and/or compulsive repetitive actions, and small acts of resistance to this order seem futile. Here structuring principles of cycles, loops and modularity can be seen as resisting ideals of linear progression, and time and space become ambiguous factors here – the environment rotates past the viewer situated in a kind of metaphysical ‘no-space’ reminiscent of a video game environment.

Tethered to the endless cycle of looped actions these figures resist the conventions of linear narrative progression, trapped in a kind of compulsive
stasis with no clear beginning or end. They also form discreet units of action, which can be arranged and rearranged at will in the creation and construction of the work. The loop forms the most elementary form of the structures of programming language, which involves the altering of the linear flow of data structures through control structures such as the loop. Lev Manovich champions the loop as ‘a source of new possibilities for new media’, and conceptualises it as an ‘engine’ which puts narrative in motion. Loops retrieved from the ‘database’ are a ‘multitude of separate but co-existing temporalities’ – units which do not so much replace each other in a ordered flow, but are rather already-activated elements which are composed in one of any possible sequential chains. This condition of the loop and its apparent inability to achieve resolution, or perhaps the illusion that it creates of some kind of perpetuity, recalls animator Robert Breer’s comments on metamorphic transformation.

Drawing on and remediating a range of sources including the photographic studies of Eadweard J. Muybridge, nineteenth century optical toys, and the contemporary digital video game, this work presents figures which occupy a space between the animate and the inanimate, between automata (devices that move by themselves) and simulacra (devices that simulate other things).

Another touchstone is the elaborate geometric ‘choreography’ of 1930’s Hollywood musical director Busby Berkeley which featured armies of women whose individualism is also radically reduced – as though all cast from the same mold. Here ‘their identities are completely consumed in the creation of an overall abstract design’. It is not so much choreography on display, as Lucy Fischer describes, but ‘kinetic designs’ and ‘mechanical decor’, they are ‘elaborate pre-programmed machines for action’ and ‘repetitive movement’. In the creation and execution of this work a hybrid space is explored where human and natural agency are uncertain: phenomena of nature

“Time doesn’t move forward, things are going, but sideways, obliquely, down and backwards, not necessarily ahead. The sense of motion is the issue. That idea seems hard to defend, because our locomotion drives us forward with our faces looking at new things. But since that movement is toward oblivion, in my philosophy anyhow, it might as well be backward. It’s a delusion to think you are getting anywhere.” Robert Breer
are simulated algorithmically, human activity is seems essentially passive and annulled, where ges-
ture does not follow thought or emotion, but instead is generated zombie-like by another’s will.

**GREGORY BENNETT**’s art practice has been a direct engagement with high-end industrial 3D animation software since 2003. As an artist he was instantly struck by the possibilities of this medium – particularly its ability to create a fully realized and naviga-
ble 3D ‘world’, and it’s as yet unrealized potential as an expressive artistic tool beyond the commercial and aesthetic imperatives of mainstream enter-
tainment. Bennett works directly into 3D modeling and animation software, taking the actions of a ge-
eric male figure as a point of departure to explore conceptions of the utopian and the dystopian. His animations are created in a modular fashion, build-
ing up units of performed movements, loops and cycles (both animated and motion-captured), creat-
ing a sometimes complex movement vocabulary. Formally Bennett is interested in embracing the in-
herent qualities of 3D digital production and the virtual, and of the operations of the ‘database’ as a pliable creative tool. He also became interested in how the image making process could be character-
ized as a creative interface between artist and com-
plex software, raising the question: how might the practical interaction with digital authoring tools impact the rendition of a final work? Digital mov-
ing image making tools offer infinite possibilities for image generation and manipulation. Thus, the creative relationship between artist and software can be seen as increasingly requiring a series of ne-
gotiations between the possibilities of unlimited potential and the need for productive boundaries and constraints, and the lure of the generic and the predetermined versus the challenge of the original and the particular.
“Ecstasis I” is a video on 4 screens featuring the correlations between film, the war and the rides in the amusement parks and the logistics of perception in popular culture. The rides are framed, cut: only appear on the screen some parts, fragments of the machines operating in the sky. These vessels, these articulated arms of catapults, these spears, those big wheels, trimmed with electric colored lights moving in the sky sometimes as a hypnotic tool, sometimes as a menacing machine, then sink into the horse-champ. We distinguish on some pictures, the body of viewers taken in the movement of the machine. Footages of the First and Second World War are juxtaposed to these images that evolve to a contemplative, hypnotic pace. These extracts from a documentary show the handling of weapons: machine guns, artillery and other guns. The soldiers come in. They no longer suffer the movement but they initiate it. The mechanisms of these war machines fit directly related to those used in the manufacture of rides. Modeled colored 3D images are displayed on a fourth
screen. Here the camera is subjective, the viewer becomes an actor, he holds the weapon, it has a view- finder, advance in a reinvented and reconstructed space. The weapons are fake, the target is not defined. Everything becomes purely virtual although the images are recreated from archival images of the First World War. Then, an explosion of colors animates the screens. Abstract images, lines and shapes on the projected surfaces. Inspired by the lost files, corrupted by the machine, the virus invades the movie screens. The image transformed by the computer that failed, destroyed and sunk becomes another image that does not convey anymore information. This animation imposes a different pace to the work. The rhythm of the images is accelerating with the modernity of proven mechanisms. A series of still images, in black and white and in color from archival footage, traces the history of optics taking as a starting point the eye, dissected and diagrammed organ. The history of photography and film, from analog to digital is thus traced through this series of jerky images. Then these optical-related pictures give way to the weapons of the First and Second World War. Subliminal images of a memory, they show a rapid evolution of optical and correlations between vision, entertainment and war. Continuing the reflection of Paul Virilio in his text “War and Cinema - Logistics of Perception” (1984), published in Cahiers du Cinema, where the author draws a parallel between the manufacture of weapons and those of optical tools, are added movements and forms of the rides amusement parks: the Ferris wheel, spear, catapult, rocket ... the park was the first time in history where entertainment puts the body of the spectator in motion, using the same mechanics that arms and discoveries in optics. Thus, amusement parks are the first democratic space where every class is alongside the other. There is no difference in class on the rides unlike means of transport, the ride is the space where a person of the middle class can touch, brushing against a person of the working class, where people of different social classes are in the same area embedded into the same entertainment movement. They have the same experience in the same conditions. This democratic space is also an important concept in the concepts in Ecstasis I. In fact, the photograph appears as an accessible art medium: anyone can buy a camera from the 60s and be-
come a photographer, make art without being part of an elite. Family, traveling, in his everyday life, photography saves fragments of reality and stages them in the frame. Finally, the war is a means for democracies to impose democracy to countries subject to other policies. War becomes a non-democratic means to impose democracy. This questioning of the war and democracy is led by Judith Butler, in particular in his book “Precarious Life: The Powers of mourning and violence” (2004). Finally, “Ecstasy I” creates a hypnotic microcosm where fascination combines with fear and war becomes a menacing spectacle. Exploring the history of photography, and the association with the history of the manufacture of weapons, it highlights the dematerialization of two techniques: photography becomes digital, supports getting smaller, dematerialized while images of war are no longer shown. This video work questions the systems for recording images and paperless media. Once the digital images can be corrupted by the machine, destroyed, that there remains a culture? What images do we keep? “Ecstasy I” is the first chapter in a series of works exploring the relationship between the images of war and the spectacle, the representation of war given to public through the media and issues of perception of these images and of the political climate and the consequences of this type of representation in popular culture. This work was created after a first series of photographs taken in November 2004 in Coney Island, New York, a few days after the re-election of G. Bush. This first series of black and white photographs shows a deserted amusement park. The sinister atmosphere, the end of the fun caused by Bush’s reelection are captured in this series. The dizzying issue is also explored through the second chapter of the entire work Ecstasy, through image processing of the First Gulf War disseminated by the media as the first surgical war and the non-representation of the conflict. These intriguing pictures aims to create a reflection on representation of war in the mass media and a questioning on the picture in general by the impulse of an emotional state between an aesthetic fascination and the terrible issues raised in the work.

ALINE BIASUTTO believes that the imperceptible is the starting point. The images she produces are al-
ways fragmentary, incomplete, unclear or frozen in a form of a misleading abstraction. In the flood of reality, it punctures and tears fragments that are a priori silent when stripped of context. Between a reality that was (that - fleeting - the time of recording) and perceived (that - subject to subjectivity - the viewer), would be found in the sensitive potential of the image. What interests her is precisely this gap, where ambiguity becomes a place of suspension, projection, and the relationships between real, represented and visible. In our interview she stated, “When we are shown an image in which the object represented bursts, what is left? ... I like working in this zone between the conception of the image and it’s intended meaning, and that which is cancelled of any narration.” To understand this idea, you have to think like her, refuse to open your eyes as wide as two mouths swallowing at once, but also refuse to close them completely. We then enter into that state of “movement/struggling” that characterizes her work. To see the world between batting eyelashes, between your own palpitations and a filtered vision. The idea that a glance is already a statement (of oneself, on the world) gives the viewers of her work full power: “Otherness is paramount. To create an image, you must look at what is outside oneself, look past the mirror. At the same time, the image is a vehicle between the one who makes it and the viewer. It says as much about the person who did it than those who look at it. Once I create an image, it is no longer mine.” At the edge of silence or explosion, the images created in Aline Biasutto’s work – limits are pictures of resistance - to the visible, to their medium, to any interpretation that could be made at the first glance. To the question, “what can an image produce for you?” She replied, “a scream.” A primary visual language, almost primitive, that she also associates to a dream of Georg Baselitz: “to paint until invisibility.”
“Object”. Deleuze and Guattari wrote in Anti-Oedipus, “there is no such thing as either man or nature now, only a process that produces the one within the other and couples the machines together.”

Traditional bi-polarities of the body and the world beyond it are collapsing due to ideas emerging from eco-critical theory and ecological precarity due to anthropogenic impact. Our research practice is predicated upon the idea that “the human is always intermeshed with the more-than-human world”. Finite human bodies are embedded in flowing, unbounded ‘non-human’ processes; water, air and food molecules we ingest, have passed not only through the Earth but further reaches of time and space. Yet the intimate experiential knowledge of such phenomena is unperceivable through our naked senses. In Object, we speculate, can future technologies that...
fuse (wet) biological processes and (dry) computational systems, enable us to access a dynamic flow of data-energy, between inner (body) and outer (environment) worlds?

We imagined a device that enabled us to experience a flowing information exchange between internal somatic and external material systems. The object discovered by the protagonist allows her to experience herself as indivisible from the flow of matter and energy surrounding her. By exploring her interactions with the object through a journey of discovery, we question and re-imagine our relationship with technological artifacts and their roles in mediating and co-shaping our relationship with the world.

Object and Woman. The object prop was an architectural model based on a double Mobius strip design, a factor that resonated with our instinct that it should have a strange mystique. Comparisons were later drawn between our object and the enigmatic obelisk Hipgnosis designed for Led Zeppelin’s Presence LP. The serendipitous discovery of a model with distinctive formal and aesthetic qualities reinforced the conceptual blurring of the inside and outside - a psychological process Lacan termed Extimacy, which we sought to speculate upon as a mode of catalysing discourse. We chose a visually non-technological object to evoke a sense of arcane, timeless, and possibly alien in intelligence and design. In Nostalgia de La Luz (2010), Patricio Guzman draws elegant comparisons between calcium in long dead stars seen by astronomers based in Chile’s Atacama desert, with bone fragments reclaimed by relatives of the victims of Pinochet’s 1973 coup. The aesthetic and formal resemblance of the object to fossils and shells, and its’ presumable marine origin, invokes sacred geometry and principles of a code intrinsic to natural phenomena like Golden Ratio and Fibonacci Sequence, as exemplified by the shell of the chambered nautilus. When the object grants her moments of indivisible communion with an unbounded flow of material energy from which she, as a human being, is usually excluded; perhaps, like the moment when Neo ‘sees’ The Matrix, she ‘knows’ that the spirals in her DNA are repeated and infinitum in galaxies above her - “A spider’s DNA is expressed in its web. The environment, then, from the perspective of the life sciences, is nothing but the phenotypical expression of DNA code.”

Process. “Object” was quickly made in response
to site-specific conceptual and environmental stimuli. To illustrate how it enabled the woman to perceive normally invisible material and chemical processes she interacts with, we first displayed graphical overlays of environmental data-flow captured with an Arduino Smart Citizen device. This data was captured during Mark Shepard’s Design Fictions for Data Geographies workshop in locations around Oulu, Finland. However, during screenings it became apparent that “Object” elicited surprisingly profound audience reaction. People were emotionally affected and drawn to speculate on contemporary human positions relative to our environment and the cosmos. It also became apparent that data-flow visualizations limited scope for readings from the humanities end of the spectrum. We chose to remove the visualization as we found it more critically interesting to enable broader scope for reflective interpretation.

Interpretations and Implications. Cosmic Womb. One of most informative interpretations came from a writer, who enriched our perceptions when he read the object as both shell and womb, “The sound of the cosmos is still in our ears in the womb as is the sound of the sea in a shell.” Which echoed Jack Kerouac, “The one thing that we yearn for in our living days, that makes us sigh and groan and undergo sweet nauseas of all kinds, is the remembrance of some lost bliss that was probably experienced in the womb and can only be reproduced (though we hate to admit it) in death. But who wants to die?”

Optimism Futures. An Australian curator took a more optimistic tone, “The film made me feel strangely optimistic for the future of the human race... Looking deeper, I suppose it’s an optimistic representation of the relationship between human and ancient mystery / new technology... I thought it showed a sort of idealised and beautiful relationship, similar to how I feel about my laptop...”

Dystopia. “And if you gaze long into an abyss, the abyss also gazes into you.”

Many noted a melancholy tone akin to dystopian Sci-Fi, and thought the glitch sonics processed through generative algorithms implied her lapsarian revelation came at a price, and she now shoulders a burden of great responsibility. She sits, eyes closed at the water’s edge to the sound of an aria from Handel’s Xerxes - the first audio radio broadcast of music to a general audience, transmitted to ships in the
Western Atlantic on 24 December 1906. But the aria is reversed - so when she breaks the fourth wall to directly confront us, is this a first broadcast from a new human being? Does she plead with us to share her responsibility, or like a Mobius strip of water and time, is it a warning and her look one of pity, or disgust? Has she become a “parahuman fusion of code and nature” - a harbinger that “teleological trajectories of humanity could be supplemented with parallel alternatives”; and in her eyes do we see the return of the repressed of ecological consciousness?

**BLACK MOSS** is an emerging practice based trans-disciplinary collaboration between artist, filmmaker, writer Nathan Hughes (UK), and PhD candidate, designer, researcher Jinyi Wang (SWE/CHN). Driven by a cluster of resonant interests spanning art, design, film, consciousness and philosophy, they have produced several design fictions since their inception in 2015, and have several projects in pre-production. Black Moss is envisaged as a nomadic design futures research lab with an inclusive ethos and an international profile. They use speculative narrative and participatory ethnography to probe the fault-lines of the body / environment / technology, and their dissolution as traditional binary paradigms dissolve in response to eco-critical theory, anthropogenic impact and trans-corporeality. Their production processes apply evolving ecologies of research interests, affective aesthetics and philosophical perspectives, in response to distinctive global locations and unique sensory environments. They work with fluid configurations of people, place and technology to anticipate design opportunities and cinematic provocations, which question the epistemological potential of human computer interaction and trans-corporeal communication to deliver authentic emotional experiences. They engage with critical discourse emerging from Dark Ecology, Eco-psychoanalysis and Cosmic Pessimism to document poignant narratives animating the Anthropocene imaginary. Subsequent production outputs are considered to be active containers for celebrating evanescence, the everyday uncanny, and the return of the repressed of ecological consciousness.
"Abra: A Living Text" is an interactive artwork distributed as a free app for iPhone and iPad that invites readers to play with a constantly-mutating and evolving text. Pushing at the boundaries of the book, Abra presents a text that refuses to be held to the page, refuses singular authorship, and allows the reader / viewer to make it their own. Game-like, but not a game per se, Abra is a text toy that takes advantage of algorithmic processes to decentralize authorship and create an unpredictable, unruly, generative text. The recipient of an NEA-funded
Expanded Artists’ Books Grant from the Center for Book and Paper Arts at Columbia College Chicago, Abra: A Living Text is an exploration and celebration of the potentials of the book in the 21st century. Coupling a limited-edition hand-bound book printed with heat-sensitive ink and other features that animate print together with a free iPad and iPhone app in which readers can bring the text to life, Abra blurs the boundaries between the page and tablet as touchscreen interfaces, encouraging readers to see the book as an ever-changing form whose mutation they can participate in. The artist’s book and app can be read separately or together, with an iPad inserted into a well in the back of the book.

For consideration for the exhibitions at ISEA 2016, we submit the free app, which contains the same text as the artists’ book, but which does not simply remediate it. Rather, the app takes advantage of the touch-screen interface to make Abra a customizable experience that is different each time it is read. The app, programmed by Ian Hatcher, and collaboratively designed with authors Amaranth Borsuk and Kate Durbin, makes reference obliquely to print’s history and future. It presents poems in colors that emulate those of medieval manuscript illumination, floating on the black screen. A dial composed of rainbow-hued ornaments from a 17th-century typeface allows one to navigate through the text, which mutates helically from one verse to the next. When words are shared between lines and across stanzas, they are kept visually intact and animated to new positions, shifting into place as the dial is spun. One stanza swallows the next, an ouroboros that leads from the Abra’s first to last word: “heaving.”

As the text heaves itself into being, readers may change it as well, selecting from a toolbar at the top of the screen a number of “spells” they can cast with their fingers. “Mutate” changes words when they are touched, substituting language and emoji from the app’s lexicon based on relative symbolic similarity. “Erase” removes those words the reader touches, leaving gaps in the text. “Prune” both trims away words and closes up the space. “Graft” lets readers type in any language or symbolic set their device is capable of handling, including emoji, allowing them to paint their words into the text. These words are added to Abra’s lexicon and can appear at will when the autonomous mutation setting is active. The “Ca-
The "dabra" button casts an unpredictable spell, drawing randomly from a range of algorithmically-determined behaviors that include visual re-arrangements, animation, word transformations, selective censorship, and erasure attuned to sound and language.

When they have shaped the text to their liking, readers can share their creations using built-in screen capture and social media buttons. Abra is thus a collaboration between Amaranth Borsuk, Kate Durbin, Ian Hatcher, and a potentially infinite number of readers. The seed text—a series of conjoined poems by Borsuk and Durbin that meditate on mutation and excess, rely on unruly images that merge the digital and natural worlds, and reflect upon the hive-minded nature of collaboration itself—refuses to stay on the page. This living text adapts to its reader, absorbing new language and images and incorporating them into the constantly-changing text.

AMARANTH BORSUK is a poet, scholar, and book artist interested in textual materiality. Her books include As We Know (Subito), with Andy Fitch; Handiwork (Slope); and Between Page and Screen (Siglio), augmented-reality poems created with Brad Bouse. Her collaborative digital projects include an erasure bookmarklet, The Deletionist, with Nick Montfort and Jesper Juul, and Whispering Galleries, a site-specific LeapMotion interactive work for the city of New Haven created with Brad Bouse.

KATE DURBIN is a Los Angeles-based writer and performance artist who shows at Transfer Gallery in Brooklyn and has performed at the Pulse Art Fair, MOCA, the Hammer, and elsewhere. She is author of The Ravenous Audience (Akashic Books), and E! Entertainment (Wonder). A trade edition is forthcoming from 1913 Press. Durbin is founding editor of Gaga Stigmata, and her tumblr project, Women as Objects. She was the 2015 Arts Queensland Poet-in-Residence.

IAN HATCHER is a text/sound/performance artist and programmer whose work explores cognition in context of digital systems. He is the author of Prosthesis (Poor Claudia), The All-New (Anomalous), and developer of two poetry apps: Vniverse, with Stephanie Strickland.
“Intergovernmental Panel on Capitalism (IPC)” is the leading international body for the assessment of capitalism. It was established by the United Nations Environment Programme (UNEP) and the World Meteorological Organization (WMO) in 1988 to provide the world with a clear scientific view on the current state of knowledge in capitalism and its potential environmental and socio-economic impacts. The Intergovernmental Panel on Capitalism (IPC), is an ambitious attempt to edit all online materials published by the The Intergovernmental Panel on Climate Change (IPCC) by programatically replacing every instance of the phrase “climate change”
with the word “capitalism”. Founded by the United Nations in 1988, the IPCC is the “leading international body for the assessment of climate change” and is tasked with assessing and synthesizing research around climate change. This edit is made to all of the IPCC reports, web and video content and the resultant materials shed light on the tension between environmental issues and contemporary economics, calling capitalism itself into question.

TEGA BRAIN AND SAM LAVIGNE are Brooklyn based artists working with issues of economics, quantification and seduction. They have simulated international organizations and businesses but run a real dating service in New York City.
“Freud’s House: The Double Mirror” - Brass Art’s new work - forms the second chapter of an ongoing project (Shadow Worlds | Writers’ Rooms) and allows them to enter the domestic spaces that selected authors occupied. For this recent project they investigated the Freud Museum, London having previously
explored the Brontë Parsonage, Haworth. During a period of residency, the artists inscribed themselves into the domestic space of Sigmund Freud’s former London home. Using Kinect laser-sensors and Processing software to capture intimate-scaled performances throughout the rooms, staircase and hallway, Brass Art developed a visual response to the notion of the uncanny using strategies of repetition and simultaneous ‘doublings’.  

The Resonant Site. The allure of visiting Writers’ rooms or homes brings the promise of direct experience - re-energizing the writing or legacy of the works, as the site of creative inspiration or toil, offers up something of the personality or circumstances of the writer. Writers’ Rooms, as an investigation of simple, domestic spaces, creates the possibility of thinking about the everyday, the ordinary and the familiar as the most vivid potential sites for uncanny revelation and transformation. In re-animating the ‘familiar’ domestic spaces of chosen authors – via hallways, staircases, private and public rooms - Brass Art’s sojourn invites a re-evaluation of each of these spaces, with their particularities and peculiarities.  

Any collection has restrictions put upon it for the conservation of the artefacts - these are obvious and explicit - and Brass Art have pushed these as far as possible performing, sometimes in an uncontained way, within circumscribed, hallowed spaces. There is an interesting dimension to playing ‘beyond the walls’ of the museum or heritage site; in this moment the space is alive to being re-worked and re-animated. Perhaps less clear are the unspoken restrictions around the mythography of the subjects: who owns or directs those, and what that might mean for the emergence of potential counter narratives created by the artists. Their performances with capture technologies, create an unfixed and constantly evolving form: a direct copy of the original space - a double - but with shifting and unexpected points of view in immeasurable time periods, with their doubles the surprising and submerged occupants. These out-of-hours temporary occupations bringing props and costumes, set the scene for a gesture, movement or dance to evolve. The identities the artists adopt in response to the sites are specific, recurring and other. Being both present and also absent (through the use of disguise) is vital to the way they translate and give ‘form’ to the space. Thus du-
ration articulates space; and practiced space becomes place.

The Double Mirror. ‘Doubling offers another disturbing and yet familiar set of personae in ways of telling the self; permutations of inner and outer selves catalyse uncanny plots about identity’ (M. Warner, Fantastic Metamorphoses, 2004, 161-203). This notion of doubling underpins Brass Art’s collaborative practice, enabling them to examine intimate ideas and move beyond the private self. Their intention to copy and perform others’ actions was important from the outset. The idea of using repetitive actions and sonic refrains gave them the opportunity to create a piece that would flow through the spaces of the house – moving both in and out of step with time. Thus, ‘the double’ in this work is a signifier of the uncanny experience, triggering a sense of the familiar yet strange. Sharing disguises and attempting to mimic each other’s movements and gestures results in a mirror-image performance where the protagonists ‘refuse’ to replicate their doubles. In the editing and redrawing process something unexpected occurs – the protagonists switch, move in and out of step with linear time, and extend the dream-like register of the piece. Retrospectively the artists themselves cannot always be sure who inhabits a particular role; identities are submerged and disrupted, and thus the doubling succeeds in ungrounding them. In terms of Brass Art’s creative process this playfulness is crucial.

The Haptic Light. The unnatural and inexplicable bringing to light of something (which surely ought to remain hidden) has particular resonance in Brass Art’s use of the Kinect sensor, in that it allows walls to appear permanently permeable, ‘revealing’ the reverse of the scene as the scanner rotates. The inexplicable light is comparable to the scanner-eye of the Kinect laser rolling over and skimming surfaces until it renders the scene (unseen by the artists at that point) in shimmering pixels. This supposed ‘revelation’ of the literal fabric of the building can be seen as another ungrounding – the passage from home to unhomely. The artists recall Thomas De Quincey’s development of the spatial uncanny, doomed to forever repeat the same futile movements through spaces, staircase and corridors. Anthony Vidler sees him, “… caught in a vertigo en abîme of his own making, forever climbing the unfinished stairs in the

During the sojourn in Freud’s house, ambient audio was simultaneously captured by electroacoustic composer Monty Adkins. He recorded fleeting and involuntary aspects of the performances and coaxed sounds out of long-dormant objects. The resulting audiovisual work takes the form of a two-screen ‘double’ digital video installation. This pixelated and seemingly fragmented re-imagining of Freud’s house reveals exactly what is there and what is ‘unseen’ as the Kinect footage appears to bisect walls. Brass Art create a dynamic exploration of the domestic interior as a site of creativity, measuring the space through their bodily presence and a virtual ‘peeling back’ of the architectural layers. The accompanying soundscape, experienced binaurally, evokes the intimacy of being in the space itself; synthesizing the gestures and movements of the artists with creative data visualisation processes. This synthesis of digital data (performance) and field recordings (site) offers a new spatial approach for electro-acoustic composition, and a novel reading of the historic/cultural sites revealed via scanners as part of a process of ‘re-translation’.

**BRASS ART** is Chara Lewis, Kristin Mojsiewicz and Anneke Pettican, based in Manchester, Glasgow and Huddersfield, UK. Within their collaborative art practice they use analogue and digital technologies as a means to disrupt conventional narratives, and to capture themselves in real and imagined situations. Manifest as miniature 3D models, morphic silhouettes, drawings, and shadowy digital sprites, their artwork returns to themes of the double, the inanimate, the limen and the atemporal. Brass Art address the playful aspect of ‘doubling’, and how it is performed within collaborative practice. Using the form of the ‘shadow self’ to represent this process, they animate static forms (figures, silhouettes, objects) with different light-based technologies: from the illusory qualities of the pre-cinematic to white light bodyscanning (3D and 4D) and laser technologies. This manipulation of the body’s anatomical boundaries enables the artists’ portraits to shift between the real and the virtual.
“A Word Heap” is a single channel experimental video animation produced using facial recognition and motion capture software, motion graphic effects, algorithmic 3D renderings, and collaged audio design. In this work, the artist adopts various avatar personas (rendered as floating, talking heads) to conduct performative readings of various texts, exploring the notion of ‘avatar poetics’ within the mutable, special-effects driven environments of the screen.

“A Word Heap” compiles texts from various online sources, most notably anonymous ‘troll’ commenters and from auto-generated word streams inserted into the body of spam emails (presumably in an attempt to flummox the recipient’s spam filters). These ‘word heaps’ - randomized fragments of content culled from news, literature, online media and other far-reaching sources, often scrambled and illegible - are deliberate introductions of pseudo-authentic ‘noise’ into a communications medium... a kind of Turing Test that seeks to outwit the A.I. of the user’s inbox, rather than the user. I edit these
text with the intent of presenting them as successors to the tradition of Surrealist automatic-writing poetry, or the free-association experiments of post-modern fiction. They are thus re-framed and performed with the added lyricism of an avant-garde poetry slam (or the most perplexing virtual reality karaoke ever). The performing characters themselves seem like simulated figures from a retro era - cyberpunk floating heads statuesque, xeroxed and painted over - older forms attempting to convince each other of their autonomy, their authenticity.

SEAN CAPONE is an artist working primarily in the field of digital animation. His work takes the form of immersive scale, phantasmagorical projection environments and abstract video ‘paintings’. More recently, however, his work has shifted dramatically to short-form, single-channel works that combine avatar motion capture, 3D scanning, motion graphic effects, original sound design, and performance-oriented readings of appropriated and original texts. In both bodies of work, however, he tends to forego traditional cinematic tropes and language in favor of the ruptures and atmospheres generated through (what he call) a ‘poetics of the screen’: audio/visual loops, special f/x, avatar personalities, virtual landscapes, computational/algorithmic design, and computer screensavers, all in whimsical but knowledgeable dialogue with the history of experimental film & video and the evolution of painting & sculpture into digital form.
“The Listeners” is an installation and linguistic performance – enacted by visitors with an Amazon Echo. The Echo embodies a voice-transactive Artificial Intelligence and domestic robot, that is named for its wake-word, Alexa. The Listeners is a custom software ‘skill’ built on top of this infrastructure. The Listeners have their own ‘interaction model.’ They listen and speak in their own way – as designed and scripted by the artist – using the distributed, cloud-based voice recognition and synthetic speech of Alexa and her services.
JOHN CAYLEY introduces The Listeners and addresses certain contexts and circumstances surrounding The Listeners and the voice-transactive infrastructure on which they are built. Cayley believes that transactive synthetic language will reconfigure practices of language generally, including the arts of language, and that it will encourage the emergence of an aurature—practices of aesthetic language-making characterized by the fact that their artifacts exist—both archivally and in-the-moment—supported by aurality rather than by visuality: rather than by graphics, typography, and print, as literature.

Cayley’s talk will also touch on related issues and circumstances which are critical for our current historical moment. Transactive synthetic language and its art has statements to make about synthetic language and human embodiment; the robot imaginary; identity, integral embodied identity, and new modes of being; the voice and individuality; the ‘neutral’ voice; the inner voice; the voice of reading; artificial intelligence and identified artificial intelligences (AIs); network services and personhood; network services, AIs, and surveillance; artificial intelligence, AIs, and social relations; network services, AIs, and privacy; the ‘smart’ home; transactive synthetic language and domotics; the terms, control, and ownership of network services and their artifacts; the future of reading; the future of literature; the future of the archive as language. It is difficult to exaggerate the consequences of the developments that make The Listeners possible for the art of language and also for political economy and culture as a whole.
“Black moves in square” is a framed mini video installation that continues the series focus in exploring natural transformation via digital imageries and the interplay between virtual and physical space. From a distance, the image displayed inside the black frame appears to be still; yet as the audience approaches closer, subtle and gradual transformations of the image appear and start to pull one into this deep and endless microcosmic world. The tiny ultra-resolution display commands and heightens the audience’s perceptual attention and experience, intensifying the infinitesimal complex transformations on the screen, playfully mirroring the original work with an inverted scale.

CARLA CHAN works with a variety of media, such as video, installation, photography and interactive media. Much like the never-ending development of new technology, Chan considers media art as a medium with infinite possibilities for artistic expressions. Minimal in style and form, Chan’s works often toy
with the blurred boundaries between reality and illusion, figure and abstraction. Her recent practice focuses on the ambiguity in nature. Bridging natural transformation and unpredictable computer algorithms, her works are consolidated with a cohesive dynamic between form, means and content. “Black moves in square” springs from my long obsession and fascination with natural transformations, particularly formless shapes and their movement. The transformative power of natural substances such as water, rock, air and clouds produce infinite varying forms that seem both ordered and random at the same time. These magical transformations continuously disorient and fascinate the senses, creating a rich perceptual journey that is chartered for a mysterious unknown cosmic. This unknown cosmic can be seen as a representation of an external world as well as a mirror of the psyche from within, where the immanent and the transcendent are fused as one via the ever-changing audiovisuality.
“Self-luminous 2” is an experimental handmade instrument shown as performance. It is a series-project which I have been working on since 2013 and finally developed into shape in 2014. I am looking for an intimate and personal instrument that reflects on the relation between digital sound and light messages. In computer language, light-on is 1 and light-off is 0. If there are more than two lamps, it could be code, or various meanings could be read from it. When I press a button or turn a knob, a message is sent to Pure Data, and the sound produced by Pure Data is triggered live. The data of sound such as frequency and volume are analysed and sent out to the second Arduino to control the light. The light, in this case, is an intuitive element for human beings. From this point of view, it is really close to sound which...
disturbs our biological body directly. The lights are visual and they can be translated into messages. The message might be readable by coincidence with a link to the code. The light is bright enough for the visual phenomenon to persist in the minds of audience. During the performance, the sound is reproduced by code, and part of it is improvised.

**Yen Tzu Chang** I was under high pressure over years of study painting and lost the fundamental spirit and interest in everything. That changed when I came to know media art, especially sound art. It is such flexible art field and brings me lots of energy. Sound always secretly switches on basic perception of the body. I realized that if I want to explore more about sound, installation, performance, and so on, trying to search for the information by myself, asking and learning about technology can help me to develop my works. I think art work is one of the important ways to express my thinking, so most ideas of work come from life experience and emotion. About Self-luminous, you can see some shadow by back through of my work — "Time travel". This work displays the blurred memory of me at midnight in a car which was running on the highway. I just saw the street lights, the light of the cars moving in the opposite direction, and made it into a visual light and sound installation. And then, I totally fell in love with light as a medium. I realized the light somehow strongly controls the emotion of performance. We are in a short but high-impact visual world, so I tried more experiments to find out what kind of design and gestures are good for showing instruments and performing concerts. “Self-luminous 2" is part of this thinking stream. It is a handmade instrument built from plastic glass, an LED sheet, and several electronic components. I attempted to play the sound in cold style, but with extensive changes. Thus, the sound strongly attacks the auditory sense first, and then drags the audience until she/he feels exhausted. The true feeling begins and goes on from this time point. For me, it is a sound installation with special output because it is still developing and always makes me think more of the minutiae. So, every time the concert is modified. No matter what I add or remove, the purpose of changing is getting close to my present sound composition attitude.
林水源傳奇系列為藝術家追溯三十多年前的年幼記憶，藉由訪談年長的家族和村民試圖去解謎誇張傳說的口述歷史的故事。藝術家小時候是由外祖父母撫養，在當時極為年幼還無法言語的低矮視角，去觀看這當時村民畏懼且景仰的風水師。而由於無法言語和筆記，只能藉由觀看的幼童視角，試圖用卡通般的繽紛色彩，以視覺和感受去重現外祖父的英雄傳奇事蹟。而這種庶民式的傳說，牽扯了清光緒年間擔任雲林縣衙捕快蘇阿乖將軍，於南投林圮埔（竹山）一代剿山匪的故事。在硘磘庄外番仔共36名軍官全軍覆沒後，村民將整個蘇將軍的軍團埋於忠義之墓。爾後當時為農夫的林水源路過將軍墓，每每遷著牛隻經過，牛總是畏懼經過將軍墓而遲遲不願回家而拖拉許久，因此林水源先生對著將軍墓承諾，日後若經過能順利讓牛隻不再畏懼，將供奉將軍墓的亡魂。而事成順利之後，林水源卻忘記了。因此竹山硘磘村裡的木雕師父，授將軍墓神靈委託告知林水源先生，已經將神明刻好送至家中來收費，而兩人互相理解源由後，大感驚訝，且承諾和背負以風水師之技術照顧
鄉民的責任，而造成日後一連串鄉土奇聞。林水源先生在未當農夫之前，早年曾至中國學習傳統道教巫術，為竹山地方知名風水師。早年曾有許多台灣各地的民眾前往指點迷津，而遺留下許多有趣的傳說事件。此系列作品，為一台灣鄉土地方色彩的故事，配合眾人的口述歷史，而一集一集的故事，誘發藝術家去創作的連載式傳說。藝術家試圖以卡通的方式，多彩的降低過度靈異感的氛圍，如此刻意的手法希望在觀看這樣的傳說時，能拉遠觀眾的視角和心靈距離，而不敢到畏懼，可以全然以安全的，可愛的，繽紛的距離，觀看台灣歷史性的真實卡通。而如今，此神明又稱『忠義天尊』又稱聖義元帥，或稱紅旗公（紅先師），為一面紅的將軍，亦為若如藝術家兒時多年的守護神。如今紅先師在林水源先生過世後幾年已恭送回天庭。至今為在警界仍有許多員警為求破案而去竹山尋找祭拜，也實有所聞上社會新聞，為台灣道地的真實鄉土傳奇流傳至今。藝術家的創作動機是觀看長年下來，社會政治問題依舊動盪不安，人心私慾難測，希望藉由也許帶有神化性的色彩，告民眾，心存良善的重要。陳依純主要以錄像藝術、實驗動畫影像、互動藝術、複合媒材、繪畫為主要創作，長期關注於工業區、邊陲及中下階層等社會議題及民間故事。而這些創作主要目的為編織一個巨大的工業和農村歷史地圖，去承載其個人的真實與虛幻間的經驗，並嘗試與真實/現實社會的對話，以詩意的影像方式，浪漫輕快的音樂盒去敘說的痴人之夢與期望。
“Musical Noice – City Ambient Sounds” is a musical performance that captures the city’s ambient sounds as an artefact for textual building in the collaborative free improvisation by iLoRk, a laptop orchestra/mobile device ensemble from the Hong Kong Institute of Education led by Dr. Lee Cheng. A collective of ambient sounds representing various cityscapes of this city will be recorded, which will then be mag-
nified, distorted and/or synthesized to convert the meaningless signals to artefacts of this event. Values and meanings are therefore injected to the ambient sounds of the city, which are usually regarded as unwanted noise to the citizens. In this semi-structured and interactive performance, iLOrk members will collaboratively make music with ‘sonic trees’ – microphone and speaker stands that hanged with digital/electronic instruments and amplifiers – that surround the in-door and open space performance venue. Audiences are welcome to participate by responding to the city’s soundscape via interacting with those sonic trees.

Art should be made to communicate ideas and values, and provide meanings to its audience. Musical performance as an art form should therefore be able to anchor people’s sonic experience, triggering their reflective thinking on the ambient sound that surrounds in everyday life. The title of this musical performance, Musical Noice – City Ambient Sounds, offers several meanings – it could mean an accented version of the word “nice”; taking out one stroke from the letter “N” it becomes “Voice”; interchanging the letter “c” with “s” it becomes “Noise”. Musical Noice responds to the sub-theme “Noise Contra Signal”, that noise can be interrupted, intervened and reinterpreted as a meaningful artefact, which contributes as part of the musical context. The emphasis on economic development and fast pace of life in this city have ignored the invisible layer of its ambient surroundings, considering the ambient sounds of this city as unwanted noise (and meaningless signals in the electronic understanding). The proposed event attempts to raise people’s awareness of the ambient environment through imbuing new meanings from the sound that surrounds them, and therefore diverging people’s perception on noise and unfolding the possibilities on the involvement of noise in art-making.
"Spaces. Places. Memories." is a time-based series exploring how spaces transform into places. A discourse from the literature Space and Place by Yi Fu Tuan, "Spaces. Places. Memories." documents three spaces in Singapore – Canal, Grassland & Road – transforming into places through communal initiative and gathering. As Yi Fu Tuan wrote in Space and Place, "Place is security, space is freedom: we are attached to the one and long for the other". The notion of "Place is security, space is freedom" is resonated in this series as we see the individuals create and enjoy their activities in the respective grounds. We see how the people interact with their surroundings in search of a purpose. In the midst of these interactions, memories are formed, leaving a social and cultural mark on these spaces. Underlying concepts of memory-making, one's relationship to the surroundings and how human spatialise time
are conveyed in this series too.

The “Longkang (Canal)” is a space which holds my personal childhood memories. When I was young, my friends and I would mischievously climb down the longkang to play. Occasionally, we get reprimanding from bypassing adults who warn us of the danger but we would ignore them and run away. Despite the danger and unhygenic conditions in the longkang, that is a space where we were free from any rules. In that space, we instantly become “kings” because we were the only ones down there and we could do whatever we wanted. In the artificial waterways, we compensated the lack of “tools” to play by exercising our creativity to find fun. We will salvage leftover containers to catch small fishes or tadpoles in the waters and use whatever items we found in the longkang to play with water. When we got bored of those activities, we make use of the vast space the longkang offers to play “catching” (a game similar to police and thief). Our naivety surfaced in these activities within our “paradise”. Our mischievousness and desire for fun has changed the longkang into our playground. However, such scenarios only exist in the form of memories today. Children today have found fun elsewhere. The longkang has since been deserted, as a result, and returned to its initial state.

Like “Longkang (Canal)”, the idea of “play” is evident in “Cricket” although it is different in nature. On weekends, the group of migrant workers come together in an open grass patch to play their favourite game of sports - cricket. To any passersby, the empty land is probably ignored and deemed as useless but to the migrant workers, this space is identified as a cricket field. With the sports equipment and their enthusiasm, the migrant workers transformed the grass patch (space) into a cricket ground (place) and found joy in the field. Immediately, the impression of the land changes from being useless to a place of significant entertainment value. Cultural values and memories are planted upon the land as the game of cricket takes place. The profile of the space, as a result, has taken the shape of the activity performed in that space.

In “Thieves Market”, we observed that the road was originally a road that is hardly used by any vehicles. The vendors, on the other hand, see opportunity in the barren road and use their freedom to interact with the space. As the day starts, they gradually
move in with their goods and props to set up their stores. That process instils a stronger sense of security and evokes curiosity in the space. Subsequently, more people enter the space and a crowd is formed. While some come to sell their goods or in search of particular items, others are there to explore. The crowd has also attracted unexpected individuals into the space – security guards. Although the security guards are there for different reasons, they add a different dynamic into the space and reveals the significance of the place. The accumulation of activities has harnessed enough interest to gather people of all backgrounds in that space. While people come and go, bargaining voices filled the air. Transactions and memories are made in the midst of the chaos. The tangibles (vendors, visitors, goods) and intangibles (conversations, bargaining, transactions) layered the space with cultural heritage and memories, assisting the transition from a road (space) to a market (place).

The series is presented in the medium of projection on photography. In each piece, the photography shows the stillness, emptiness and neutrality of the space. The projection, on the other hand, adds life into the work. It enriches the photography with cultural and social content through moving images and sounds. The faint projection is an attempt to convey the concept of memories asethically. Spaces. Places. Memories. is based on and inspired from different individuals’ personal memories at different locations. More importantly, this series draws attention to the transition from space to place through the spectacle of individuals’ memories.

CHU HAO PEI’s work encompasses various mediums such as installation, videos and photography. He has a particular interest in cultural heritage, environmental issues, politics and history which is derived from his volunteering in environmental and heritage groups like Ground-up Initiative, The Adam Park Project & Bukit Brown Cemetery Tours. Influenced by institutional critique pioneer artists, Hans Haacke and Marcel Broodthaers, his works often questions and critiques the social, political and cultural issues that are part of the everyday life. More critically, he examines the loss, or potential loss, of Singapore’s nature and culture heritage as a tactic to draw attention to wider issues of heritage, memories and cultural loss within the context of Singa-
pore. The issues concerned frequently raise the awareness of the conflict between nature/cultural heritage conservation and urban planning.

Chu’s process of work often involves researching, making field trips surveying and conducting interviews to understand the subject matter of his work. During these trips, Chu often starts with historical context as the basis of his research in which he makes observations and do audiovisual recordings in the process. With the collected data, Chu conceptualises and experiment with different forms and mediums within his discipline. Inspired by the experiential element in Olafur Eliasson’s installations and using his knowledge in new media technology, Chu is inclined to create immersive installations within the capacity of the space that are often not possible with traditional mediums e.g. Developing MacRitchie. Hence, Chu’s body of work is carefully balanced with different media and linked by recurring formal concerns through the subject matter.
“Hearts and Minds: The Interrogations Project” is an immersive digital media project that foregrounds veterans’ testimonies of US military interrogation practices and human rights abuses during the Iraq War, often by young and ill-trained soldiers who nev-
er entered the military expecting to become torturers and who find themselves struggling to reconcile the activities they were asked to do. Drawing upon extensive interviews with veterans carried out by political scientist John Tsukayama following the Abu Ghraib accounts of abuse, this project is unique in building understanding of how a military with a just vision of its practices might allow the conditions for human rights abuses to occur. The hybrid project was developed through a unique collaboration between filmmakers, artists, scientists, and researchers from four universities and developed in the immersive 3D CAVE2 at the University of Illinois-Chicago (UIC) for exhibition, educational institutions, museums and libraries, and distribution using tablets/ipads and Oculus Rift.

The Virtual Environment. “Hearts and Minds: The Interrogations Project” was developed at the Electronic Visualization Lab (EVL) at the University of Illinois Chicago (UIC) for the CAVE2™, the next-generation large-scale virtual-reality 320-degree panoramic environment which provides users with the ability to see 3D stereoscopic content in a near seamless flat LCD technology at 37 Megapixels in 3D resolution matching human visual acuity. The CAVE immerses people into worlds too large, too small, too dangerous, too remote, or too complex to be viewed otherwise [1]. The immersive 3D environment of the CAVE is here intended to provide an affective environment that produces a space for interpretation. The visualization environment serves as a dispositif for enacting individual and cultural memory of an institutionalized atrocity.

The project presents the audience with a narrative environment that begins in a reflective temple space with four doors opening to ordinary American domestic spaces: a boy’s bedroom, a family room, a suburban back yard, a kitchen. The user navigates the environment using motion tracking and a wand, a 3D mouse, to interact with and control a VR experience in the CAVE2™. The virtual scene is continuously updated according to the orientation and position of the head, as measured with head and arm trackers, and the 3D view of the scenes is focalized on this perspective.

Moving through and exploring each of these rooms inside the virtual scene creates a sense of being immersed in the virtual environment. Using a wand
with buttons, the navigator triggers individual objects, such as a toy truck, a Boy Scout poster, or a pair of wire cutters. When each object is activated, the walls of the domestic space fall away and a surreal desert landscape is revealed in 2D surrounding panorama, and one of the four voiceover actors is heard recounting particular acts and memory related metaphorically to the object selected. The objects also function very much like hyperlinks in moving us from one narrative element to another. Viewers travel through the domestic spaces and surreal interior landscapes of soldiers who have come home transformed by these experiences, triggering their testimonies by interacting with objects laden with loss. The project extends and make accessible disturbing narratives based on the actual testimonies of veterans who bravely chose to share their experiences. The immersion the system provides allows for a different type of affective experience of these accounts, activated through the visceral immersion afforded by the visual and auditory environment. The work offers models for engaging with testimony and oral history. It uses visualization to build new discourse around challenging topics and to create communicative virtual environments that enable storytelling through visual metaphor. While many uses of visualization technologies are focused on providing accessible representation of “big data”, in this case, the same technologies are being used to narrativize a complex contemporary issue and to provide a platform for discussion and debate of military interrogation methods and their effects on detainees, soldiers, and society.

RODERICK COOVER is Founding Director of graduate programs in Documentary Arts and Visual Research and in mediaXarts: cinema for emerging technologies and environments at Temple University. A pioneer in interactive documentary films, installations and webworks, his works are distributed through Video Data Bank, DER, Eastgate Systems. Coover is the recipient of Whiting, Mellon, LEF, and SPIRE awards, among others and his works are exhibited internationally.

SCOTT RETTBERG is Professor of Digital Culture in the Department of Linguistic, Literary, and Aesthetic studies at the University of Bergen, Norway. Rettberg was the project leader of ELMCIP (Electronic
Literature as a Model of Creativity and Innovation in Practice), an EU- and HERA-funded collaborative research project, and a founder of the Electronic Literature Organization.

**Daria Tsoupikova** is an Associate Professor in the School of Design and the Electronic Visualization Laboratory (EVL) at the University of Illinois at Chicago. Her work includes the development of virtual reality (VR) art projects and networked multi-user exhibitions for VR projection systems, such as the Cave Automatic Virtual Environment theatre (CAVE).

**Arthur Nishimoto** is a doctoral student in the Department of Computer Science and Research Assistant at the Electronic Visualization Laboratory (EVL) at the University of Illinois at Chicago. He has previously developed interactive applications on the EVL Cyber-Commons multi-touch wall including the 20-foot Virtual Canvas and Fleet Commander which has been exhibited at SIGGRAPH and Supercomputing.
“Cunt Touch This” is inspired by Tee A. Corinne’s Cunt Colouring Book from 1975. The game is a meditative drawing activity accompanied by sounds. Using fingers on a touchpad players can admire, care for and add their own artistic colouring to the detailed shapes of Corinne’s drawings. Pacing of strokes is important for the aesthetic look: slow strokes create thick colour lines while fast strokes add a coarse graffiti style. Randomly placed sensitive areas respond to the touch: Careful work around these gives more time to draw, while too much interaction will cause the image to pulsate in a slow motion cunt explosion before the image fades to white leaving the message “thank you, it was a pleasure”. The option “Cuntinue?” invites the players to encounter new lev-
els. Sensitivity area and pleasure length on each vulva are unique just like each drawing shows the diversity of female bodies.

**COPENHAGEN GAME COLLECTIVE** is a multi-gender, multi-national, non-profit game design collective based in Copenhagen, Denmark. The collective comprises a network of people and companies interested in independent game culture. Collective members include creative individuals first of all, but also small companies, non-commercial interest groups, and game communicators and disseminators.
“In Motion” is an essay on the poetics of movement representation. Forms on Movement, colors on Movement and look on Movement. This experimental and abstract movie was possible after the a three years research with ARTIEFRACT software. The Movement-creation opportunities, offered by this new tool, are completely different from any other, as the software create between two forms a sequence of forms, always moving, that ultimately give rise to one another, completely different from the first. This creation is controlled by controlling the functions and attractors, though it can always be a quota random. This project will aim to a poetic of move-
ment, or its representation can have on the surface of the screen. The movement that occurs in the passage of the color A to the color B, the way this is fused with the movement of forms and the way that how this form is transformed into another one, cheering and populating the screen in constant rhythms and cadences. This project synchronizes two objectives that are important in my career as an experimental creator, the innovative and experimental technological side by side with the creation of representation of movement-essence of the motion representation of animated cinema.
“Marginal Consent”. Channel One - Poses associated with hysteria in the late 19th century are re-enacted (inhabited) by the artist and posted on amateur porn/tubesites on the Internet. Channel Two - Scroll of collected comments left by users of the porn/tubesites. By using early photographic images of female hysterics (1890-1910) as a reference for re-enactment (inhabitation), and then (re)positioning them on porn sites, the definition of sexual content is challenged. The work was removed from RedTube for not being sexual in nature, and has been taken down from other site for a myriad of reasons. Despite being diagnostic aids, there is a sexual under/overtone in many of the original “hysteria” photographs. Due to the limitations of early photography, the patients needed to hold the poses for several
seconds for documentation; thus there are elements of voyeurism and (solicited?) performance that resonates with the voyeuristic/exhibitionistic nature of Internet porn.

**DANA DAL BO** currently lives and works in Montréal, Canada. Her work moves in and between photo, video, textiles, performance, and the net; it is a fusion of these mediums with her diverse background in psychology and modeling. She draws inspiration from reality TV, surveillance practices, the history of medicine and psychology, infomercials and pop culture. Themes of contemporary anxiety, voyeurism, exhibitionism, narcissism and feminism dominate her work.
“Talking Spaces” is a site-specific sound performance series in which situational audio recordings are converted into an improvised sound performance in public space. Through this performance series, the artist seeks to draw attention to the inseparable sonic bond between listener, space, and performer during performance, as well as between listeners and the fascinating sound environments embedded in their daily lives. With a microphone, audio of the space is periodically recorded. Recordings are processed to varying degrees and arranged into improvised music with a digital audio workstation and MIDI controller. The resulting sound, expelled from a speaker, blends with the natural sound environment, overlaying it with a modified version of itself. Each performance is totally unique, since its only materials are situational recordings gathered during
the performance. This performance series is strongly tied to Sound Walks and Land Art. During a Sound Walk, the goal for participants is simply to listen to the sounds of the environment. However, in addition to surrounding environmental sound, participants almost certainly make sound themselves by moving throughout the space, for example with their breath, footsteps, or clothing. Thus, the two seemingly separate entities of human and environment become sonically intertwined. It is a goal of this performance series to generate a similarly meditative and socioenvironmentally adhesive sensory experience for the performer and listener alike.

“Talking Spaces” cannot exactly be considered a “Sonic Land Art,” since its compositions are not comprised of natural materials but recordings of natural materials. However, like Land Art, performances are site-specific, derive their materials from the environment or public space, and position in/on that space an artwork which resembles but redesigns it in the aesthetic of the artist. Also, the two are ephemeral and sometimes created within the solitude of remote locations, preserved and viewed by third parties only by way of documentation. A passing pedestrian who sees audio equipment connected to speakers in public will likely assume it marks the presence of a street performance. Because conventions of sound or music performance command or suggest attention to the performed sound, the conversion of recordings of the surrounding environmental sound into a musical performance thus draws attention to listeners’ surroundings. As a street performance in public space, the absence of a stage or rows of chairs for audience seating removes the conventional notion of separation between audience, performer, and venue. Instead, listeners may feel free to approach the performer and experiment making sounds into the microphone or even to engage in conversation with the artist.

A “Talking Spaces” performance is comprised of three basic components: Electronics, Environment, and Performer. The electronic element of the performance is essential in that it facilitates the capturing, processing, and performing of digital audio. The quality and character of the sounds entering and exiting the devices depends on the quality and character of the equipment. While, in field recording, attempts are often made to prevent extensive sounds
associated with the word “noise,” such as wind, feedback, or low fidelity, these qualities might instead be appreciated as a compositional contribution of the equipment to the performance. Other compositional elements affected by electronics include structures and processes within the digital audio workstation as well as effects featured on the speaker(s) or guitar amp(s) used to project the performed sound. The audio equipment as objects also provides visual cues to the audience. A microphone pointed away from the performer suggests environmental input and possible audience participation, should members decide to approach the microphone.

The environment, of course, provides the sound material to be recorded and processed. The natural environment as a system of dynamic and ever-changing patterns provides a generative compositional contribution to the performance. Additionally, the visual appearance of the environment connects sampled sounds to their origins as physical events, which offers some transparency to audience members regarding the performance process. A performance in public space which draws attention to its dynamic sonic presence consequently draws attention to its visual presence as well, encouraging listeners to become active viewers of their environment. The performer’s role in the performance has much to do with awareness. As with a musician playing in an ensemble, listening, adjustment, and reaction are required of the performer, who decides the amount of sound and the character of sound to add to the pre-existing musical texture. Other fundamentally human qualities contributed by the performer for this project include personal musical tastes or influences, emotional expression, skill level, mood, sense of humor, and so on, all of which affect the musical composition of the performance.

Though the project’s configuration provides some constraints, compositional possibilities are seemingly endless. DAWs enable field recordings to be manipulated and arranged quite elaborately, even during an improvisation. Depending on the physical controls featured on the MIDI controller in use, the performer has access to varying degrees of tactile expression, though digital options on the DAW can sometimes compensate. This particular artist happens to be heavily influenced by the textures and compositional arcs of large-scale symphonic works
and techno alike. Decisions must be made, however, with the environment in mind. Thin textures sometimes subtly obscure the distinction between environment and performance, while, in contrast, heavy effects and mechanized repetitions can quite starkly distinguish the two from each other. This artist prefers to strike a balance and, perhaps most importantly, at the end of the performance, to leave the audience wondering if it’s over.

**EMMA DANCH** is a multidisciplinary artist whose body of work includes electronic music production and performance, poetry and creative nonfiction writing, fiber sculpture, photography, and illustration. Across media, her process-driven works involve a collage-like collection, deconstruction, manipulation, and reassembly of fragmented materials into understated yet emotional conglomerates. Regular fluctuation between disciplines has instilled in her process a cross-pollination of textures, formal structures, and ideologies. Rooted in a traditional musical background, musicality in particular is embedded throughout much of her work. The language of her writings is shaped by its rhythmic and melodic musical framework. Rhythm and temporal movement are also vital procedural components to her illustration and fiber works, which are often comprised of multiples drawn or assembled over long periods of focused repetition. In her conceptual sound work, Emma recontextualizes musical instruments, objects, and practices to examine their hidden potentials in other facets of music-making. Some methods include performance with tonal musical instruments as exclusively percussive sound objects; rearrangement or removal of conventional stage vs. audience seating configurations during performance to alter distinctions between performer, audience, and space; use of “noise” in its many forms and definitions as sound material for electronic music production; and street performance using real-time field recordings of the space itself as compositional material.
“Xon Kon” Welcome. Collect, build, and trade in the new city. Hit the streets to collect currencies, invest to build your empire, trade with other players – or takeover their territory. Join this street game that explores the economic forces that shape a city. Will you build and own the dominant empire in the new economy? Or will you lose your territory to other, more powerful, players? Cities are highly coded locations. Unique to Hong Kong is that the city’s symbols and systems have been continually recoded over the past 200 hundred years. Transitioning from Chinese to British rule and back again (with a brief period of Japanese occupation in WW2) Hong Kong has been repeatedly rebooted: linguistically, politically, culturally and even geographically. The remains of bi-lingual messages, remixed symbols, and obsolete frag-
ments of code are still found scattered at street level. Traces of the Hong Kong’s previous incarnations appear throughout the architecture, traditions, food and fashion, such that walking around the Central Districts evokes an appreciation of the city’s complex multiculturalism, as well as its mercantile past and present. Indeed, fundamental to Hong Kong’s foundation, and continued way of life, is its ongoing role as a global trade centre. Since its establishment by Britain in the 1840’s, the city has served as a key port-of-trade connecting East and West in the exchange of a broad range of merchandise. Once dealing primarily in tea, silk, opium, gold, cotton, and spices, the city’s more recent exchanges of favour are fashion accessories, consumer electronics and international finance. The multiple trans-national networks that have developed as a result of this rich history of trade have deeply formed and re-shaped the city at cultural and architectural levels.

“Xon Kon” is a street game that draws in these layered histories of Hong Kong by inviting players to collect coded currencies hidden in the city streets. These currencies can be collected and/or traded with fellow players, and form the building blocks of an intricate model of Xon Kon – a coded analogue of the city of trade. Visit the gallery to establish your territory, check your empire online, claim and trade codes and currencies via twitter, and watch instagram for new codes on the street. Over the seven days of the game up to fifteen players traverse a city both real and imagined as they join to define and decode the rules of the Xon Kon Special Administrative Region.

**Dr. Troy Innocent** explores the multiplicity of codes in the contemporary mediascape, exploring the connections between language and reality. His work invites people to play in worlds that emerge from transmedia ecologies – complex systems of virtual and actual signs and entities. In his practice he has developed a unique aesthetic vocabulary that spans interaction, design, sculpture, animation, sound and installation. Innocent is represented by Anna Pappas Gallery.

**Dr. Hugh Davies** is an artist, academic and researcher in the realm of media and creative arts. Informed by his training as a sculptor and employment in film and theatre, his creative practice invites participation in constructed transmedia worlds. In a
playful spirit of critical inquiry, his research draws on his creative output and contemplates perception of reality, as well as the paradoxes of technology, design and media through concepts such as materiality, desire and obsolescence. With an output spanning sculpture, games and participatory practice, his works have been presented in Australasia, Europe and the Americas. Davies is the founder of the participatory arts group: Analogue Art Map.
“Patterns” is a sequence of digital animations in which raw images and sounds are generated by computer algorithms and conformed by the artist into meaningful shapes and sounds. The piece’s premise is that the digital medium is a world. A world to be explored and cultivated during the artistic process. It is a world because it is a platform for the existence of beings and events. It is an alien world with different natural laws; It is a discrete world in which atoms are pixels and single audio samples and in which forces are computer processes which manipulate the digital matter. Before it is cultivated by the artist, this world is incomprehensible to human perception. The end product is a strange combination of familiar and alien. It gives a feeling that there really is a world out there, inside the computer. Maybe it is the afterlife, maybe it is a refuge.

Following are short explanations of the different parts of the piece accompanied by related still frames:

1. Portal. A transition from the continuous world to the discrete world. A mathematical equation of a circle represents a circle with infinite accuracy. But on the screen it is reduced to a finite representation by pixels. The Portal is a sequence of circle renders on a grid of pixels. As the grid gets smaller and the circle is represented by a decreasing amount of pixels, the computer is lesable to represent the circle...
and it becomes pixilated and broken (due to statistical errors of the representation algorithm). Thus, the idea of a circle is lost but the materiality of its representation subsists.

2. One white pixel, as if it were infinitesimal, disrupts the black void that surrounds it. Repeated manipulations by blur and sharpen algorithms make it expand in space (in a diffuse pattern), beyond the frame and to infinity. Rotating the screen’s plane in 3D space creates the illusion of a camera, a human point of view.

3. The Colors of Noise. Similarly to white light which contains all colors - white noise contains all frequencies. Using filters, it is separated to high and low frequencies in audio and in video. The combined pattern of frequencies makes an image of sea, wind and waves.

4. White noise becomes a word by combining frequency patterns in the order and dynamics of that word.

5. From Noise to Tone. In order to isolate a single frequency from noise we reduce the noise to a single white pixel and to a single audio sample and then start adding them up in an orderly manner. The construction principal is that the disturbances should appear in equal time intervals. In the beginning, 10 pixels flicker, each 5.5 times per second and form a sound with a frequency of 55 hertz. More pixels add up and form other notes. Low notes have few white pixels and high notes have many. Eventually 4 octaves of the F major scale are formed, represented by a gradient of grey shades. Playing the sounds in a certain rhythm and in a certain order makes a recognized tune: “Music alone shall live”.

6. Epilog

**SHAHAR DAVIS** manipulates material with my hands, shaping it into symbols and images: Searching for symbols that have not been attached to a meaning and images of things that do not exist. He believes such signifiers are discovered by chance and by intuition, by exploring the materiality of the medium in search for their manifestations. He is looking for these signifiers where there is much uncharted territory - in New Media.
“The Material Couplings of Immaterial Machines” is a 20-minute piece that utilized the dynamic and sound-reacting iTunes visualizer to play and interact with a political science lecture from Yale University on French political theorist Alexi de Tocqueville’s notion of democracy, as obtained freely from the open source of iTunes U. In the lecture, the nuances that democracy might take and the cautionary tone with which Tocqueville approached it are emphasized, touching on notions such as the tyranny of the majority and the danger of soft despotism. The result is a video of captivating and flowing visuals interacting with and moving to the cadence of a political science lecture on the anxieties surrounding democracy. The installation was conceived to be set up in a room with chairs to resemble a pedagogical setting.
Referencing the student roots of a large number of political movements (such as May 1968 in France and the more recent Sunflower and Umbrella movements in Taiwan and Hong Kong), the project intends to examine the relationship between democratic aspirations, the possibility of political revolution, distributed online learning, interactive visuals, and how the massless collectivity may be sedated rather than empowered through the merging of large institutions of pedagogy and digital media. In an age where the phenomenon of open access, free culture, and MOOCs (massive open online courses) has gained tremendous traction, how might such an enterprise be utilized as a banner of democracy and openness while concealing underlying powers and their strategic motives? Is the liquidity, porosity, and coupling of media titans and prestigious academia one that is demonstrative of democracy? And if so, of what kind?

Following Georges Bataille, media theorist Trebor Scholz talks extensively about the tyranny and aggression with which gift economies perpetuate the dominance of power structures. As he cogently argues, “openness functions as public relations.” The joint venture of iTunes and the top universities such as MIT and Yale might be veering on the side of despotism as the lecture forewarns. The visualizer, which has its nascence in the political movements of the 60’s, has been completely co-opted as the standard in media entertainment, for the consumption of ‘everyone.’ This illusory and oppressive moniker of ‘everyone’ is precisely where Tocqueville’s anxiety emerges – who are ‘the people’? Is the online sphere a site for mobilization of the collectivity or merely an extension of the failed Habermasian public sphere? The bespectacled form that such a lecture is presented in, is emblematic of the tension between framing ‘the people’ as massless consumers in the digital age and the potential of a mobilized collective, while the techno-entertainment titan and the prestigious academia conflate and reassert their unrivaled leadership and monopoly in their respective industries.

KEVIN DAY’s practice explores the materiality and body of immaterial data in the age of flickering signifiers. His works examine issues such as algorithmic culture, digital memories, cyber control, post-
human concerns, communications, and online subcultures, focusing on the effects the digital interface has on human relations, perception, and cognition, specifically the obligatory mediation through coded language and signals. Through his work, the production and consumption of digital materials is framed as subjugation through language, the digital language of code. In his sound, drawing, text, photo, graph, and installation work, the body persists as a medium through which signals must pass, resisting the notion in information theory that data are free floating and decontextualized, and insisting instead on a situated and embodied spatio-temporality. Day’s practice seeks to resist the codification of being through an insistence on the presence of noise in the interface, which persists within the signals in the capitalist communication industry. As such, the body is the necessarily mediated materiality in the production of immaterial labour, insisting on its position between immediacy and hypermediacy.
“Vanishing” is a project on the role of data in photography, and the tension between visual information and hidden data of the digital image files. Created with custom software that writes historical data to the image exif code (names of victims of a terrorist attack, dates of bombings of a war strike, etc.), the photograph gets visually degraded while its data becomes enriched with the event information. This creates a hybrid document that reveals the complex ontology of digital images, standing between reading and seeing, coding and decoding. It makes the tension between visual output and data processing in digital images visible, it questions the notion of photography as a document, interweaving the signifier and the signified, noise and signal, requiring the viewer to open the file code to make sense of the image.
Vanishing consists of a series of digital videos and digital image prints accompanied by small publications. The pictures are all appropriated images of iconic historical photographs, that have been “glitched” through a custom software. The intervention to the data file creates the visual loss of information, thus making the image visually degrading while at the same time making the information of the image richer. The original and the resulting images are presented with a small printed publication of the exif code, where the viewer can read the pixel data and historical information. Additionally a video of the process shows the performative act of the re-writing of the image.
“Aquatint” is a bespoke mix of Overlap’s award-winning transitional landscapes: a mesmeric dance of shapes, lights and abstract imagery on the cusp of the recognizable, reflecting the emotional response we experience in powerful natural environments: atmospheric, sensory and textual, delivered through a systematic patterning within a void and augmented by their melodic minimalist music. A plastic view of nature.

“Running Forest” is a middle distance electromagnetic slide through an endless forest.

“Lazy Wave”. Underwater sky, a surface never reached.

“Cloud Edged”. Perhaps the purpose of abstrac“A stream of singularities appears to have effectively been harnessed to create sequences of image and sound that recall the familiar texture of bodily experiences shown through an abstracting filter. It ap-
pears less necessary to determine location and geography than to exist in the moment, experiencing phenomena within the framework of an immersive virtual experience”. Ashley Wong, Sedition Arts.

**OVERLAP** creates atmospheric audiovisual performances, installations, single screen videos and VJ performances for the international media/music festivals and arts circuits. They have developed a style outside film, TV and video art – a way of abstracting and combining imagery that has a musical or painterly logic rather than a narrative based or conceptual one. A visual take on serialism: wallpaper with conceits. Recent works explore the relationship between still and moving imagery through systems of implied motion within transitions, use of discreet picture planes and obscurcation techniques. The view is in movie time but limited to flat photographic space, viewed through a perceptual keyhole, more akin to memories and dreams than cinema.

Overlap’s music is atmospheric, melodic and minimal: collaged musical spontaneity. Recent soundscape albums Tracks between Trees, Slow-sound and Greylight Green are sometimes orchestral in scale, sometimes spaciously empty. As experienced VJ’s, Overlap understand how perfectly 4/4 beats support live visual mixing. In the above albums they have kept the even timing and removed the beats, blending a mix of English folk, electronica and melodic drone into an ideal vehicle for visuals. Violinist, singer and composer Eos co-writes and performs vocals and violin, Andy Dragazis contributes to the arrangement and production. These sessions have been heavily manipulated, fragmented, inverted, time stretched and effected – then dropped into a constant echo speed, resulting in a happy marriage of improvisational freshness within a dry arrangement, a sublime ‘Edwardian electronica’. Experiments with sound and image are distilled into single screen pieces, forming useful components for audiovisual installations and performances.

“A stream of singularities appears to have effectively been harnessed to create sequences of image and sound that recall the familiar texture of bodily experiences shown through an abstracting filter. It appears less necessary to determine location and geography than to exist in the moment, experiencing phenomena within the framework of an immersive virtual experience”. Ashley Wong, Sedition Arts.
“Unsavory”. Policies engineered by lobbyists can be shortsighted. The National Restaurant Association aggressively opposes mandated sick day legislation because they assume it will increase operating costs. While well-paid employees can easily take time off to recover from an illness, for employees making minimum wage, the decision to stay home could mean financial suicide. And in the restaurant industry, employees going to work while sick could result
in a public health crisis. “Unsavory” is a mobile game designed to put the player in the precarious position of choosing between their personal health, public health and their financial wellbeing. Like other activist games, the intention is to create awareness and empathy around an issue that is best understood as part of a larger system. Additionally, the game seeks to be a catalyst for change by embedding a social media campaign into gameplay that encourages players to share meaningful facts and statistics regarding restaurant workers, access to health care, and paid sick day legislation in the United States. The objective of the game is to pay all of your bills at the end of the month by working at a minimum wage job. At your job, you prepare tacos, quesadillas and burritos by tapping on the ingredients in front of you that match each order slip. Each round equals one day, and the game difficulty increases by introducing a new type of order slip. Every 5 days, the time allowed between orders is reduced to increase player difficulty. A player is allowed to screw up an order twice in one day without being penalized. However, if the player makes a third mistake and receives a third strike, they can either quit for the day or use a “re-shift” to play the round over again. If a player is out of re-shifts and goes home early more than two days out of the month, they’re fired.

Each day the player is welcomed to work by their boss. The boss admires a strong work ethic and is a bit slow when it comes to arguments presented by the player’s dialogue. The intent to is work through the logic of how things play out in the real world with dry humor. Players expect a challenge in a game, so a boss with tough love isn’t a stretch for the cultural context of a video game. At the end of each week, the player is paid for time worked. Typically, this is a full 40-hour week but if the player went home early the time they were unable to work is deducted for their paycheck. After work, the player is transported to their apartment where they are able to pay their bills, take medicine, and call in sick. To ground the game further in reality, the bills to be paid by the player are a simplified version of a financial plan created for McDonald’s employees in the United States by Visa.

The key takeaway that “Unsavory” attempts to impress upon players is that a person making mini-
mum wage without access to paid sick days is systemically forced to work while sick. In the second week of the game, the player catches a cold. The screen begins to shake and the player must wipe their nose in time in order to stop the nose from releasing a torrent of snot onto the food trays. Each time the player wipes their nose a timer is reset. The sicker a player gets, the shorter the time period between required nose wipes. If the player sneezes, their boss realizes they are sick and sends them home for the day. The boss is upset that the player would come to work while sick, failing to understand that the player has no real choice in the matter. The player can opt to buy and take medicine or take a day off from work to increase their health, but they are not paid for that time. This makes paying the all of the bills impossible if the player takes more than one day off from work. Each proceeding day the player is fully aware that they are sick yet they continue to come to work and hide their condition. As the boss continues to interact with the employee, the original tough love dialogue now comes across as mean spirited and unrelenting. The system is laid out for the player to see as they have experienced it.

Beyond exposing the system, “Unsavory” seeks to promote a dialogue about paid sick day legislation. When the player first becomes sick, they receive a letter from an advocacy group that informs them about paid sick day policy in the United States. The player continues to receive messages with additional information about paid sick day legislation each time they come home from work sick. The messages act as a silver lining and point towards a better future. Each letter invites them to participate in a social media campaign within the game. From this campaign screen, they can select various tweets that highlight the issue through different lenses (with regards to business, public health, human rights concerns) and target specific hashtags and accounts related to the campaign. Thus, the game promotes a call to action that allows players to go beyond the gameplay and get actively participate in addressing and trying to fix a real-world problem.

The world is not black and white. Many gray areas exist. While perspectives are subjective and every bit of rhetoric can find some thread of reason to tug at, sound logic is fleeting from our world. Our world is full of systems. Systems control the world around
us. Systems enforce the law of land. Systems create culture and increase our prosperity. Ultimately, systems make us who we are. I make games to dissect systems. A computer can only be cold and calculating, so creating sets of rules for humans to play with allows us to tease out fact from fiction in a given system. We can’t unconsciously cheat a computerized system. We have to interrogate a system and understand it fully before we can hope to change it. This process goes back and forth with the artist and the audience, working together to find a mutual understanding through interaction.

Games are a collaborative endeavor. Relying on the strengths of other people to create something is humbling. The process of design is a constant reminder that by working together, we can achieve something fantastic.
“Three Bankers: Volcker, Greenspan, Friedman.” This is a grouped set of video portraits of three important bankers and monetary theorists: Paul Volcker, Alan Greenspan, and Milton Friedman. These portraits are taken from a larger, ongoing series concerned with the ideologies of monetary policy and the worldwide economic collapse. Like all the portraits in the series, the base images for these videos were taken from public domain video. The originating footage was re-configured to a standard 720 x 1080 vertical format. Source images were then re-rendered as single frames, rotoscoped, placed on 3D layers, re-lit, and color graded to establish an underlying uniformity across the base layer. Layers were then processed through GLSL shader scripts written to create generative patterns of fracture, noise, and distortion specific to each of the portraits. The series is formally benign, bankers facing us, gesturing in blue light, an atmosphere reminiscent of network
broadcast or video reportage, etc. However, as the distortion of each image plays out, the bankers create a space beyond the fact of appearances, each portrait establishing an image more accurate that the originating figure itself. “A distortion which distorts itself into fact,” as Francis Bacon has memorably said of his own work in portraiture, in other words, a distortion that restores accuracy to the originating image, a distortion which undoes the semblance of stability proposed by an official version of each figure, a distortion used to return the image to fact. The public provenance of the base images is appropriate to the project. One way to interrogate systems of power is by appropriating what is put forward as journalistic, factual, and credible. To allow standard, mass broadcast images of those in control to continue undisrupted or to be society’s predominant representations of the turmoil engendered by current economic philosophies is, in a way, also a means of denying our experience of those policies.

ANGELA FERRAILO has chosen to remain focused on the human figure as the subject for art making, and to investigate the ways computation might extend or even re-imagine a studio tradition of portraiture and figuration. This distinguishes her from many digital artists who work with data, information flows, and abstracted machine aesthetics. Whether digital or analog, portraiture is a specific type of representation, one that seeks ways of reconsidering what is called fact, especially the ‘fact’ of the apparently stable surface. These portraits are at times perfectly legible and at other moments difficult to clarify. They perform a technical reality of the image while invalidating any claim appearance makes towards stability. Like the processes of banking itself, the features of these men are meant to be mysterious, open to continual reconfiguration and mutation, large and imposing, but unresolved for many reasons, not the least of which should be the question on the part of the artist as to what has been captured. What has been created, asserted, expressed? In the complex flows of money, debt, and data, can the answers to these questions ever be stable? Or is the destruction, pain, and human suffering unleashed by the economic philosophies of the past fifty years is, like any system of genocide, unrepresentable?
“Il ne reste plus que l’attente” ("Wait and see") a software linked to the web and made with a video game engine (Unity 3D). Every 15 minutes this software check on Twitter the occurrence of a list of expressions. Those expressions are made of words related to the lexical field of liquidity combined with terms usually used in finance (liquid, stream, wave, flow, finance, exchange, management, market, etc.) The more those expressions have popped on Twitter, the more the sea seems agitated, on the opposite, the less the words are use, the more the sea looks quiet.
This program acts like a barometer of the discourses about liquidity and finance on the Internet. This witness of the speeches which reactivate today a collective image linked to water, questions the figure of the ocean as the new paradigm of our digital society: a liquid world with many streams where everything communicate, and in which we evolve without being able to embrace all its complexity and inner mechanisms.

**GALDRIC FLEURY** and **ANTOINE FONTAINE** - the Parisien artists known as fleuryfontaine - question through their installations, performances and digital pictures the interactions between man and its close environment, using information technologies as their field of investigation. Their work fully participate in this history to witness the shift from modernity to algorithmic governance. The theory of knowledge, combined with that of Capital, finds expression through the metaphor of liquidity, the fantasy – shared by teenagers, engineers and preachers – of a borderless, water-tight world in constant regeneration. (Alexis Jakubowicz, 2015).
“Jane” is a series of films comprising of six conversations between John and Jake about a woman they share; both are married to a woman called Jill. Each is replete with options for dialogue and camera angles that are initially randomly selected. The work also allows for user selection through navigation of the interactive master script for each selected conversation. Films last between over three minutes to a little over five. Form follows function as the vagaries of desire that the chimera of Jane embodies finds its perfect expression in the deliberately pliable text. Jane is a siren, a masterful mistress and wholly beyond normal expectations. She is the figment of the male imagination that exists only to haunt him. Jake and John the protagonists are ambivalent too. They can be read as individuals or the same person separated by the attrition of time. Taken as individuals, John is the older, more jaundiced and stoic of the pair. He is also probably the happier or at least more
accepting of his marriage and its inevitable compromises. Jake is the more idealistic and yet the more troubled too. He bears the burden of a sexual ambiguity both in himself and the troubled relation his wife had with her father. Meaning and signification in ‘Jane’ is carefully modulated though its script in both its global structure and in its individual sets of more local variations. Globally each conversation consists of three parts each beginning with a pause of varying length, followed soon after by one of three key works spoken by either character, namely ‘last night’, ‘tonight’ and ‘fantasy’; thus the six conversations are formed. The overall schema then is:

Old Films, New Endings (Last Night Jake)

last night  John watched a film on TV last night.
fantasy    John makes up different endings to the film he watched.
tonight    Jane recommends an interesting film.

Bedtime Stories (Last Night John)

last night  Jake’s wife tells him bedtime stories under certain circumstances.
tonight    Jake describes the kind of bedtime stories his wife tells him.
fantasy    The kind of stories that Jane tells.

Married Too Long (Fantasy Jake)

fantasy    John talks about the dream life he would like to lead.
last night  John has an argument with his wife.
tonight    John resolves to work things out with his wife.

Sexual Conundrum (Fantasy John)

fantasy    While John is jealous of Jake’s married life, Jake is not so sure why.
tonight    Jane, her gay entourage and Jake’s sexuality.
last night  Jake seeks a solution to his double life with Jane and his wife.

Eat in Eat Out (Tonight Jake)

tonight    Jake has dinner cooked for him again tonight.
fantasy    John warns Jake about the perils of kitchen politics.
last night  Farting and going to restaurants with Jane.

Filmic Fantasies (Tonight John)

tonight    John watches TV with his wife in silence, while Jake talks with his.
fantasy    John observes his wife’s televisual fantasy. Jake cannot talk to Jane.
last night  John’s wife calls out for another man and the allure of screen sirens.

The script internal variants manage to maintain credible meaning in each combination of their very many compound possibilities. The variant types used include:
• default lines that do not change except for camera angles; these are like fixed way-points in the sea of flux
• change of camera angle from a two shot to a close-up on the vast majority of lines
• groups of alternative lines where one alternative replaces another
• groups of alternatives lines that are linked to another group where changing one will change the others
• groups of groups with a two tier level of variation available to the user
• sequence sets used in the pauses that start each part where combinations of one to four shots are selectable
• a closed loop of lines where each line and variation can be spoken by either character

Film is a one-way street where the viewer is pacified as the largely submissive onlooker. “Jane” attempts to extend this paradigm as there is no definitive or privileged cut, no variation worthier than another. It is rather the sum of its manifold possibilities. The same goes in fact for its eponymous heroine, “Jane”. She is whatever the male characters fear and desire whatever their situation. “Jane” is simultaneously a daydream and a nightmare. Shape-shifter extraordinaire, she is the constantly mutating remainder of male desire. Whatever men crave and fear in the female sex, “Jane” exemplifies and amplifies. “Jane” eschews branching narrative. Instead variants that have localized polyvalence propagate semantically across neighbouring content. These maintain credible meaning in each combination of the very many compound possibilities available. Hence there is no definitive version, no directors cut. It is rather the sum of its manifold possibilities. The work in many ways belongs to the theatre with its black box setting. And it owes probably more to work of Samuel Beckett than anyone else. At its strange heart the piece is a writing automaton. It chooses what the algorithms decide for it against the carefully calculated script. “Jane” is also self-reflective about itself, film and narrative in general. It refers to old films and gives them different endings. It evokes the names of actors and actresses to conjure the clouds of narrative allusion associated with each. Elsewhere fairy tales are retold to Jake reflecting the couple’s sometimes disturbing psychology.
“Portal to an Alternative Reality” has been produced in partnership with the ZERO1 American Arts Incubator, the U.S. Department of State’s Bureau of Educational and Cultural Affairs, the U.S. Consulate General, Wuhan, and K11 Art Foundation China, Portal to an Alternative Reality acts as an access point where the public can immerse themselves in virtual and augmented reality experiences that document the rapidly changing city of Wuhan.

In 2014, ZERO1 and the U.S. State Department’s Bureau of Educational and Cultural Affairs launched a new media and digital arts program, the American Arts Incubator. It showcases artists as engaged and innovative partners in addressing social issues, in addi-
In 2015, public artist John Craig Freeman was selected by the U.S. Consulate in Wuhan to spend 28 days in Wuhan where he was asked to engage and empower the youth of the city. Early in 2016, a portal gate was built in the courtyard in front of the K11 art village in Wuhan. The construction was directed by local master craftsmen and mediated with four iPad viewing devices connected to a powerful projector with screen for evening events.

In April 2016 Freeman led an intensive five day virtual and augmented reality workshop, where he assembled and trained four production teams made up of faculty and students from local Universities. The goal was to have the teams engage the community to determine which parts of the city to document in virtual and augmented reality. The resulting work was then placed at the precise GPS location of the portal gate in the courtyard of the K11 art village. The public was able to experience the work on smartphone mobile devices using a free downloadable augmented reality browser app and during special evening events using the iPad viewing devices. The virtual and augmented reality scenes were created with photogrammetry techniques. Photogrammetry is the science, technology, and art of obtaining reliable information from non-contact imaging and other sensor systems, in this case, to create 3D models from series of photographs taken at various angles. If an object, person or scene is photographed at multiple angles, software can analyze the parallax difference between key features in the image and extract a three dimensional reconstruction of the image in the form of a point cloud, points in space with XYZ coordinates and RGB color values. Polygons can then be created by connecting the dots, so to speak.

Augmented reality is virtual reality in a physical location. It is a new medium that has the capacity to support aesthetic research and artistic creation, particularly in public space. Viewed through the camera of common smart phones and other mobile devices, augmented reality allows vast audiences to experience new and emergent realities. Virtual objects can be located at precise longitude and latitude coordinates anywhere in the world. The mobile device becomes a kind of cybernetic prosthesis that can extend human perception and the sensorium, making the vir-
Meaning is constructed in augmented reality much like montage in filmmaking where shots are juxtaposed. Rather than adjacent film clips cut together over time however, augmented reality juxtaposes the real and virtual, over space. Furthermore, looking through the virtual world to the physical world beyond disrupts our sense of what is real and what is virtual, causing a profound shift in our established ontologies.

In May 2016 the project was moved to Hong Kong for exhibition during the symposium, and to seed a possible expansion of the project.

JOHN CRAIG FREEMAN is a public artist with over twenty-five years of experience using emergent technologies to produce large-scale public work at sites where the forces of globalization are impacting the lives of individuals in local communities. With his work, he seeks to expand the notion of public by exploring how digital networked technology is transforming our sense of place. Whereas the public square was once the quintessential place to air grievances, display solidarity, express difference, celebrate similarity, remember, mourn, and reinforce shared values of right and wrong, it is no longer the only anchor for interactions in the public realm. That geography has been relocated to a novel terrain, one that encourages exploration of mobile location-based public art. Moreover, public space is now truly open, as artworks can be placed anywhere in the world, without prior permission from curators, governments or private authorities – with profound implications for art in the public sphere and the discourse that surrounds it.

In the early 1990s, we witnessed the migration of the public sphere from the physical realm, the town square and its print augmentation, to the virtual realm, the placelessness, the everywhere-but-nowhere of the Internet. In effect, the global digital network has facilitated the emergence a new virtual space, which corresponds to the physical geography around us. The public sphere is now crashing back down to place in the form of place-based virtual and augmented reality, without losing its distributed character or its connections to the vast resources of the world-wide digital network.
“Tunnel” finds Edwin Abbott’s novel Flatland: A Romance of Many Dimensions as an inspiration. It is a story centered on a two-dimensional geometric figure, a square, Mr. Square. Who is occupying a land of flatness, a land of only length and width. Through a series of encounters with a higher dimensional being, a three-dimensional sphere, discovers a greater
reality outside of his own limited perception. First he refuses to believe, but comes to understand, despite his limitation, the concept of a third dimension. After Mr. Square’s mind has been opened to a new third dimension, he dreamed of a visit to a one-dimensional world (Lineland), where he in turn was the higher being. Inhabited by single dimensional lines, he attempts to convince the realm’s monarch of a second dimension; but is unable to do so. Dejected, he travels about and meets a singular point. “Can you consider having length?” Mr. Square asked. “Length? What humorous thoughts I come up with,” the point responded.

The Sphere came and explained to Mr. Square, that he had arrived in Pointland, and that the points here do not acknowledge dimensions at all: “You see, how little your words have done. So far, as the point understands your words at all, he accepts them as his own – for he cannot conceive of any other except himself – and plumes himself upon the variety of Its own thought, as if it were an instance of his own creative power. Let us leave this god of Pointland to the ignorant fruition of his omnipresence and omniscience: Nothing that you or I can do can rescue him from his self-satisfaction.” Flatland is an allegory of an idealism. Through its examination of the view of multiple dimensions, it offers an insightful metaphor towards human being’s existential relationship to the larger cosmos. This is where Fu’s work invites and engages its viewers.

As in flatland, Fu’s virtually rendered work guides the viewer into a metaphorical higher dimensional world, where the artwork becomes a physical symbol for the viewer’s physical perception, in relation to the greater reality, and the installation, posing as a limitation to the viewers perception, is a port to that world. One is either detoured or offended by the limitation presented by the installation, or one accepts his or her limitation and humbly explores what can be seen.

“Tunnel” is also inspired from one particular experience Fu had going through a small mountainside tunnel on a trip to Arizona. “There were five windows carved out of one side of the rock tunnel, giving glimpses of an extraordinary expanse of the Arizona landscape, in an otherwise pitch-black tunnel. The guide explained that there are six windows, each increasing in size as you traveled. I counted as
we went along. One. Two. Three. Four. Five. Where was the sixth? As we came to the mouth of the tunnel, the guide said, this is the sixth window.” Fu took that as a metaphor of human understanding of the larger physical, spiritual, and metaphysical. In that, She is interested in the nature and significance of the reveal and expectation.

The following quote from Woody Vasulka's Notes on Installation summarizes the characteristic of the digital space revealed in Fu's Experimental 3-D animation and installation:

“...digital space has no generic method for looking at the world the way that a camera does through its pinhole/lens apparatus. Digital space is constructed space, in which each component, aspect, concept, and surface must be defined mathematically. At the same time, the world inside a computer is but a model of reality as if seen through the eye of a synthetic camera, inseparable from the tradition of film. Yet, in this context, no viewpoint is ever discarded, the internal space is open to a continuous rearrangement and access to a selection of views and narrative vectors in infinite, not only to the author, but also, with the use of certain strategies, to the viewer. Once the author constructs and organize a digital space, the viewer can enter into a narrative relationship with it. A shot in film indicates a discrete viewpoint. Its narrative purpose is to eliminate other possible views. In contrast, the world in the computer contains the infinity of undivided space, undissected by the viewpoints of narrative progression. In the world of the machine, all sets of narrative vectors are offered in an equal no-hierarchical way. The machine is indifferent to the psychological conditioning of a viewpoint. All coordinates of space are always present and available to the principles of selected observation.”

Fu's animations as a whole reference C. D. Friedrich's painting, “Wonder Above Sea and Fog”, on the account of the emotional response of the contemplative figure encountering both the physical and metaphysical infinity, which is also a major concern in Chinese Traditional Landscape Painting. With a former painter’s sensibility, she approaches the subject of the sublime using topographical computer rendered abstraction set on a time line. The animation projected into space becomes a necessary physical metaphor for the discourse of human physical per-
ception. This invites the viewer to physically and mentally enter into a liminal Gordon Matta Clark like interior within a digitally constructed space, where the viewer’s body is motivated to expand their perception but their physical ability to perceive all that is potentially visible is limited. The limitless virtual world entices and calls, but the physical fights against it. Like Friedrich’s painting, her abstract perception as a frame and opening to another world and experience, invites the viewer to look into the virtual landscape. “Tunnel” continues Fu’s formal and conceptual exploration. The piece functions as a window into a parallel dimension that stimulates an awareness of both consciousness and space, extending out from the pictorial and expanding into the land of virtual reality.

SNOW YUNXUE FU’s work engages in a Kantian quest to capture the experience of the sublime through the limited means of human consciousness. It is a contemplation that transcends cultural boundaries and one that opens onto fundamental inquiries into the nature of human existence: who are we, and what is our significance in the material cosmos? Her work explores the experience and the challenges that arise when we are faced with the notion of greatness beyond all possibility, calculation, measurement, or imitation, and inviting viewers to experience and consider our ability to articulate our physical limitation, to grasp it, and the fundamental questions that arise between the metaphysical and our physical perspective.

Extending out from the pictorial, her installation work engages in a metaphoric relationship with physical perception, by which the sublime is framed and the viewer is invited into a liminal interior within a digitally constructed realm. Her work engages computer-rendered abstractions and installations that incorporate and manipulate architectural space to encourage and maximize the viewer’s response. Modeling her animations on the allegorical paintings of C. D. Friedrich, the universal aspiration to explore the nature of physical and metaphysical limits mirrors a fundamental aspect of her upbringing a world away, specifically Chinese Traditional Landscape Painting. Coming from a painting background to now working in digital media, she is interested in how the sublime has been framed throughout art history.
and now explorations of the Techno-sublime, pur-
posing her installations to implement perceptual ex-
periences. She invites viewers to remember or imag-
ine the infinite in nature – the first time you see the
ocean, the Milky Way, or a view from a mountain
peak – not just of the sake of experience and consid-
er the infinite in the external, but how it invites us
to look within ourselves, to encounter the infinite
there, too.
“33 1/3 Revolutions” is a game art installation that deals with Hong Kong’s record store culture and with vinyl records as objects of tangible heritage and cross-cultural importance. A single player computer game built with the Unity3D editor will be made accessible to festival visitors as well as a browser game that can be played online. The game presents a fictitious urban environment that is constructed from pictures that are taken from Hong Kong record stores. The level consists of a vinyl hero, a ‘digitization spaceship’, buildings and huge vinyl records that are larger than (wo)man-sized and invite the player to start and stop the respective music contained on these records.
The cultural history of 20th century apparatuses contains two machines that became iconic for youth culture, film, and Western civilization, both use a revolving device to achieve their functionality: The revolver (predecessors date back to the 16th century, but it is popularly known as the “colt” in Western movies) and the record player. Both of these apparatuses (let’s forget about the third potential sibling here: the KODAK carousel slide projector) meet in a game that celebrates turntables and vinyl music and equips the player with a revolver to fight against the dematerialization of music. The revolver equipped music connoisseur has to make his way through the streets of an urban environment that contains famous Hong Kong record stores like the ones of Paul Au at 239 Cheung Sha Wan Road in Sham Shui Po or by Ho Hing Ming at Lamma Island. The player is attacked by a digitization spaceship, but he or she can shoot back, can duck and cover and can play the rough and warm sounds of the analog vinyls that are a threat to the digitization spaceship.

Vinyl records have almost completely disappeared from the shops and homes of Hong Kong for more than two decades, before the inhabitants of Hong Kong once more fell in love with vinyl. It is interesting to see how certain cult shops keep a nostalgic collection of outmoded bands like The Who, Bob Marley’s Wailers and the like. The unpredicted phenomenon of a revival of vinyl is not unique for Hong Kong, it rather mirrors a global tendency that shows a 400% increase in global vinyl sales in between 2007 and 2014. However, what is typical for Hong Kong is the radical enthusiasm about media innovations, which quickly drop into oblivion. In regard to vinyl this has been described by record collector Paul Au: “Hong Kong people like to follow trends. They listen to whatever is popular, so they throw away a lot of old things. In the 80s, they threw away all the things from the 60s. They cannot stick to one lifestyle for long and they also don’t give many genres a chance. Back in ’83, when Metallica started getting famous, local record dealers imported only 50 copies of their first album. Only 50 copies for the whole fucking colony! What kind of a city is this?” (http://hk-magazine.com/city-living/article/vinyl-hero-storeowner-paul-au)

The game is an open exploration single user computer game that can be played as a download on Ap-
people IOS, Linux or Windows machines and also as a browser game in conventional web browsers like Safari Internet Explorer, Firefox etc. The games level has been built in Unity3D and exported for the respective platforms. The game has an expected playing time of 8 to 30 minutes per player and can be restarted at any time or continued by a successor player. In order to make the game accessible for as many players as possible in conditions of crowded festival conditions an automated change of players will be facilitated. A message of the type “Please hand over the system to new players... or continue” will be displayed if activated by the system operators.

**Mathias Fuchs** has been working on the topic of game audio and has presented game art with a focus on audio at resfest, Futuresonic festival, or at Kiasma museum Helsinki to name a few. Most of the games were developed on the UT Editor and ran on the Unreal games engine. “33 1/3 Revolutions” is being developed for Unity3D which allows not only for a better control of the game and its elements but has the additional advantage of being able to be ported to various platforms like Mac OSX, Windows, Linux, Android or iOS. The game can also be exported to run as a browser application.
“Peoples Screen”. In November 2015 Public Art Lab Berlin commissioned a new version of “Occupy the Screen” for the Guangzhou Light Festival in China. Sharing the same time zone, the installation was connected for 12 evenings with the Northbridge Piazza public video screen in Perth, Australia and was extensively reworked to converge scenes from the cities of Guangzhou and Perth. Renamed “Peoples Screen”, the installation was hugely popular, involving over 25,000 participants in Guangzhou alone. For
the first time the citizens in Guangzhou, China and in Perth, Australia were brought into exchange through an artistic real time performance on public screens from the 15th to 29th November 2015. “Peoples Screen” was presented during the Guangzhou International Light Festival on the screen at the Flower Garden Square and on the Northbridge Screen in Perth, offering public audiences the opportunity to co-create coincidental encounters and spontaneous interactions between these two cities. This installation builds on practice-based research and developments of previous interactive works for large format urban screens including “Occupy the Screen” for “Connecting Cities - Urban Reflections” in September 2014 between Supermarkt Gallery Berlin, Germany and Riga European Capital of Culture, Latvia.

This new installation pushed the playful, social and public engagement aspects of the work into new cultural and political realms in an attempt to ‘re-claim the urban screens’ through developments in ludic interaction and internet based high-definition videoconferencing. By making use of illustrated references to site-specific landmarks in Guangzhou and Perth, audiences were invited to occupy the screen. The concept development of “Peoples Screen” was inspired in part by 3D street art as a DIY tradition, referencing the subversive language of graffiti. The interface borrows from the ‘topoi’ of the computer game, as a means to navigate the environment; once within the frame the audience becomes a character immersed within the environment. “Peoples Screen” linked two geographically distant audiences using a telematics technique; the installation takes live oblique camera shots from above the screen of each of these two audience groups, located on a large 8 x 8 metre green groundsheets and combines them on screen in a single composited image. As the merged audiences start to explore this collaborative, shared ludic interface, they discover the ground beneath them (as it appears on screen as a digital backdrop) locates them in a variety of surprising and intriguing anamorphic environments, where from a particular position the characters can look as if in precarious situations. In “Peoples Screen” this included suspended on a plank high above a lake, or on an oversized wooden bridge. The installation was designed for the audience to engage in an intuitive way and there was no preconceived ending. The position of
the urban screen as street furniture is ideally suited to engage with people going about their everyday life, and often the most interesting outcomes are discovered through the ways that the public interprets and re-appropriates this environment. The interaction is an open system aiming to offer the audience a means of agency to be creative and make individual decisions. The area of play was clearly demarcated as a space via the green screen groundsheet in both Guangzhou and Perth, identifying a theatre of play - once in the space the participant engages as they wish. The environment may suggest activities or events but the audience are free to respond as they choose, which is key to the characteristics of an open system, that there is much opportunity for the unexpected and that chance encounters can change the direction of a narrative that is unfolding.

We used our experience of previous installations to inform elements of the design to include objects that people can engage with, but also playing with perception and illusion. This included a Pop Art inspired tunnel, which participants intuitively jumped into, and steps, which disappear into an underground bunker. From our observations optical illusions acted as a signifier of play, people inherently recognised the environment as playful and inviting. We also used the notion of the computer game as a design reference, incorporating box hedges suspended in space, which participants recognised as a game platform to jump on and between. The environments often implied a physical response such as jumping, diving or climbing, including a swimming pool to dive into, coloured boxes to climb across and a bridge to jump off. This contributed to the active approach that the majority of the participants took.

In both “Peoples Screen” and “Occupy the Screen” people of all ages took part and adults were as likely as children to engage. We observed an uninhibited willingness to play from children. One girl played for hours engaging with the set, pretending to sit at the table, jumping into the tunnel, walking the plank etc. She engaged in a very performative way, with confidence and exaggerated movements. We also observed this enhanced ability to perform in adults as well as responding to the environments they tended to engage with others, pretending to scratch someone’s head, or hold hands in order to jump into the tunnel together, or lift someone up from the pool.
The remoteness of the installations appeared to give confidence to cross into personal space that might otherwise be seen as a physical invasion of space. In many ways “Peoples Screen” broke down cultural and social barriers, both in the local communities, but also between two cities, where new collocated spaces and creative encounters could be founded and occupied.

Through this research project, we have developed a framework for open participatory artworks for urban screens to maximise audience agency through play, engaging the public in new ways in the urban environment, offering the public agency and developing events that create community memory. Levels of openness were measured, from which we were able to define key characteristics, to provide a framework for open interactive systems for urban screens. “Peoples Screen” aimed to include the widest range of urban participation possible and aligns to a ‘Fluxus Happening’ in a move away from the object as artwork towards the street environment and the ‘every day’ experience. It also borrows from a tradition of early 20th century media developments where audiences were transfixed by the magic of being transported to alternative realities though early films at the traveling fairs. Lumière contemporaries, Mitchell and Kenyon, whose films of public crowds in the 1900’s present a striking similarity to the way audiences react and respond to “Peoples Screen”. These pioneering fairground screenings of audiences filmed earlier the same day possess all the traits of live telepresent interaction, albeit through the latency in processing, whereby the audience play directly to the camera and occupy this new public space by performing to themselves and others when screened later.

**PAUL SERMON** For over 25 years, Paul Sermon’s work in the field of telematic arts explores the emergence of user-determined narratives between remote participants who are brought together within shared telepresent environments. Through the use of live chroma-keying, video projection and videoconference technology these geographically divided audience participants are composited live in intimate social spaces. This is essentially how all his installation projects function, where the public participant plays an integral part within these telematic...
experiments, which simply wouldn’t function without their presence and engagement within them. The participant controls and choreographs their human avatar in new telematic spaces, in combination with another physically remote public performer. As an artist Sermon am both designer of the environment and instigator of the narrative, which he determines through the social and political context that he chooses to play out these telepresent encounters.

**CHARLOTTE GOULD** Through Charlotte Gould’s practice she explores the potential for open interactive installations in digitally mediated public spaces using urban screens. She has developed a number of mixed reality systems to prompt play and interaction across social and cultural boundaries. Gould’s interactive installations provide a framework with an environment that offers a visual context to prompt interaction, engagement and play on an international stage. She examines audience agency and opportunities for play, testing the boundaries of open systems, to offer opportunity for diverse audiences to co-create artworks through the development of unique narratives. Through Gould’s research she tests the potential for mixed reality environments on urban screens to promote public engagement and civic responsibility, looking at how this can impact on culture, changing the way we engage in the urban environment and contribute to a collective memory and sense of place.
Animation is dynamic, architecture is static. Animation renders on a flat surface, architecture is three dimensional. Animation requires a medium, architecture is medium and content at once.

The projected artwork is fusing the inherent qualities of animation with those of architecture. It utilizes architecture as a canvas for animation and utilizes animation as an emphasis of hidden dynamics in architecture. It virtually breaks walls, transforms concrete surfaces into human faces and let geometry dance. It dissolves the rigidness of architecture by mapping animated projections on its surface and embodies animated shapes through physical structures.
Is anything original any more? Can an artist create a completely singular work, free from outside influence? Derivative works offers no answers to these questions. Drawing from a wide range of musical, timbral, methodological and ideological sources, derivative works takes the form of an audio-visual barrage, compressing complex rhythms into tight temporal spaces and offering neuro-linguistic diatribes. Shifting and groaning synths, triggered by an impossible drum machine.
Inspirations: science fiction, gabba, object oriented philosophy, hardstyle, ui design, rubber, trap, native instruments, compressed air, open-mindedness, nike, rave, linn drum, history, candy, tr-808, matte black cars, computer music, recycling, time, guitars, cleanliness, careers, spatialisation, techno, strobe lights, family, automated testing.

**CALUM GUNN** My art encompasses academic computer music and rave culture & sounds. In my work, I mainly focus on the deconstruction of rhythm, subverting the notion of dance music. Having created pieces inspired by ‘classic’ rave sounds, modern edm and early techno, my work reproduces familiar sounds, arranging them into new patterns and tones. Often times these pieces are performed with accompanying visuals that feature screeds of text generating in time with the audio. The stark presentation of words, appearing in random colours upon a black background, at first seems simplistic but soon unifies the audio with the themes of the piece. The text provides clues to content and interpretation. I use a variety of software and hardware in my processes, primarily the open-source audio programming language supercollider. The research and development of my work arises through experimenting with programming algorithms and interfaces to control them. Often, a project will begin to take shape from a simple rhythmic or timbral idea, and be iterated upon to add complexity and variation. Each project eventually takes the shape of an album-length suite of interpretations, to be compiled and released as the definitive version of the work. During research and production new areas of interest arise and lead to the next body of work.
ANDREAS GUSKOS, IREK KURIATA
YOU WILL NOT ENTER TWICE INTO THE SAME RIVER - TODAY, YESTERDAY, TOMORROW.
IMPRESSION ON THE VARIABILITY OF FORM IN TIME

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<td>Spatial audio-visual installation 2015</td>
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<td>2×2 min playing simultaneously in two adjacent spaces in infinite loop</td>
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<td>Andreas Guskos: Idea and visuals; Irek Kuriata: Sound</td>
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“You will not enter twice into the same river - today, yesterday, tomorrow.” - “Heraclitus says that everything changes and nothing remains and by illustrating the flow of the river he says that you cannot step twice into the same river.” by Socrates, after Plato, (Cratylus). After the conquer of Ionia by Persians in the middle of VI century B.C. many Greeks emigrated to western colonies, to the so called Great Greece (southern part of the Italian Peninsula and part of Sicily) with philosophers such as Xenophanes and Pythagoras amongst them. Xenophanes was the ancestor of Eleatic School of Philosophy and Pythagoras was the progenitor of Pythagorean Union. For Pythagoreans the most important substance of the universe was not matter, but the form it acquires by the inscribed information. Driven by such assump-
tion they were discovering the harmony of the world (cosmos) associating it with music. The world cosmos (κόσμος) was applied to the Universe by Pythagoreans and it means harmony and order. One of the tools for learning philosophy was the monochord – a musical instrument by the help of which Pythagoreans discovered the harmonic tones. The most significant supporter of Pythagoreanism was Plato. He developed the concept of idea (ιδέα) as a matrix of all objects of the same kind existing in the material world. He considered the world of ideas as real and the material world only as a copy shaped by it (as it can be seen in the known parable about the cave). Aristotle saw the matter (ύλη) as host for the form (μορφή), which by his understanding was the information inscribed in the initially unshaped matter. For the Pythagoreans (numbers) and Plato (ideas) the substance (ουσία) was the information itself and for Aristotle it had dual nature, consisted of form (information) and matter (host).

The word information comes from the Latin word informare, which means applying form, shaping. The analogical word in Greek language, μόρφοση, stands for education. By considering the etymology of that notion, a wide definition of information would be: shaping anything, material or non-material, in a way that it could be later extracted and read by the receiver. The dualism of the substance (ουσία) consisted of unshaped matter (ύλη) and the information as a form (μορφή) was introduced by Aristotle. In physics (φυσική – physics, φύση – nature) there is a notion of entropy that can be described commonly as a measure of disorder. According to the second order of thermodynamics the entropy in a closed system always proceeds to the state of equilibrium that is a configuration with maximum entropy. There is a singularity in such system called life. Life decreases entropy and produces information in its spot. In nature there is a common process associated with life - endless replication of information for the purpose of its propagation and preservation (DNA). According to the second law of thermodynamics life is a singularity and it is like a time-reverse process.

The word history comes from the Greek world ιστορία, which comes from the word ιστώρ - witness, critic and that in turn comes from earlier form ἴστωρ, the combination of ἴ (from οἶδα or εἶδα - I know) and ἴστμι (stream, record).
Contemporary concepts of space and time are classifying time as another spatial dimension. In physics there are still unsolved outlooks about the nature of gravitation and magnetism and paradoxes of time-space, like e.g.: while time travel is theoretically possible, what would happen if we would go back and change some properties of the past? Would this change the course of history?

Idea (Andreas Guskos)
This artwork shows the idea of turbulent time-space that is constantly changing its form, where it is not possible to go back or forward to the place that existed or will be existing, because the target is never the same that it was in the past or it will be in the future.

A section of a four-dimensional object generates a three-dimensional form. By moving the section’s location steadily in time, the resulting form will be subject of change depending on the properties of the four-dimensional object and will give the impression of motion. If the parent object is dynamical, re-section of a previously cut ("past") location will give a different result. By analogy, a place of a future section will produce different image from the one generated by the assumed "present" section steadily moved in time. The future and the past generated from present point of view is different than those generated by the "present" section moving in time.

The projection “You will not enter twice into the same river” presents this idea by animation, on a model reduced by one spatial dimension.

Sound (Irek Kuriata)
“You cannot step twice into the same river”. Apparently in digital art the algorithms responsible for random sound events are not truly random. They are in fact a mathematical simulation of randomness, however their complex mechanism does not allow us to sense it and our psyche perceive the generated events as random. The steady, artificial repeatability of sound causes in turn a subjectively interpreted perception, as if our mind would persistently attempt to humanize the occurrence.

The sound layers are interpretations of digital graphic files, in this case generated from the animations of Andreas Guskos. Bitmap files imported to audio edition software are interpreted by the algorithm as specific noises, glitches and rhythmical
structures that can vary depending on the file type (jpg, tiff, bmp, etc.). Micro-sounds cut from ordinary bitmap files were used for the construction of 2 layers: the dominating rhythmic generated by randomness algorithms and the ambient background built from noise and supported by digital effects of reverb and delay type set in various combinations. Digital sampler replays particular sounds of pulsatile nature in random order, which causes an impression of complete chaos. However, in order to organize this sound structure there are additional kick drum and hi-hats implemented. As in macro scale in nature, we are dealing with the simplicity of repeatable periodicity and in micro scale with complex variety. On the other hand the sound background plays a connecting role between rhythmic and chaos and it is a sort of ethereal substance binding these two aspects amongst others.

When everything is performed simultaneously in two adjacent rooms, the soundscape gives the possibility to the spectator to experience various proportions of sound background and rhythm by moving between these two spaces. By looping back both layers and juxtaposing them to the image, we gain a feeling of autonomous form living its own life.

**ANDREAS GUSKOS**' background is architectural design and graphic design and he is interested in the space of information, design in the space of information, education in the space of information, visualization and sonification of information, history of information, information in nature, search for mutual relations between nature (physics) and technology, convergence, transvergence in art/science/technology.

**IRENEUSZ KURIATA**'s background is graphics and graphic design. Her current fields of interest are:

- Graphic design as autonomous and free language of expression for commenting culture, literature and music. Search for individual synthetic forms of expression typical for graphic design language, based on geometrical proportion systems, modular meshes and typography. Search for rhythmic, random and ambient structures based on electronic methods of sound synthesis, sampling and glitching.
“Martial Law (HK Version)” belongs to the ongoing “Martial Law” series, which consists of an evolving chain of interactive sound installations with electro-acoustic, mechanic and electronic elements, which has already been reimagined for its showing in three different cities under very particular circumstances. Its main component is centered around a customized and repurposed tambourine the viewer can move with a joystick, triggering a series of unexpected visuals and sound events, as several objects glide across the tambourine’s head as viewed through a fresnel lens. The piece as a whole presents the audience with a stochastic sound and visual generator that is controlled via unclear interactive parameters, guiding the audience into an unmediated discovery process in which the artwork reveals its possibilities and nature in the midst of actual interaction. It plays
with notions of free improvisation and the connections between body awareness, sound generation and synesthetic and cymatic phenomena. It stands as a complex and unpredictable self-organizing audiovisual system that the audience can influence and direct but not fully control.

In all its versions, “Martial law” is a sound installation that can also be understood as an electronic musical instrument. Using Arduino, hand-wired analog electronics and digital fabrication techniques, it is always conceived as an outgrowth of the space it is placed in, animating it through sound. Through its almost continuous sound emission, it erects a live streaming sound commentary on the space’s mood changes as its lighting and occupants change in the course of the day. Its visual presentation

Its first incarnation was shown in Hamburg, in the context of an event that took over low-budget hotel rooms for the staging of small scale exhibitions under several different curators. At that time, it was displayed inside a small ceramic sink at the room assigned to curator Armando Rosales. In its next version, it was reconstructed for its display at Taipei’s Japanese diplomatic office, where it became a wall sculpture with a tabletop device. Its next incarnation took shape in Tokyo, at a group show themed around anatomical drawing and representations of the body, where it became a more ambitious sound installation and performance stage, including amplified stringed platforms and proximity-activated granular synthesizer.

For ISEA 2016, the work has been adapted for its ephemeral installation at Run Run Shaw Creative Media Centre, entering into a dialogue with the building’s unique architecture. It will be greeting visitors in their way to performance stage, framing a performance by Aquiles Hadjis and Rie Tashiro and staying on for the rest of the day in order to be interacted with.

AQUILES HADJIS makes things in order to find out how to make them. That process of learning always makes him think of other things he wishes would exist. After Hadjis feels he cannot tinker with them any longer, he put things on display in order for themselves to help him figure out what they are. That movement taking them towards (and away) from other people can take place several times for a
given object, slowly transforming its meaning and its functionality, as its story becomes clearer.

In their meetings with each other, Hadjis himself and our audience, his works generate conversations that can be experienced as music, games, tools, or forms that punctuate space, but may actually be better described as instruments to further our understanding about the whats and whys of activities like showing art pieces and making music. In most of Hadjis’ works, he sets up an encounter for the audience to unravel. He uses sound as a metaphor for the relationship between space, time and awareness; inviting the audience to move beyond interaction (set modes of input producing expected outputs) into a free conversation (open-ended discoveries triggered by unclear terms of engagement).
“Hiatus [gap, break, void]” is an installation where every visitor’s actuation reveals a dark patch in the light field of a light object that is otherwise appearing clean and functional. The light object is installed at the ceiling where 16 pull cords in various lengths and positions are applied to 18 identical shades which are positioned in a white grid gadget.

The outgoing light is warm-white tempered, which is in general associated with comfortable impressions. That impression is irritated by a cold manufactory-like design and by the malfunctioning of the light performance, which becomes a constant part of the room situation. The dark patch vanishes for a moment but then it returns falteringly in a dif-
different shape each time a pull cord is actuated. The programmed gaps in the matrix are activated randomly by pull switches. The pull cords are adjusted according to the spatial conditions so that some of them touch the ground, some are too short to do so and one is of excessive length. A leading motive of the setup of the room installation are the several recurring forms discovered in the pull cords, the cones that complete them, the shades, the framed misprints and the diverging dark patches.

“Commonly, hiatus describes a short pause in which nothing happens or a space where something is missing. On the other side I understand it as a reference to the state of in-between.

For the setup of the room installation I chose different recurring forms and I used a set of rules to create a clean and functional impression which should be questioned and contradicted by a scattering and faltering malfunctional light performance and by the soothing variety of pull cords.

The answer to an unambiguous signal, evoked by the use of pull switches, triggers a diffuse and edge transcending reaction of the light. The outcome of the performative human-object-interaction can be read as a dusty answer or open up room for reflections. The framed pictures of reproduced misprints are taken from daily work life.

The diffuseness and the malfunction of the light object are a kind of disrupting „noise“, just like the misprints are a product of noise, too. That correlates to the noise that is attributed to signals in modern communication technologies. It is in fact an attribute of life itself. Malfunctions or noise can be disturbing or empowering, they can take a stand against unambiguity.

The installation was built in an old customhouse and asks for the sense and senselessness of daily human actions.”

**SANDRA HEINZ**
“The Moon Is A Mirror” is comprised of five commercial LED panels, custom steel frames, translucent organic materials embedded in resin (dove feathers, fur, snake skins, seeds, seashells), custom programming, electronics and animation. The screens diffuse the light from the LEDs in variant ways and this luminous obstruction creates both a material and discursive surface. The viewer is both looking at and looking through.

The images on the electronic screens are interrupted by organic screens. Naturally-occurring translucent materials were researched and selected for their unique qualities to scatter light. Embedded in organic resins, these materials’ variations in texture, color and density affect the video playing on the LED grids behind them. The low-cost LED panels used are currently the fastest proliferating outdoor display technology in our world. When paired with raw natural surfaces inside constructed steel framing, the system becomes a multi-layered hybrid of organic and electronic components. The friction between commercial electronics and coarse organic
surface situates them in both media archaeology and emerging technology.

The moving image’s preference for the clear screen today ignores its historical roots in translucent organic materials. Cinema’s rich history begins with explorations of light from behind. Images deliberately modified through variations in a screen’s material qualities began with gourds, ice and fibers, and continued through backlit firescreens, photos and diaphanoramas. Early moving image systems like Shadow Plays and Phantasmagorias have each used clarity, diffusion and obstruction as part of their creative strategies. More recently, translucency has been utilized by a subset of artists working in Expanded Cinema, Installation Art and Media Art. Artists throughout time have explored how obstruction can add another dimension to the meaning in the image.

The nexus of the surface is changing again in the age of AR and smart glass; transparency is becoming less transparent and surface is being increasingly explored as a way to convey or enhance meaning. Tactile interfaces are rising in popularity and as more artists and scientists explore touch-screen technologies that involve texture, the screen may return as an important layer to the media it presents. This artwork looks backward as a way to look forward; these recent developments have a foundation in media history in which nature has acted as an organic lens and filter to the image. The title, “The Moon is a Mirror”, reminds us that the moon itself is reflected and displayed light, and that nature has been media in many forms long before we began our journey into creating our own moving images.

The animation in the sculpture is a simple walk cycle, a foundation in learning how to create a moving image. Walk cycles are both literal and figurative first steps. However, here the man is trapped in a distributed frame, pacing back and forth across the five LED grids. Each organic material modifies his gait differently, diffusing, scattering and blocking the light. Without the video, the screens have a delicate, handcrafted quality. However, as the moving image struggles to pass through, the screens become empowered and subvert the original meaning of the footage. The character seems in-between the display and screen, not present on either. He becomes a
metaphor, trapped and pacing between a mediated environment and a constructed nature.

**SCOTT HESSELS** uses kinetic sculpture and natural forces to explore new relationships between the moving image and the environment. Across the works, natural energy becomes the shaping, formative voice in the creation of cinema. Using a range of technologies borrowed from both art and engineering, he surrenders his ‘will to form’ to the powers found in nature. He creates mediated earthworks.

“The Moon Is A Mirror” was developed concurrently with the Sustainable Cinema series of sculptures to provide two perspectives: cinema displayed using organic materials and created using natural force. Sustainable Cinema is six kinetic public sculptures that harness natural forces to power a moving image. Large-scale and made from steel or wood, they reference both the early optical illusion toys that were part of cinema history as well as the first energy sources. In these artworks, cinema is given an alternate history in which the original natural power systems and early organic surfaces continued to evolve instead of being discarded by the industrial and digital revolutions. The entire series is a fictional ‘what if’ question, a faux-archaeology in which both perspectives, nature’s voice in both image display and creation, stayed integral to cinema’s evolution. These fake history machines are meant to trigger consideration of more environmentally responsible media.

Kinetic sculpture materializes energy, giving form to non-visual forces. These sculptures simultaneously create and break the illusion of animating by revealing the system—we see the machinery, we see the screens. Ecology also reveals the systems that make life. Hessels hopes that when we watch a device make ‘life’ through a simple animation, we extend the metaphor to empowering all natural systems that make life. By giving nature ‘the will to form’, the artworks capture the energy of the earth and when the animation in them comes alive, become part of a larger life force continuum.
“ThreeYearContract”. Every once in a while, a new technology makes the world a better place without demanding some sort of major trade-off (think Polio vaccinations). More often, however, our advancements require that society shift to accommodate their less desirable effects. ThreeYearContract calls our attention to the impossible promise of the smartphone: simultaneous presence both here and somewhere else.

TYC is made up of two identical units, each appearing to be no more than a simple block of wood. When an audience member pressed their forehead against one of these blocks, it places a cellular phone call to its counterpart. This call can be answered when a second participant adopts the same peculiar stance as the first. The work’s absurd interactive requirement forces both its users to commit fully to the conversation at hand, and encourages reflection on a growing culture of tele-absence.

TAYLOR HOKANSON is an artist, educator and open source hardware advocate. His practice revolves around the creative opportunities formed by online communities and computer-aided fabrication tools. This research informs carefully engineered objects that question the myth of singular authorship, our expectations of post-digital functionality, and the absurdity of human-human and human-computer interaction.
“Metropolitan Triangle Garden”. In this 3D animated video, classical sculptures in the museum participate in a destructive performance triggered by software glitches, distortions, and misused simulation, turning the space into a madhouse theater with both classical beauty and digital chaos. It attempts to connect the sense of space, history, turmoil, and transformation to the idea of technological sublime in a twisted way, breaking the restrictive association between advanced graphics technology and high-end cinema production while attempting to put classical art into a contemporary digital aesthetic context.

“The work tries to engage with our cultural heritage in a disruptive way, occupying the static space of a cultural institution and turning it into a chaotic digital performance. In the computer, each of the sculptures has a triple identity: a human or animal figure, a sculptural ornament, and digital data. The original sculptures were crafted by the old masters with care, treasured in their time, broken and tossed in historical turmoil, and preserved and admired again. The
original delicacy and the torment of time together created a new sensibility. In the video, they are de-
structured not only as ornaments, but also as bodies with cultural associations, which resonates with the
Greek idea of the tragic and the sublime.

It is also an attempt to reimagine the aesthetic directions we can take using high-end visual effect
technologies. Today, moving images are heavily com-
puter generated. The shiny cars or glittering beer in
TV commercials are 3D models rendered photo-real-
istically, not to mention all the collapsing and explo-
sions in Hollywood blockbusters. Taking the tools
that big visual effect studios use, but working alone
as an artist instead of with a team of hundreds, I try
to reclaim the independency of the technology. Most
of the “effects” are created through errors or mis-
used simulation, celebrating rather than concealing
the “wrong” and “mistakes.” **RUI HU**
“Graphite Piano” is a wooden sound instrument, shaped to resemble a piano. It is built with 3 sets of 8 pencils, each with a different darkness ranging from B to 8B. The instrument also has 24 keys, one per pencil. Each pencil is placed above one key. The keys have been drawn on the wood with various shades of pencils. The shade of each key is the same as the shade of the pencil that corresponds to it. The pencils in each set are all placed at three different distances from the keys.

Therefore, the same pencil shade will generate different tones, depending on its distance to the key. Performers can play the instrument by pressing the keys. This action facilitates the contact of the pencil
and the key, which will complete the sound oscillator circuit and generate the tone. The pencil and its marks thus work as a sound switch. Besides, musicians can play Graphite piano by waving their hands above the keys. This idea is related to other instruments or sound generating devices, including Louis Bertrand Castel’s 18th century Ocular Harpsichord, as well as the Theremin created by Leon Theremin and the Moog synthesizer by Robert Arthur Moog (and others), both made in the 20th century.

Using the pencil as one of the electronic components for generating sounds seems absurd yet completely makes sense because of its physical properties. The pencil core is made of graphite, which enables the pencil to serve as an electrical conductor. It is also a tool traditionally associated with writing and drawing. The physicality and the function of pencil make it an ideal element to be used in my sound sculpture. This work expresses my interest in the physical aspects of sound and language.

**PHOEBE HUI**’s early pieces worked with the transformation of text into image and played with the heterogeneous written forms of different languages. She is interested in the semiotics of Roland Barthes, and in the linguistic inventiveness of Lewis Carroll. Nonsense is an instrument of defamiliarization, experimentation and discovery. ISense and non-sense becomes one of her fundamental tactics for exploration in the process of art making.

Apart from everyday language, she is also interested in reinvented the ways comics are created and perceived by exploring the boundaries of comics as a language and as an art form. One of the exploration directions of her early work with comics is playing with the understanding of narration in comics and how comics composed, read and understood.

Hui’s recent projects have increasingly relied on interdisciplinary ideas drawn from literary theory, art history, quantitative research, electronics, computer science, and interface design. The combination of distinct fields of knowledge has greatly enriched her creative and critical horizons. She is interested in investigating sound in a materialistic way using computational methods and physical electronic means. She studies the physicality of sound storage and sound generated materials, to establish unusual relationships between aural and visual domains.
“Surveillance” is a performance by two fish – Sharky (red) and George (black) – constantly tracked by an IT system that analyses their speed and the distance they travel in their bowl. Projected onto a screen, these data are combined with those of a stream from a news site, updated every ten seconds and presented in the form of text bubbles, like a series of text messages. With humour that has a certain gravity, this curious set-up reports a real time discussion between two beings, no matter how insignificant, based on events in a world in constant movement.

LONG XINRU (Iris) and ZHOU SHAN (Cedar) are a duo of Chinese artists based in London and Beijing. Drawing on information technology, the visual arts, marketing and storytelling (those little tales spun by advertisers around brands to capture our attention), their works explore the idea of virtual reality and its impact on human behaviour from the psychological and sociological point of view. Iris graduated from the Royal College of Art, Cedar from the Central Saint Martin’s College of Art and Design.
The App “TOUR(IST)”, is a mobile experience, an augmented soundwalk through the urban landscape. The User can take interactive “sound tunnels”, urban shortcuts revealing a series of acoustic ambiances creating a stimulating listening experience, a mobile audio voyage through the urban environment.

Playing with the usual codes of spatial representation, the App TOUR(IST) is an augmented soundwalk. TOUR(IST) offers urban shortcuts, virtual displacements and an immersive experience in a new acoustic space and ambience. By unveiling a series of 3D ambisonic recordings, TOUR(IST) creates “sound tunnels”, trajectories emanating from the actual location of the User. TOUR(IST) reveals a series of acoustic ambiances that incrementally create a
whole new way of experiencing the city. Amidst the new urban soundscape thus created, the User develops a new sensory rapport with his or hers immediate environment. A new urban cartography is developed, a hybrid space in which the mobile User generates in real time, a listening experience while walking through the urban environment around the gallery of ISEA.

This urban grid is superimposed on a network of data that, although immaterial, is based on the same nodal logic. Both are made up of intersecting points and articulations of lines that enable functional movement. The act of travelling outside the grid (be it the urban fabric or the data array), of choosing to proceed along parallel paths, appears difficult to reconcile with that logic. This project aims at an exploration that is contrary to normal experience of the city, as it involves plotting transverse lines through the public and private spaces. Each of these trajectories will be in the form of sound tunnels, “wormholes” that will make it possible to move from one point to another by passing through every looming obstacle—somewhat like a wave passing through solid material. A hybrid space of data collection and a mobile device enables this real soundwalk and virtual journey through the neighbourhood of ISEA, offering alternatives to its rectilinear nature.

Sampling sounds from buildings and the urban space surrounding the gallery, data is captured to create a virtual tour of the neighbourhood. This series of recordings, made in straight trajectories, are like “core samples” from drilling; they reveal simultaneously the various occurrences of sound phenomena of the urban core, from the infra-perceptible to the ephemeral sound event. The samples present the User with a series of related soundscapes from the area surrounding the main gallery explored by foot by the User.

Tour(ist) takes advantage of the integrated compass, GPS, tactile screen and binaural sound processing capabilities of the iPhone, enabling the User to move through the “sound tunnels”, either travel towards specific place in the city or generate a 360-degree sound experience, a total-field collage of sound just beyond his immediate location. These tunnels carry the User through obstacles from space to space, encounter to encounter. The User is like tourist (according to John Cage), like a wave, travelling
through space and matter, confounding normal movement and penetrating both private and collective spaces.

The sound database of TOUR(IST) will include sounds created during the ISEA workshop and urban intervention: ConcreteCity_An ultralight approach to urban interventions orchestrated by Insertio. The urban sound intervention aims to incite participants to conceptualize, construct and implement an ultralight, large-scale wireless intervention of audio elements inserted in a public space, transforming a section of the city into a sound experience. The work will be achieved through a hands-on approach constructing and deploying an ephemeral wireless ubiquitous computing network, by temporarily grafting actuators, small devices “plankton”, that inhabit objects and urban infrastructures, (...can a stop sign shudder ?). These urban elements, diverted from their primary use, create a furtive audio orchestra-
tion. The resulting composition is a largescale spatialization of sound with multiple points of listening. The spatial forms include elements of the site’s material things, social activities, phenomena and the processes that are concomitantly taking place, specific to a time, place and culture.

Our approach focuses on the imagination of urban sites, their materiality, usage and memory. By interfering with what is normally a given “state” of operations, the intervention reveals an “augmented everyday soundtrack” leaving the field open to exploring the potential of the sounds of the city, the interaction with urban spaces and objects and the diverse interpretations of what surrounds us.

TOUR(IST) explores the theme of New Media and Cultural Heritage. As a listening experience created through the recording, archival and retrieval of fragments of sounds: from bursts of conversation or moments of daily routine (public and domestic interiors) disparate places (places of worship, shopping centers, local businesses, etc.). It is a world that is revealed, a condensed auditory form where the experience of the city itself reveals the simultaneity of its diverse and multivalent expressions. TOUR(IST) explores surrounding digital archiving technologies, investigating new hardware and software interfaces for storage and retrieval of archived data, posing interesting questions like: what kinds of new materials and subjects are being archived?, what are the
assumptions that lie behind these storage techniques?, and how the resulting representations shape our perception of the original information?, it also explores what happens when a particular kind of map, developed for a specific type of data, is used to present another kind of information, within its historical precedents and social, political and technological implications.

**INSERTIO** (latin word for insertion, insert) is a research lab that probes responsive environments and interactive architecture through questioning ubiquitous computing in the context of art. They combine a theoretical investigation of the interstitial and the virtual to a concrete «ultralight» exploration of interactive, interconnected, hybrid spaces by the insertion of various devices at the interface of the dynamics of the habitat, the urban and media. In the past few decades, the intensity of the transformational forces that disrupt the “urban condition” has called into question the claims to control and stability upon which the ambitions of the urbanistic project have traditionally been based. This state of things is not without repercussions on the ways of imagining, theorizing and putting into practice urbanism and the territorial project. If the relation to fluxes can be operated by the action of bigscale architectural infrastructures, the deployment of a constellation of urban microelements would constitute another way of thinking and implementing the idea of infrastructure as an equipment that is atomised, reticular, open and malleable. An ultralight approach to urbanism reframes the role and ambition of microintervention in the urban project as a strategic territorial vector of action. What was usually belittled or simply not even seen by the conventional architecture and urbanism approaches – the very small, the moving, the informal: the “plankton” – thus regains a new informative and operational value to imagine territorial intervention. “Plankton” not as a cluster of indistinct, apathetic and passive organisms, but rather as a virtually multitude of small devices meant to facilitate varied performances and uses, a moving myriad for a creative colonization of the spatial and temporal potentials of the urban landscape.
“S for Sisyphus” is a contemporary update and a creative reworking of Albert Camus’s “The Myth of Sisyphus”. S for Sisyphus is an experimental video game project aiming to explore action, meaning, and human intentionality via a simple animated and playable experience. It consists of two related but standalone versions: S for Sisyphus ¬ (playable version) and S for Sisyphus ∞ (machinima version), each articulates the theme of the work with a slightly different accent and experience.
“Well-formed breasts...coincidence?” is a video performance created for the camera. This video work makes reference to the power of the symbols (archetypes) that at the same time are shapes and, consequently, numbers. These symbols, as well explained C.G. Jung, have dominated our life because they are part of our collective unconscious determining what is beautiful and good and what is ugly and bad. Thus, the religions and governments have used them throughout the history in order to create resounding effects that manipulate the society. It means that strong or weird physical experiences can turn into aesthetic and pleasant experiences (images) just because they follow powerful and inherited patterns and symbols. This video talks about the most important numeric sequence, Fibonacci sequence, and...
about the master number par excellence, the number 11, which is interpreted as the resonance of the oneness.

Through this work, which is part of a specific communication project, Jai Du wants to reinforce the concept of the importance about the unification of the science and spiritual worlds.

Poetically it can be explained as follows:

*Maybe you don’t remember this number sequence maybe even consciously you don’t know what it means search on Google! The name is Fibonacci sequence and it has nothing to do with esoterism remember it not only if you want to win the lottery it can also help you to understand everything around you: the DNA defining you the Egypt’s pyramids the terrorist attacks of 11S and 11M the power of British monarchy the black holes and even the hole of the Bic pen also why you have to wake up every morning to work at an office that you don’t like at all this sequence explains everything! because it is part of the collective subconscious and, obviously, the abstract art has never existed because God exists.*

**JAI DU** starts her professional career as a business consultant in 2000, mainly working for banks and government institutions where she normally spent more than 12 hours/day. In 2008, thanks to a tragic accident suffered in Africa, which almost ends up with her life, she realizes about the lack of sense of passing life working at offices such amount of hours. Thus, she decides to fulfill her real life mission by starting communicating about the topics that nobody from her social and job sector would talk freely due to the fear of being fired or excluded. So, she becomes an artist with a hidden identity under the alter ego of Jai Du.

In her first video performances emerge topics such as the internal conflicts and dependencies that the System’s rules produce in the citizens: the idea of personal success based only on “specific” professional careers, the current roles of the women in the
different job sectors and the migration of people in search of a prosperous country.

Currently, questions of perception, emotion, affect and sensation have been crucial to the most of her latest work which involves the concept of the collective unconsciousness (C.G.Jung) and the use of archetypes and mathematic series in order to create/activate specific emotions in the audience. Recently, Jai Du has turned towards thinking performance as a symbolic practice for bringing the unconscious mind to the consciousness and thus, being able to apply a healing process through art. She have been developing a new way of thinking based on symbols/archetypes that allows us to examine the emotions related to the toxic Ego which is continuously reinforced by the society rules.

Jai Du has found through Art not only the dispositive for self-reflection but also a way to raise social awareness. She thinks that this consciousness raising way plays a key factor to put in motion the social engine and to trigger the human being evolution.
“Possession Trance”...there appears to be a complicated set of rules for computing with neurons which prevents many of them from working at once. The neurons are electrically triggered, and if the rules are broken we get an electrical overload. This is the cybernetic explanation (in brief) of what we usually call epilepsy, or (perhaps) what our forefathers called ‘possession’. - Stafford Beer, 1965.

Possession Trance is a live performance project spawned within underground D.I.Y. rave and experimental music communities. Slowly mutating for the past nine or so years the performance uses a combination of minerals, metals, electronic circuits, high powered stroboscopes, dense smoke, high volume noise and ritual incense in an attempt to create powerful, hallucinatory phenomena within audience members aimed toward provoking a liberating, communal and shared experience.

Initially using Nicolas Collins CMOS synthesisers in combination with stroboscopic light, the project has developed by examining the core underlying structure of electronic and computational circuitry.
Currently this performance utilises self built crystal amplifiers constructed with iron and chalcopyrite, copper-oxide and copper solar cells, and will be soon incorporating magnetite and maghemite audio “tape” to create recorded feedback loops live.

Possession Trance tends to spirals sideways into bastard tekno, burrowing through noise infested cybernetics, crude neuroscience and distorted physiology in an attempt to piece together our fragmentary daemons and split the nine-fold reality layers of human perception; from communing with the dead to disturbing the holographic brain; from trance states to opening flicker portals in optic nerve fibres; these practitioners practice a dark hypnosis in psychoactive hyperventilation clubs. This is far more potent than those Burroughsian opiate dreaming machines. These are the dank back alleys of the contemporary Core clans; turbo charged amphet-psycho-triptamine splittercore; highly potent chemical potions releasing anxiety ridden, fraudulent time-travel. We live on the peripheries of our own being. The veil is removed. Portals are opened. The superimposed fluorescent grid clamps the mind like thousands of splintered fingers sinking deep inside the brain and pulling out neural pathways in all directions. The pathways split into rotating cylinders folding in opposite directions spiralling into infinity. The holoflux is engaged as Purkinje shifts in his nauseated hallucinations, Fechner lurches into view weaving his pattern induced flicker colours in Helmholtz’s face. They all dissipate in photic voltages tracing themselves into oblivion through rods and cones penetrating dank neuronal alleyways at high velocity running unstoppable into head-on collisions with particles swarming from the OI! factory and binding with tactic centres of the inner muscular shell. The signal is now at the level of internal mineral solutions performing ionic transfers causing electrical lightening storms shooting through cells. Axon hill-ock is firing like a spasmodic machine gun spewing out incandescent howls and screams of white noise automatically reloading the onslaught continues as possession trance is manifest. Believe you are possessed by a god or deity. Something other has entered you, nonhuman. It is the nonhuman we are now in communication with.
RYAN JORDAN is an electronic noise artist whose work explores noise and a literal approach to DIY electronics. Recent projects include the creation of crude amplifiers, transistors, diodes and solar cells constructed with raw metals and mineral ores to generate sound and music. He is currently working on the construction of magnetic audio tape using specific minerals naturally occurring in the earth.

Another aspect of Jordan’s work is the focus on the human psyche and cognition and how we are connected to and experience the world and technology.

These concepts are put into practice through his live performances which combine his self built devices with the use of high powered strobe lights in attempts to create powerful hallucinations.

Jordan also runs NNNNN / noise=noise, an experimental noise research laboratory and live performance platform operating as an open place for people to experiment with electronic music and art. The aim of this project is to disseminate knowledge and to act as an informal, alternative and autonomous network enabling people to create and express themselves via technology and experimental audio-visual arts.
The objectives of “SONIC ELECTRIC: sonic recipes with experimental intermedia” are located within the fields of experimental sound performance and electronic art as inter-media [sound/video, performative and community practice] to develop a strategic laboratory for collective engagement by exploring principles of participation and relationality.

The aim of this project designed for ISEA Hong Kong is to develop a practice-based creative analysis of identity, power and place, through the immersive environment of the kitchen. The spatial politics of the communal kitchen workplace shape our daily experience. With a collection of hand tools and electric motors that will be gathered together from kitchens in Hong Kong, local participants will be bending kitchen instruments and appliances into doing things they were not designed to do and will learn to shift and reposition their status as tools and social markers, in ways that seek to open up sites of resonance and resistance.

Participants will also learn how the spatial and deep listening experience of the kitchen interior may open through collaboration via the fidelity of kitchen utensils and motors to sonic textures in sound performance. Sound has the ability to create a
relational space, a meeting point, diffuse and yet pointed. This makes sound a significant model for thinking and experiencing the contemporary condition, for as a relational spatiality global culture demands and necessitates continual reworking.

It locates us with an extremely animate and energetic environment that, like auditory phenomena, often exceeds the conventional parameters and possibilities of representation. This connection is equally a spatial formation whose temporary appearance requires occupation, as a continual project, emphasizing our place and is also potentially, emphasizing our local community.

This dynamic provides a key opportunity for moving through contemporary social discourse by creating shared spaces; it belongs to no single public. It can exist as a network that teaches how to belong, to find place and still search for a new connection, for proximity.

A critical and practical hands-on workshop will introduce recruits to, the concepts of Sound Improvisation from a dynamic perspective using kitchen tools and appliances and the manipulation of such tools and appliances. Utilizing Performative Improvisation, Sound Exploration, Music Electronics and Music Recording.

Participants will also experience how to make deep listening an effective tool or as an active collective process.

The workshop will finalize into a sound and performance art work presentation fusing cryptic beats and experimental noise with live sound improvisation created by the amplification of manipulated kitchen apparatus assisted by electronic hardware such as Contac mics plugged into bass guitar amplifiers. They will play their kitchen appliances through these devices for the final performance presentation.

“My research inquiry examines the spatial architecture of the kitchen and the relationship between art practice and broader social / political spheres, specifically to explore what kind of knowledge aural-aesthetic and taste-aesthetic experiences are capable of producing.

I use the kitchen table as the motherboard, a platform to investigate principles of participation as an area of relational aesthetics stressing the hybrid
or in-between nature of performance, sound, and labour and community practice. I aim to unlock the capacity for sound to create a relational environment, as a tangible meeting point linking art and sociality.

Working with musical communities and other social groups, I examine how institutional and political/economic forms of power appear in experiences of crisis, with all the uncertainty that characterizes our present.

My focus is the kitchen as a relational site for extensive techniques - bending instruments and appliances into doing things they were not designed to do. I see a kitchen island as an experimental sound workshop and food laboratory. I am revealing how do aesthetic practices in the kitchen contribute to the sensory formation of a specific community. Do these practices, through engagement of the senses and physical labour, reinforce or blur social class borders? I am also mixing in how can the dynamics of aural perception, taste, and the consumption of food; promote interaction by sharing multisensory experiences.

How can these practices reconfigure notions of identity and encourage alternative ways to integrate our perceptions through intercultural collaborations?

Furthermore, I am stirring up what sensory relations are made possible between artistic propositions and the social context/environment of a sound presentation?

How can the dislocation and repositioning of the kitchen appliance create new cross-cultural spaces, to propose alternative ways for shaping solidarities that cut across conventional lines of class, region, ethnicity, and ideological affiliation.

And to complete my recipe for research and reflexivity...I am whipping in...How can inclusive, from the ground up associations have the potential to be small catalysts for change within dominant social systems by looking at sound and sociality. How can I capture moments of insight, as a process of dialogic engagement that binds people together through ethnographic inquiry and procedural knowledge? “Juliana España Keller
“...what is seen was not made out of what was visible”. The vibration of air molecules can be perceived as a tangible kind of beauty, at times extreme and other times subtle. This aesthetic abstraction both moves toward and pushes away from how we normally define synesthesia. This work is a dynamic audiovisual installation/performance, which explores a purely physical connection between the sonic and
the visual. The audiovisual elements are tightly synchronized and unified into a new form of synesthetic tactile experience. Sounds, both within and beyond the human hearing range, create a physically perceptible vibration of air molecules and simultaneously manifest as visual geometric patterns on a customized 16-channel oscilloscope. This oscilloscope acts as the technology for the immediate visualization of sounds ranging from the infrasonic to the ultrasonic. As the process continues in real-time, the music affects what I create visually, and as I create the visuals they in turn affect the music in a continuous and organic feedback loop.

I intentionally move away from the ubiquitous traditional screen format; instead, I physically sculpt projection into the real world around us, creating and mapping dimension onto existing objects and spaces. The physical space itself is a key element in my working process, and I explore radical ways of visualizing my musical ideas to specifically fit the site. In this work, the audience is immersed in a hyper-tactile experience of audiovisual installation/performance.

**JINKU KIM** is a composer, performer, and multimedia artist currently residing in New England. His audiovisual performances and sound installations redefine the boundaries of interaction and seeking the pure physical connection between the sonic and the visual. Over the past decade, he has developed his unique audiovisual performance systems, which succeed the analog past to guide to new tangible era, utilizing custom hardware and software.
TOBIAS KLEIN, FREDRIK HELLBERG, LARA LESMES

MASK 臉譜

POLYU

Multimedia installation 2016

3D printed, projection mapped, interactive installation
Tobias Klein: INSTALLATION;
Space Popular (Lara Lesmes Fredrik Hellberg): NOTATIONAL DRAWINGS;
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www.kleintobias.com
www.spacepopular.com

“MASK 臉譜”...Electronic media exemplifies the dual meaning of revolution: to always create new while returning to the old. In this dynamic, where multiple centers and margins compete for attention, and borders to be transgressed are shifting, paradigms and practices must be replaced, repackaged and re-ap-
appropriated to keep up with the parallel evolution in art, creativity, culture, society, and politics."

ISEA statement 2016

One of the oldest forms of colour articulation in complex dynamic performance media is the Cantonese Opera. All aspects of costumes, texture, masks and form are geared together to create a total work of art. Characters are articulated through elaborate colour coding, communicating mental state, behaviour, status and role. Such complex narrative materiality and communication is comparable with the transdisciplinary approach of cybernetics – one of constructed communication feedback loops in closed systems. Taking the local specificity of the opera’s rich history, we speculate on a new form of storytelling and non-linear performance. In the opera, characters are based on notated behaviors and roles, articulated through elaborate costumes and colour coding indicating mental state, behavior and character. The colours are static and so is the narration.

MASK (臉譜) takes the static codification and translates the narration and character development into a dynamic, reactive and cybernetic system of conversation. The work is the design of a continuous conversation between two protagonists of the Chinese Opera. It takes the form of an interactive installation with two newly designed 3D printed masks are augmented by the means of chemical and biological agents as well as 3D reactive projection mapping. Each of the augmentations is reactive and environmentally controlled. Each of the reagents has a particular time span to change colour, from the instant change of a projection map, the intermediate reaction of polychromatic pigments to the slow change of bioluminescent bacteria or slow growing crystallisations. The mask here is object and condition at the same time. The reaction of the mask is recorded, played back and looped, creating a 2nd layer of influencing input, suggesting the layered repetition in the opera, stimulating and inhibiting the crystalline growth.

Using 3D projection mapping, that as a source takes the recordings from the biological augmentation as well as the polychromatic stimuli, allows the audience to interactively stimulate the masks behaviour up to the point of chemically altering its shape through the precipitation of Aluminium potassium Sulphate – the curing of the mask in its dis-
figuration. The narration culminates and form is lost for chemical augmentation and change. The extreme time spans from the instantaneous colour changing of the pixels in the LED matrix of the projector to the long curing of the mask using crystalisation are only able to be seen as a process and never as a whole-similar to the momentous perception of the enacted Opera.

TOBIAS KLEIN works in the fields of Architecture, Art, Design and interactive Media Installation. His body of work generates a syncretism of contemporary CAD/CAM technologies with site and culturally specific design narratives, intuitive non-linear design processes, and historical cultural references. Works are crossing disciplines from sculpture, media art, installations and architecture ranging from crowd-sourced phenomena such as the work ‘virtual sunset’, the artificial environmental reactive growth of crystals in 3D printed substrates and his work on the translation of craftsmanship in the digital context through re-articulation of cultural archetypical objects within digital embodied environments generated by the use of medical datasets from Magnetic Resonance Imaging. All bear testament to the role of architecture today as more than designer, but cultural agitator and the creator-craftsman between automatic mechanization and poetic creation.

FREDRIK HELLBERG and LARA LESMES are practicing architects who through their work with at Space Popular ltd and the undergraduate design studio Tools for Architecture explore experience driven design methods and new holistic approaches to construction systems in a variety of media. Their work also explores narrative driven art and architecture though projection mapped sculptures and installations in pieces such as “The Visceral Intricacies of Magister Ludi’s Archetypes” which was exhibited at Sto Werkstatt in London. Together Hellberg and Lesmes explore new ways to exist and interact in virtual space through speculative projects such as “The Cloud of Resilience” where the world’s death mortality rates can be visualised and explored both through three dimensional diagrams and via fully immersive virtual scenarios.
ELENA KNOX
PATHETIC FALLACY/ OCCUPATION/LAMASSU KENTAURUSU WAGYU

CMC 6/F

PATHETIC FALLACY
- Single-channel video + stereo sound 2014
  4’17” Continuous Loop

OCCUPATION
- Single-channel video + stereo sound 2014
  4’57” Continuous Loop

LAMASSU KENTAURUSU WAGYU
- Single-channel video 2014
  0’54” Continuous Loop

- Campbell Drummond: camera and lights;
  Lindsay Webb: sound mix; Transconductor:
  storm recording; Maggie Blinco: ursula; Kirsten
  Packham: actroid operator; Maylei Hunt: stills
  Thanks to Tom Rivard and Ed Leckie actroid
  and permissions: National Institute of Advanced
  Industrial Science and Technology (AIST), University
  of Tokyo, with Creative Robotics Lab, National
  Institute for Experimental Arts, UNSW Art
  & Design; production: Lull Studios

- www.elenaknox.com
“Pathetic Fallacy” is an intergenerational dialogue about growing old. Youth doesn’t believe it will age. Age believes it knows best. Humans believe in the pathos of humanity. And the cycle continues.

The screenplay wraps the empathic notion of kokoro around the subject of aging: aging of humans, of women, of technologies, of matter, of robotic or cyborg assemblages. The piece is a ‘two-hander’ between an elderly woman and a ‘young’ ‘female’ android. A conventional mother-and-daughter or Juliet-and-Nurse figuration is applied to an unconventional scenario, as the video explores a new familial paradigm. Pathetic Fallacy was the first two-handed dialogue drama created for film/video involving an actroid (see, since, Fukada’s 2015 feature Sayonara). The English term ‘pathetic fallacy’ denotes the ascription of human traits or feelings to inanimate nature. In keeping with this theme, Actroid-F’s simple face-detection and face-tracking software are employed in its acting. This robot cannot currently distinguish between individual faces or ‘decide’ to follow a face; its decisions are made by humans via computer interface. However, it often fools its interlocutors into believing that it can make these determinations. It mimics the human development of empathy via neurobiological mirror-learning: visual emulation in face-to-face situations. Framed as a fantasy, but yet endeavoring to strip back layers of fantasy and futuristic nostalgia, Pathetic Fallacy provides another snapshot of a point-in-time where science fact is not caught up with science fiction, and where speculation and education are based inelegantly upon what is known.

Elaborating a poetics of point-of-view, the actroid and the elderly woman discourse about aging in a dramaturgical möbius loop. Their dialogue comprises their attempting and not attempting to understand each other, and reveals a lack of clarity as to where one entity ends and the other begins. Insensibly entangled in a beatific human–robot mis/understanding, each character relies on what she perceives as empirical evidence to promote her own partial fallacy. Each character also relies on her typecasting with reference to specific cinematic emotions—the maternal fondness of the elder, the smart self-indulgence of the younger—and are unfortunately unable to break these time-honored molds (the gaze of the artist attempts to query,
destabilize, break the molding for them). Mirroring the dialogue’s intersubjective mirroring, time is also on a loop in the video, which can seamlessly repeat and repeat; as long as each interlocutor is closed or oblivious to the other’s perspective, the loop remains closed and the questions remain open.

Pathetic Fallacy seeks to make explicit, and relate to technoculture, tensions between generational feminisms and non-feminisms in terms of claims to authenticity. In arguing about aging, even in their gentle, clichéd way, the old woman and the robot in the looping scene perform a claim-staking solipsism present in modern-day feminist discourse. They are both wrong, and they are both right. The gynoid will age, but not as the human elder thinks it will. The gynoid has the overconfidence of the (literal) digital native; the woman the overconfidence of the rational anthropocentric. The ‘child’ in the scenario is the burgeoning intelligence that exists in the mutual space between them, in their intersubjectivity: in the mirror.

**ELENA KNOX**’s works propose and disrupt embodiments of gender in media and technology. Live actors, puppets, and machines perform their own critique. Most recently she has worked with ‘very humanlike robots’, eliciting and complicating their embodied sociocultural codification.

‘Geminoid’ or ‘actroid’ robots—aesthetic copies of humans—are already a niche reality. It is evident, then, that at least some of us will be mediated and networked though prosthetic bodies that attempt to pass as human. This is a profoundly materialized, and material-bound, idea of a global network. It manifests all kinds of epochal anxieties: obsession with visual appearance and the ageing body; with dramatized sex; with cheating death. It fetishizes presence and drinks deeply from established wells of sociocultural power. Most actroids created thus far (since 2003) appear female and youthful; this ideal is culturally ingrained through ancient myths to sci-fi. But the public reaction to each new realistic gynoid model shows that the notionally comforting form also provokes panic and denial. In making robots conventionally alluring, we worry that they are seducing us.

The six works in Actroid Series I feature Actroid-F, developed in 2011–15 by Hiroshi Ishiguro Labora-
Stories. They performatively provoke the urgent revision of gender stereotype, currently being reinscribed at the frontline of much humanoid R&D. Women and girls upon whom popular high-tech gynoids are modelled will be come to be further associated with slave labour and depleted rights. The Series’ artworks produce ambivalent versions of gynoid agency that are oxymoronically based in a chronic paradigm of control. They ask hard questions about sexism, stereotype, anthropocentrism, and labour.

The fem-bot is usually unable to speak for herself. In this Series, Knox presented the world-first made-for-video scenes of an actroid being verbal: her gynoid ‘speaks its mind’. The project initiates action by working with one robot within and against modalities of feminist cyborg and biopolitical theory. Can the fem-bot aspire? Is that what we desire?
“Light Catcher” is a dialogue between sound and light. The installation is composed of numerous optical fibres that interact with sound. Sound is the driving force, light is generating the space. An electric spark is igniting the reaction. Light is entrapped inside the optical fibres, reacting only to sound stimulus. Acting like a catcher, the installation absorbs and emits light. This results an emergent dance of light from the fibres and the reflections on the surrounding surfaces. The white light dominates the installation but shades of other colors exist to highlight an audio event, like the sounding French horn playing a minor second interval. The visitor is invited to walk around the installation and explore the different visual and audio aspects.

YIANNIS KRANIDIOITIS is new media artist and musician whose work focus on creating spaces and experiences by combining sound and light. By isolating minimal concepts, like the movement of a pendulum, new perspectives are created which reveal an inseparable relationship between science and art. This requires a cross-disciplinary work with music, sound art, visual arts, electronics, physics and coding.
“Moving Objects” is a kinetic sculpture consisting of motors, rings, and silicon wire that approach the visual phenomena between chaos and order and challenges the viewer to constantly seek patterns and principles. The technology behind the art—the machines, the wiring, the motors—is integral to Pe Lang’s piece, bringing the audience in touch with the technical processes that are so often hidden in our high-tech society.

**PE LANG** is a Swiss-born artist professionally active in Berlin, whose works are moving constructions. He carries on the tradition of constructivist and kinetic art, doing so in a captivating and fascinating manner. Lang’s works apply and take command of the forces of nature and the phenomena of physics: magnetism, friction, gravity and electricity. His reliefs, sculptures and installations combine self-made mechanical systems with wonderfully severe structures. The results are logically surprising, elegant and fascinating works in which each part justifies itself through its relationship with the whole.
"Walrus" (2011 – 2016) is an interactive installation consisting of a computationally augmented mirror that only reflects the face of its users, while supplanting the interactor’s face with a previously recorded one in the same position and with a similar facial expression. This supplantation occurs in every frame, using a different person’s face each time. Walrus proposes a reflection on identity and self-perception, while also commenting on the current conversations on interaction, technology, and surveillance. Augmented mirrors—which are sometimes referred to as “magic mirrors” or “augmented reality mirrors”, among other names—have a long tradition with new media art. Moreover, mirrors have always played an important role in culture. With a history dating back 8000 years, not only they have always been present in art and in myths, but they can also be thought of...
as the first interactive artworks. Mirrors can be found in the drawings decorating in the Tomb of Mereruka at Saqqara (2300 BC), thus offering us one of the first examples of remediation: a medium turned into another triggering a fractalization of representation. It should not be surprising, then, that mirrors have also been present very early in video and digital technologies. In “Video: The Aesthetics of Narcissism” (1976), Rosalind Krauss observed that using video’s innate ability of instant feedback, a huge number of artists adopted the human body as one of the main subjects. “The body is therefore as it were centered between two machines, that are like the opening and the closing of a parenthesis. The first of these is the camera; the second is the monitor, which reprojects the performer’s image with the immediacy of a mirror.”

Since their massive appearance in video-art, mirrors have always been present in new media art. From Krueger’s VIDEOPLACE (1974) until today, there has not been interactive technology that has not been used to create a new type of mirror. Mirrors continue to be remediated and continue to allow the insertion of the body into the artistic practice, and into the art object. With the recent popularisation of first webcams, and then depth cameras, new waves of mirrors have populated contemporary new media art.

With Walrus we attempt at leveraging this “design pattern” by creating a mirror that proposes a self-contradicting interaction: a mirror that infers a human essence, a common trait of all its interactors (amalgamating all its users into a continuous stream of visual feedback), while at the same time filing in its most basic behaviour. In Walrus, we are both able to see more and less of ourselves. Walrus reminds us that every mirror offers representation of reality (a new layer of perceptual abstraction), and questions our immediate assumption of perception as reality, and our naïve acceptance of mirrors as faithful vehicles.

Mirrors surveilling reality. Although, as we said, Walrus presents a self-contradicting mirror, this contradiction does not ontologically separate it from the mirror kind, for all mirrors entail a similar conflict. Mirrors, in Borges words, trouble the depths. They exist in the reflection of light, outside of the image, simultaneously expanding a scene and con-
stituting its border, its limit. Mirrors are interactive, yet blind; however, Walrus’s manipulation of the image proposes a mirror that partially sees us, understands us, and explicitly constructs a representation of us. An idea of us. In the alternative construction of self-perception that Walrus allows, the installation inserts the dynamics of computational ubiquity and surveillance. Contradiction arises anew; we are all connected, our identity is constructed with others, yet, a different identity is possible: the identity of the surveilled, the objectification that arises in our contemporary relation with the politics of technology and society.

Spatial Augmented Reality (SAR) is the use of projected light to alter the appearance of physical objects. In the last twenty years, SAR has been explored in multiple form factors and uses. Even though we do not use projected light in Walrus (although previous incarnations did), the conceptual principle is the same, for augmenting implies granting new abilities. In Walrus the augmentation is double, firstly we turn a surface into a mirror, and secondly, we augment this mirror by allowing it to see. As it happens with every cultural artefact, this augmentation cannot help but to encode a worldview, a political understanding of the world.

However, we understand Walrus as a self-questioning proposal where the political significance is ambiguous and explicitly pushed towards the interactor’s interpretation. It is in this reflection where the installation proposes a dialogue. Not only the augmented reality’s assumption of the camera output being the reality needs to be questioned, but also the social role of these techniques has to be explicitly interpellated. In Flusser words, “the task of a philosophy of photography is to reflect upon this possibility of freedom - and thus its significance - in a world dominated by apparatuses” If—following Krueger—we search for the art of interaction, Walrus is to be found in the interactive augmentation. However, the installation evidences that there are no possible innocent augmentations, for each transformation codifies power. Each transformation becomes a statement.

Technical details. Walrus is composed of a Microsoft Kinect Sensor, a computer, a screen and an oval-shaped picture frame. We configure these components to maximize both the capturing accuracy
(Kinect) and display quality. We utilise the sensor to track the interactor’s head, and Microsoft’s Face Tracker to locate the face and extract some gestural features: mouth openness, rising of eyebrows, mouth shape, etc.

The computer stores each new face and its associated data into a database, and returns an existing one from the database. We organize the database as a hash table, with similar faces stored under the same hash entries. We define the face similarity by an $L^\infty$ norm of the head rotation, plus similar gestural features.

When a new face is entered, it is put into the entry of the hash entry with most similar poses. To avoid running out of storage, we cap a maximum size of each hash entry, and randomly kick out an existing entry when the limit is reached. We then randomly pick another face from the same hash entry. This can be considered as a cheap way of finding similar faces to the input through hashing.
“Paisaje para una persona (Landscape for a person)" traces a path through different locations into a sequence of images. Places as the backdrop for a story that slips from its possible representation, building an invisible layer of meaning between the image and the story. This video was constructed from material filmed on Google Street View and then edited with audio interviews of people who were in conflict of transit or deportation.

FLORENCIA LEVY’s production sustains itself through several layers, which converge upon the notion of translation from a research-based practice and its representation as a form of apprehension, weaving material from various sources.

Levy’s practice is often supported by anthropological fieldwork and interviews, and she uses several artistic strategies and materials combining differ-
ent forms between the real and the imaginary, recollection and history. The formats in which the diverse actions materialize vary according to each project: film, publications, collaborative projects, photography, painting, or texts which function as a stage: elements, which, in turn, will contribute to a possible return to the narrative. Levy is interested in investigating how artistic practices can directly affect public spheres and activate new spheres of social structures by creating new fields of action. Levy’s focus is on the possibility of sharing a space for critical reflection, contributing to a dialogue of exchange, because her main interest lies in both building of a personal universe of images as well as developing a way of thinking, such as creating a world of ideas to serve as a bridge for others.
“Pulse Project: A Sonic Investigation Across Bodies, Cultures And Technologies” is a doctoral performance research series exploring the relational interfaces between medicine, culture and technology. This performance embraces the Cultural R•Evolution theme by using the intercultural human technology of Chinese medicine in tandem with electronics to materialise the body as it exists between cultures and across time. This project takes the durational practice of Chinese medicine and engages with a globalised Hong Kong audience from an inverse angle - arriving from the West via using the performance of ‘Chinese’ medicine by a “Western” artist and Chinese
In this study, Michelle Lewis-King embodies research practice itself through adopting the role of artist-acupuncturist-investigator and acting as an instrument or medium between herself and others and between cultural traditions for understanding and mediating the body. Pulse “reading,” case histories, notations of pulses and acupuncture point locating are all used together as methods for exploring the cultural encounter between artist, participants and diverse medical practices. Drawing upon my experience as a clinical acupuncturist (with training in biomedicine), she uses traditional Chinese medicine and music theories together technology to compose bespoke electronic soundscapes expressive of an individual’s “being” that registers along a spectrum between Asian and Western approaches to the body. These soundscapes (composed from pulse readings and a modified sonic acupuncture point location device via the Acupunctosonoscope) are not sonifications of western principles of circulation but offer another perspective to conceive of/listen to the interior spaces of the body- as each participant’s pulse is interpreted as a unique set of sound-wave images based on traditional Chinese pulse diagnosis (a complex set of 28+ waveform images corresponding to states of being) and also according to traditional Chinese music theory.

For ISEA 2016, Lewis-King is creating a new work of performance research using pulse reading and an point finding instrument. The instrument (called an Acupunctosonoscope - an electro-acupuncture device she has modified to produce amplified sounds of acupuncture points) will be used to test out and materialise the Traditional Chinese Medicine (TCM) notion of the body. As the Acupunctosonoscope only responds to the infrasonic signals that collect within the acupuncture points at their specified locations along the body - and not to the ‘electrical’ activity of the (biomedical) nervous system, Lewis-King would use the Acupunctosonoscope to investigate and materialise an embodiment that differs to our modern conception of the body. Each participant will be seen individually and shall be
thoroughly informed about and consent to the performance procedure via bilingual participant information sheets (English/Cantonese). The Acupunctosonoscope is completely safe to use on members of the public.

MICHELLE LEWIS-KING’s current research brings together her transdisciplinary experience in contemporary art, multimedia, performance, sound/music and clinical medicine. In 2011 she initiated Pulse Project, an ongoing performance research series that draws upon her experience as an artist-acupuncturist working within the contexts of the (Western) biomedical clinic. Pulse Project re-stages the clinical encounter as a frame for investigating occluded, invisible and temporal aspects of embodied experience from diverse perspectives - as a means for opening the hidden processes of clinical investigation outwards towards social debate and renegotiation. Particularly, Pulse Project materializes the human body’s imperceptible emergences through shaping infrasonic signal/sounds into unique digital soundscapes that reflect the unique rhythmicity of individual being-in-time. New interconnections between early Chinese medical philosophy, biomedicine and technology are investigated and performed as a means of reconsidering notions of the ‘body’ to reflect a quantum intercultural vision of being. For this reason, Lewis-King’s soundscapes and notations are not composed according to the Western concept of embodiment, but offer a cross-cultural perspective to conceive of/listen to the interior spaces of the body.
“WAR ZONE #1/ REPRODUCTION OF HISTORICAL MISSILE TRAJECTORIES WITHIN GOOGLE EARTH WAR ZONE EXPLORES THE MILITARY LEGACY THAT IS NOW PART AND PARCEL OF WIDELY USED TECHNOLOGIES”. In this series of videos, the artist reconstitutes three missile trajectories with a subjective camera within the program Google Earth by using historical data. This project focuses on reminding modern-day technologies of their past by highlighting the clues to their military origins. In the case at hand, the attention is centred on missile history – missiles being the precursor of the space programme and of the launching into orbit of satellites whose shots and mapping capabilities we now use on a daily basis.

As such, we follow the trajectories of a V2 rocket invented by the Nazis and launched from the Netherlands to England in 1945; a Scud missile launched from Kuwait to Saudi Arabia during the Gulf War;
and finally an air-to-ground missile launched from Israel to Gaza in 2014. By riding astride our missile in the manner of Dr. Strangelove, we can consider the development of these instruments of death, from the poor precision of V2 rockets to the surgical strikes of Israel – the nation with the highest number of start-ups, in particular in the realm of cyber-defence, and the nation in which the military is the main source of innovation.

This work is based on data gathered from archives, interviews, blogs and historical events.

“The imperfections allow to identify a medium, in the style of glass becoming visible by the accumulated dusts and scratches.

I expose the internal workings of media, through an exploration of their dysfunctions, limitations or failure thresholds which he develops sensory and immersive audio visual experiences.”

NICOLAS MAIGRET
“Sjö : två”. What happens when a contemporary sound artist and a jazz pianist remain shut indoors in a baroque castle in the Piemontese mountains for two weeks? The result is Sjö - a collaborative project between the Zurich-based electronic composer Marcel Zaes (CH) and the Paris-based jazz pianist Andrea Manzoni (ITA). From the sheltered rooms of their baroque retreat, Zaes and Manzoni present a sonic research project which is as contemporary as it is versatile. Sjö explores questions such as what it means for a piano to make a sound in the 21st century - in a century over-determined by an electronic environment. Starting from Manzoni’s jazz-based technical expertise, the duo experiments with electronic
transformations and the impact of their environment - whether low-key piano bar or deep techno club, their sound seeks to adapt the piano to different 21st century musical settings. The visuals accompanying Sjö’s sonic investigations are provided by the artwork of the Munich-based artist duo Anna Schölß (GER) and Kristijan Kolak (GER). Sjö : två is a one-hour concert program consisting of nine co-compositions by Manzoni and Zaes. All compositions include a tonal-melodic piano part and an electronic part which is based upon sonic research ideas. Several research settings that get used by Sjö are inspired by the creation of artificial spatiality which exceeds the possibility of the acoustic instrument. One of them is the use of convolution reverb in live performance. Several pedal hits, microphoned in the inside of the grand piano, act as impulse responses, while the live piano’s attacks trigger these responses. The struck piano string, resonating in the inside of the piano, microphoned, going through a convolution reverb where it resonates again in the virtual inside of the piano, creates supernaturality. Another setting consists of the use/abuse of stereophony. For the sake of theater-suitability we limit our work so far to stereophony and try to go to its very limits. Stereo as an assembly of two mono channels instead of an “authentic” image of space is the underlying concept. The use of a “wrong” mapping of the piano microphones, phase inversion, the mixing down of the left and right piano microphone into one mono channel while the same signal passes delayed in the other mono channel, or the application of a convolution reverb on both piano microphones but with a different impulse response for both channels; all of this, when assembled again and played-back as if it were an “ordinary stereo”, results in an artificial spatiality which could not exist in reality.

The creation of artificial temporality is the second concept used by Sjö, as the interest lies on the temporal perception of sound. The live piano playing of Manzoni necessitates a human-created temporality, which Zaes with his algorithms interferes. Detaching the X from the Y axis, the temporal envelope from the momentary timbre is the underlying concept, which Marcel Zaes often uses in all of his works, not only in Sjö. The momentary piano event – an attack, a decay, a release or a piano body noise – is freezed with diverse granular and freeze algo-
rhythms. Thus, the piano event results in an extemporal static sound, which then is shaped by Zaes again in function of time. The detached spectrum is joined with an artificially created envelope. Both the shape of this envelope and the parameters/quality of the underlying freeze are controlled by Zaes on stage. Further ideas of temporality include the real-time reversing of a single piano note—a concept that for the reason of its physicality remains impossible—yet can be approached, or the concept of introducing pure sine waves as natural overtones in an ongoing piano note, as the played note—once released—is prolonged and results again in a continuous sonic event that can be artificially shaped.

**ANDREA MANZONI** is a pianist with both a classical/jazz piano and a composition background who never is satisfied with current tendencies of piano playing and hence searches for his unique sound. One of his primary interests lies in using the piano as a spatial body. Manzoni introduced not only post-Cagean prepared piano methods when performing, but also the idea of the piano body and resonating strings as a reverberation space.

**MARCEL ZAES**, a composer whose compositional method is always starting from the physical qualities of the sound itself, in a post-Griseyan sense, acts as a “listener” to Manzoni’s piano playing. Watching and observing the sonic pianistic space, he waits for the subtle artifacts produced out of Manzoni’s playing: the pretended “silence” between two notes which is never silent, the release phase of single notes, the other strings which start to resonate even when they are not played, or mechanical noises/failures of the piano’s pedals and keys when used. Zaes’ methods are based upon the idea of bringing advanced studio processing techniques onto the stage and performing these non-real-time algorithms in a “quasi real-time” version. Zaes places close-up microphones inside, around and underneath the instrument, even above Manzoni’s playing hands, and enters all these signals into his Max patches, where he catches single pianistic moments and elaborates them. Furthermore, he adds pure sine waves and “dirty” idle mode noises of old-school analogue devices such as waveform generators that have originally been designed for military use. The processed piano,
the sine waves and the generator’s idle mode noises define his sonic vocabulary. This first part of the composition process could be named the “composition of the sound itself”, in the Latin origin of the word “componere” and in a spectral way of composing. Now, with the yet defined sounds, Manzoni and Zaes as co-composers start the second part of the process; the traditional-musical composition, as they put their material together following quite traditional yet advanced rules of tonal-harmonic thinking, of melody and of formal structure. This vast contrast between the spectral thinking on the material level and the more traditional thinking on the formal level not only produces a quite unique voice of “Sjö”, but also permits the duo to have their music reach a wider range of audience, thereby making advanced sound processing available to people who have never before heard such algorithms.
“Boundary Synthesizer II LIVE SET” is an interactive audiovisual performance that translates familiar moving images such as cityscapes and fireworks into impressive sound. The horizontal “boundary” line is extracted from the outline in each video frame and directly transformed into a sound waveform. Users can play with Boundary Synthesizer II by changing the video contents, controlling the frequency and manipulating the image data using image effects such as twist, mirror and mosaic. Thus, this is an audio-visual synthesizer in which the oscillator’s waveform is structured by the visual boundary. This waveform is being changed in time by videos, and unexpected sound artifacts, that is noise, continue to
be generated automatically. Therefore users need to explore the intuitive and expressive connections of image and sound by operating it. This is a non-pliable, but expressive digital musical instrument.

**Katsufumi Matsui’s** works are focused in the areas of sound installation, audiovisual performances, image sonification and new interface for musical expression.

**Tatsuya Ogusu’s** research interest is a method of composing contemporary music based on abstract paintings.
“New Game” is a romantic mutiny against the restraints of ubiquitous techno-utopian culture. The common and traditional prescribed role of installation media as a mise en scene acquires a new role as an active performer and actant. The game controller becomes a cypher key to bring meaning to other places – wild places, which as yet, can only be imagined. Meaning flickers on and off like a relay switch or an interrupted signal transmission. The game encourages the performativity of the player through colors, live video feed and theatrical motifs that are an indirect consequence of the mise-en-scène of the hardware and software, the ‘liveness’ in the approach encouraged could be perceived as unruly and un-governed. The artwork opens up standard devices and situations, it explores the notion of a playful dream that exists in the interstices between the real and the fictional. In fact, the game becomes the performer - the player concedes agency to the code. Perhaps you are really a non-
player in a game controlled by someone or something else; perhaps you are the one who is played.

**NANCY MAURO-FLUDE** is driven by the demystification of technology, and the ‘mystifications’ that lie in and through the performance of the machinic assemblage. She devises and curates numerous International cross-disciplinary events that examine planetary computing and contemporary culture, fostering radical and experimental methods of pedagogy.
“Scores for Distributed Dancing” is an iterative project that accumulates over time and through presentation in diverse spaces. It engages viewers as participants and performers as facilitators of experience. This durational event appears from within everyday interactions and highlights the pre-existing movement systems of public spaces. Social programming modifications are printed on playing cards in the form of logical operators. As participants attempt their scores, the system responds. Participants change the tone and pace of the space through a collaborative phase shift. The intervention displays how small, accumulated actions deliver results on a grand scale.
Every project space is digitally documented with pre- and post-rupture layered into an experimental video portrait for online archives and exhibition display.

This work addresses the nature of identity formation as it intersects acculturation and social structures. Our bodies are our first tools for experiencing the world, and yet how we see or interpret the world is filtered through the lens of our physical experiences. For that reason, culturally enforced physical precepts (like crossing legs when sitting, or looking down when near strangers) become inextricably linked to our sense of self. If we are consistently told to take up less space in our physical actions, we can come to believe that we do not need, or worse, do not deserve to take up as much space as others. To further complicate the delicate relationship of body and identity, we are living in a posthuman world where our physical experiences are often augmented by technological advances. The logical operators of programming parameters bind our interactions with screen-based media. Simply put, we can only perform a predetermined set of actions with a pre-programmed set of responses when interfacing with responsive media systems. We become accustomed to performing within a pre-set group of actions.

Scores for Distributed Dancing hacks the body in the same way other projects hack technology. It breaks the congruity of everyday, introduces new parameters, and provides positive feedback for what might otherwise be perceived as failure. It de-emphasizes virtuosity of movement in dance-like contexts and affirms the refined expertise of everyday actions. The project exposes the rule-based parameters of social interactions and even personal movement choices. Scores for Distributed Dancing presents these concepts in an experimental and emergent digital format.

MEGLOUISE believes that physicality is our most potent resource and she includes it as an essential ingredient in all her work. She craves sensation, gain insight from interaction, and understand that effort makes her stronger. These virtues inform MegLouise’s deeply personal, highly sensitized movement pieces.
Physicality has a power beyond the purely visual realm. It comes with implications of consent or resistance. When physically consenting, without thought, to the structures and systems around us, we lose agency; our actions can lose potency. MegLouise’s work highlights the moments of choice in everyday actions, common habits, and social practices. She recognizes walking, sitting, waiting, and greeting as trained communicative actions. She appreciates the living codes embedded in even the smallest actions and share that reverence through an interdisciplinary arts practice. MegLouise ruptures physical norms, dedicate time and space for movement re-education and highlight subtlety as a mighty tool.

Her work is firmly situated within contemporary social contexts. It includes installations of mediated bodies, movement+media performances, and experimental films. The essential fulcrum of the work is grounded in the minds and bodies of the viewers.

MegLouise develop original movements for each new piece and resist codified forms. The raw physical material is culled from ongoing research of human behavior, including empirical studies of social and experimental psychology combined with non-linear personal explorations. She gives viewers deep access to her work through proximity and by enlisting them as co-conspirators. They experience her offerings through the interface of their bodies.
The “Ouroboros” is an ancient symbol of a serpent or dragon eating its own tail. Here something is constantly re-creating itself. This symbol has a variety of interpretations and is found represented in number of ancient cultures, the two oldest being China and Egypt. One interpretation of the Ouroboros is the idea of the eternal return, where the universe is having been recurring forever. Ouroboros the robotic artwork is an embodiment of this idea. Using various DIY mechanisms and components this robot extrudes a plastic coil like “tail” that winds across the floor. The “tail” ultimately is returned to the robots “mouth” as a vacuum and rollers in the machine intake the plastic “tail” grind it back up, melt it down and re-extrude the tail as a new coil.

HDPE, High Density Polyethylene is the common material used in everything from milk jugs to toys and cutting boards. With proper collection and resources this material is easily recycled. Instead of using a ready made filament or plastic pellet the
Ouroboros robot only consumes shredded plastic milk jugs. It will thus only recycle and renew as long as it has its tail or extra shredded recycled plastic to consume. Obvious parallels are made here between the symbol of the Ouroboros and the potential of a recycling system.

The tail of this robotic serpent will have the capacity to enlarge as it recycles with each generation from ingesting additional the plastic source material through its roller mouth and vacuum. Dual linear actuators fitted with blades from a wood planer will cut the plastic filament as it is rolled into the head of the robot. In addition to the “tail” enlarging there will be variation in each new iteration of the tail. A form of reincarnation occurs through constant re-birth of the Ouroboros’s plastic tail. The interaction of material, process, variation and machine connects to many other possible interpretations including ideas from: biology, ecology, behavior studies, industrial production and micro-manufacturing.

This “Tail” material is melted at a safe temperature of 350 degrees Fahrenheit or less where minimal off gassing will occur. All heat and shredding components are safely secured inside the “body” of the Ouroboros mechanism. Blow formed transparent polycarbonate panels will provide windows into the body of the serpent robot where observers can witness these processes unfolding. Select parts of the robot are also made from recycled cast HDPE using a different process than the extruded tail. These recycled mechanical parts will be cast and fabricated in Daniel Miller’s studio at the University of Iowa. The processes used in Ouroboros connect to a larger DIY community where recycling of plastics into 3D printing filaments and other components provides a possible real low cost alternative for individuals and production at the local level worldwide. Ouroboros represents a larger body of planned work where robotic artworks utilize current technology with recycling and recycled components to explore contemporary societal issues and environmental concerns.

One can regard the human animal as not above, separate or other but rather equal to the world we inhabit. The effects of human technology are woven into the destinies of all beings of this planet. While the Ouroboros directly references the serpent or snake form, its mythology is also very much human. The recycling system that takes place within the
body of the Ouroboros both looks at ideas of mechanical manufacturing and material processing and the biological analogues to these processes. Within the Ouroboros a central electronic nervous system controls functions in each of the four sections of the robot. Additional local controls monitor various processes from ingesting plastic filament to vacuuming the “chewed” plastic pellets through the hoses and extruding hot filament. Further correlations can also be drawn between this project and the natural recycling system of plant earth as seen through plate tectonics.

The DIY systems used within the Ouroboros represent a shift in hierarchy from Governments and corporations to open source communities and individuals. This shift has been taking place for the past 20 years, as robotic technologies become ever more accessible at the local level. DIY systems used in the Ouroboros include: Arduino controllers, homemade filament extruders, a repurposed vacuum cleaner and various prototype mechanisms. While some of the Ouroboros’s structural components are made with CNC tools other parts like the polycarbonate windows are made with simple electric cooking ovens and compressed air.

The Ouroboros challenges ideas behind automation and manufacturing. Robotics has infiltrated ever level of manufacturing. Commercial production processes have been key to the ever-evolving biopolitical relationship between humans and their natural world. The Ouroboros approaches these ideas from a more intimate and social level where the micro-manufacturer can change the relationship between machine and body.

Technology and materials used in Ouroboros includes: Arduino microcontrollers, heating elements, DC motors, linear actuators, digital temperature controllers, wiring, IR sensors, shop vacuum, power supplies and various other electronics. The mechanism is fabricated from a variety of materials including: plasma cut steel, machined aluminum, blow formed polycarbonate, electrical wire, HDPE plastic (both extruded and cast), rubber and hardened steel blades.

*This project is being funded in part with support from an Old Gold Summer Fellowship from the University of Iowa.
DANIEL MILLER creates generative forms that use an array of technologies, integrating code and mechanical form to investigate space, ecology and the contemporary landscape. His projects have been investigating various ecologies and our relationship to the environment and landscape. This artwork creates points of access where the viewer can contemplate on their surroundings. Through the use of electronic media Miller is able to explore the multidimensional landscape. With the use of motion, light and sound he is able to activate space and engage the viewer’s senses in a dynamic way.

Incorporating contemporary mechanical & digital technologies allows Daniel Miller’s ideas to interface the physical world in real time. Time is an essential component in his work. Through the use of code he is able to sequence and control timing of events in his artwork. Miller’s artwork reflects the fact that we live in a transitional environment. The machines used in his artwork act as surrogate performers allowing him to investigate durational compositions.

Experimentation is integral to Daniel Miller’s process. He will spend a significant amount of time testing, developing and understanding his subject matter before engaging in the physical creation of artwork. Miller has an ongoing investigation of complex relationships that exists in our world. Through his artwork he is able question conventional use of materials and processes. Miller is interested in the parallels that can be drawn between mechanical systems and the natural world.
“AZ: move and get shot” is a net based piece which shows the natural, animal and human flows in the landscape of the U.S. / Mexico border in the state of Arizona, through the eyes of six autonomous surveillance cameras.

These cameras are part of an online platform created by a group of landowners with properties in the U.S. border. The platform shows the images of six surveillance cameras located in the border territory. The main purpose of this community is to provide the public with raw images of immigrants crossing the border illegally through their lands. Each camera incorporates a motion sensor which triggers the capturing of images when detecting the slightest vibration of the landscape. Then, these pictures are sent to a server and displayed directly on the web page.

While the main goal of the landowners is to capture and disseminate photographs of immigrants en-
tering the United States illegally, the camera is programmed to detect and record any kind of movement. By delegating the surveillance to a machine, the original human intention is lost, and the original purpose takes shape as a collection of images that reveal not only immigrants but all kinds of human, animal and natural activity. Therefore, the monitoring action becomes something uncontrollable and potentially meaningless.

The piece is composed of six independent films automatically made from the images captured by each camera. Every 24 hours, a Bot detects whether there are new pictures. These new images are saved to a local server and added algorithmically right after the last frame of the corresponding video. Thus, the films expand and reveal, day by day, how the animal, the human, the natural and the technological coexist on the Arizona borderland.

**JOANA MOLL**’s practice is a critical exploration of the way post-capitalist narratives affect the alphabetization of machines, humans and ecosystems. Her main research topics include communication technologies and CO2 emissions, virtual civil surveillance on the Internet and language. Moll believes that the actual configuration of technology reinforces cultural dynamics (rituals) that stress disconnectedness. In our contemporary algorithmic decision-making society, ecosystems are being increasingly considered as mere economic externalities. How can we rearticulate our relationship with the world if we are unable to see the actual impact of our actions in the concrete world? What can be the role of media art in the reinforcement of such process? What fundamental shifts need to occur in the sphere of art in order to reveal the connections between actions and consequences, especially when those actions are mediated by technology? Moll believes it is crucial to set the environment as a main political agent within the networked society art discourse and to create mechanisms that might stimulate and re-appropriate subjectivity, an essential process in the generation of critical thought about the true nature of technology, and in the imagination of alternative techno-paradigms which may coherently respond to our environmental and human conditions.
“Extensions of a No-Place (Wen Zhengming)” is a five-channel animation made in response to the Ming dynasty scroll painting ‘Imitating Zhao Bosu’s Latter Ode on the Red Cliff’ as well as the digital animation that is currently presented alongside it at the National Palace Museum (Taipei). I made this work whilst living in Taipei and able to study the painting for an extended period. My animation combines 3D modeling, green screen video and photomontage to recreate Wen Zhengming’s 16th century painting of the Yangtze River. It speculates on the layers of poetry, calligraphy and alcoholic reverie that characterise this particular landscape. My use of digital media drastically alters the visual qualities of the painting in order to highlight the changes that occur...
when an analogue artwork is translated into a digital medium. I also use this as a metaphor for the shifts that occur when studying a painting from outside its historical and cultural context.

Wen Zhengming’s scroll painting ‘Imitating Zhao Bosu’s Latter Ode on the Red Cliff’ refers to the second of two poems written by Song dynasty poet Su Shi (Dongpo). The landscape painting by Wen Zhengming visually illustrates Su Shi’s journey down the Yangtze River, and is punctuated with a similar deployment of cultural metaphors. Wen Zhengming was responding to Song Dynasty painter Zhao Bosu’s painting of the same poem, which introduced the blue and green style of painting to this poem as a symbol for the aesthetics and philosophies of the Tang dynasty. In the transparent brushwork of Wen Zhengming, scholars also trace a reference to Yuan dynasty painter Zhou Mengfu, who was also credited with using archaic painting styles as a means to comment on contemporary culture and politics. From this a cursory description, it is clear that the landscape images within this scroll enact a sort of cultural re-inscription, where the poetry and the paintings are engaged in a process of recreation and reconstruction to form an extended artistic conversation.

My recreation of this same landscape, using 3D modeling and photomontage sought to continue the conversation of re-creation. The underlying perspective for my study of Wen Zhengming’s painting was that landscape images are artificially constructed environments that comprise layers of accumulated symbols, and that to create a landscape is to enact a process of substitution and reconfiguration of those symbols. The five screens of this animation represent one half of the Wen Zhengming scroll, and were modeled by superimposing a digital image of the painting on top of my mesh, as well as by copying the scroll by eye (as painters work from other paintings). The surface of the mesh was covered with a photographic texture of the white ceramic tiles that are characteristic of many East Asian urban environments, such as Taipei and Hong Kong. The white gridded surface also recalls the post-war utopian architects such as Superstudio, and my use of this texture sought to connect the poetic landscape of the scroll to the intellectually conjured landscape of the utopian tradition.
My animated landscape makes a conscious aesthetic shift from Wen Zhengming’s scroll painting and seeks to articulate the levels of mistranslation involved in studying such a historical work. Philosopher and Sinologist Francois Jullien describes the material dependence between the analogue qualities of ink and the spatial indeterminacy of Chinese landscape painting. Jullien translates texts from theorists such as Wang Wei (8th century) and Guo Xi (11th century) to explain the importance of the transparency of ink and the incompleteness of painted forms in revealing the psychological potential of the Chinese landscape. Wang Wei describes forms “as if they were – as if they were not” and Guo Xi writes “if you wish to make the mountain look tall, do not show it in its entirety” to suggest that, according to Jullien, the ability of ink to seamlessly shift between representation and non-representation (or presence and absence), materially realises the philosophy of Chinese landscape painting. The dependence of Chinese literati theory on the phenomenological qualities of ink and brush suggests that the translation of ink and brush works into digital media must have some effect on the meaning system of the image. Since 2011, the National Palace Museum has commissioned a number of digital animations that merge high definition scans of scroll paintings with high quality digitally animated content, which are often displayed alongside the original works in order to communicate their historical and cultural content. Jullien’s argument would suggest that converting the scroll painting into a digital animation must alter the relationship between its material properties as a visual object and its cultural logic. The fluid relationship between foreground and background must become concrete according to the logic of binary code. Having both a mandate to preserve and to educate, the museum successfully employs contemporary technology to present historical works to the public, however by translating a landscape from ink painting to digital animation, it is interesting to now question how the landscape has changed in its spatial and philosophical structure. In 3D modeling the terrain of the Wen Zhengming painting, my gridded surfaces draw attention to the Cartesian environment of 3D animation. The spatial inaccuracy of my recreation highlights the process of translation that we enact when transferring such
works between analogue and digital mediums. Having only studied the English translations of Su Dong Po’s poetry, my comprehension of the symbolic relationship between Wen Zhengming’s painting and its poetic references are similarly distorted. My recreation of Wen Zhengming’s scroll was inspired by my appreciation of the cultural conversation it embodies, and was structurally determined by the media and mediations that characterised my interaction with it.

The performative aspect of this work responds to a more general question associated with landscape painting, something along the lines of “What is a Landscape For?” Wen Zhengming’s landscape re-performed Su Shi’s expressions by painting images of the poet enacting the experiences described in the poem. After creating my own landscape of cultural resampling, my question also became how to inhabit (or ‘animate’) this environment? At the time of making the work, I had set up a makeshift green screen in my apartment, and after hours of modeling and compositing, I would perform actions in the green screen that came to comprise the character of The Lost Man, who inhabits this landscape. I performed various forms of exploration, from spatial wandering, to planting a small garden, and to meeting a second character 啊看 (played by Taiwanese artist Nick Kan). The musical performance of The Lost Man was the final act that completed this extended metaphor of cultural karaoke.

PETER NELSON is an artist from Sydney, Australia. His initial training was in painting and drawing, and he currently works between painting, artist books, animation, and computer games. Over the past six years Nelson has been living between Australia and East Asia, and currently live in Hong Kong.

The common theme throughout Nelson’s work is how histories of landscape imaging can be read as a cultural self-portrait. He researches how the history of Picturesque and Romantic landscape painting symbolises the attitudes that underpinned the colonial era and our transition to an industrial society.
“Control” is an experimental prototype art game that embodies the interface divide between the real and virtual worlds, critically embodying the resolution divide between the real and virtual worlds as mediated through the arcade videogame interface.

It is a self reflexive artefact, a meta game that provides a critical articulation of interface constraints by using the arcade videogame interface to explore its own limitations. These limitations in terms of both the control scheme and the audiovisual aesthetics serve to illustrate the distance in the communicative link between the digital and non-digital.

Controls narrative presents a timeline of controller complexity. This serves not only as a historical reference, but also as a robust challenge for players interfacing through the games deliberately constrained control scheme. The journey through
game controller evolution combined with the high difficulty level encourages increased awareness of and empathy towards the role of accessibility in videogame design.

For most games and interaction design pieces, the aim is to make the user forget that they are connecting to the computer through an interface. In the bid for greatest accessibility, most often with the ulterior goal of maximised sales, the interface link is abstracted to become seamless and invisible.

In Control however, the interface link actually becomes the game, mirrored back to the user by the visual interface through a low bitrate representation of their hand on a physical controller. Control is an art game experience that intends to provoke discussion and reflection on the limitations of the physical interface and the nature of the human computer symbiosis in videogaming.

The game was authored using Stencyl, chosen since its tile based graphics system approximates the constraints encountered by 2d arcade game developers in the 1980s and 1990s.

Pixen and Photoshop were used as the graphics production platforms, with the majority of work done through Pixen, which is purpose designed for aliased, tile and sprite graphics production. Colour cycling animations are used to compensate for the limitations of the chosen colour scheme, a technique commonly used on vintage videogame systems. This technique proves effective as a feedback method when used to visually highlight in-game target areas.

The music for Control was composed using Little Sound DJ / LSDJ which runs on the 1989 Nintendo Game Boy. LSDJ allows access to the Game Boy’s 4 channel sound chip via a tracker based interface (figure x). It was chosen as an era-appropriate sound aesthetic, producing a chiptune sound immediately identifiable with 8bit videogaming. The in-game level theme uses a simple 4 bar, 72 beats per minute loop. There are four variations of the game theme that play in response to the player’s energy level, at 100%, 75%, 50%, and 25% respectively. As the player loses energy, the themes become more frantic, so increasing the sense of urgency.

Gameplay errors are highlighted with a sampled sound taken from the tape loading sequence the ZX Spectrum conversion of Chase HQ running on the
emulator Fuse. Similar to the noise made by a fax machine upon connection, it provides a shrill auditory jolt before progressing to the next stage of gameplay. The open source audio editing application Audacity was used for recording, editing, and sound file conversion and export.

The goal of Control is to successfully click all the interface elements that are highlighted on each level within the set time limit, while negotiating the limitations of the game’s own manual control scheme. It is expected that the player will encounter failure and frustration during gameplay, as with any challenging game.

Control has 10 levels. The first 9 of these are based on existing videogame controllers, while Level 10 is the ‘OctoPad’, an experimental concept prototype. The player must successfully press all the highlighted controls to proceed to the next stage. If the timer or energy level reaches zero then it’s ‘Game Over’!

The player is represented onscreen by a hand avatar, which is controlled using the basic arcade videogame control mechanism of 8 directions and one action button. The five digits of the hand are individually used to press the onscreen game controls. In order to use one of the fingers, the player must hold down the action button along with the appropriate directional controls. For example, the combination of left and action corresponds to the thumb.

The imposed nature of the control restrictions on the virtual hand, and their complexity in relative terms to their real world analogs is intended to encourage increased awareness of the necessity for accessibility in videogame design, while highlighting the divide between the digital and physical worlds.

Control echoes the hand to controller aspect of the videogame interface in the diegetic space of the visual interface through a downsampled meta interface. It makes the game interface the constant point of focus, rather than have it disappear to make way for an unrelated feedback visual. This goes against the notion of the ideal of interface design where an interface should be so intuitive that it for all intents and purposes ‘disappears’. In Control the visual interface will not let you forget that you’re manually interfacing with the computer through a hand to controller link.

By using a low fidelity reproduction of the hand
in the playfield, both visually and in terms of the available control scheme, the game reflects the resolution divide between the analog and digital worlds. In addition to the challenge provided, the increasing button count of the onscreen game controllers is intended to reflect the evolution of game input devices. The final level of Control confronts the user with the speculative ‘OctoPad’ prototype game controller that exaggerates the complexity of existing devices. The progress a player makes through the game levels is a measure of their own patience and ability to play within a constrained control scheme and increasingly more difficult level layout.

KIERAN NOLAN’s art based research explores the collision of videogame aesthetics, new media art, and interaction design. In particular he is interested in how the arcade videogame interface can act as a self-reflexive art object through a series of experiential artefacts. This body of work frames the arcade videogame as both a platform and genre, investigating the aesthetics, materiality, and connective properties of its interface through a bridging of technical, historic, and creative inquiry.

The view of the arcade videogame interface explored encompasses a holistic perspective reaching beyond the communicative link of the audio-visual feedback and input controls. This expanded view includes the physical and internal form of the arcade hardware, while also considering the interface as defined by environment and user context.

A critical element of reflective understanding into the materials engaged with through the practice based dimension of this study is gained from working in media constraints equivalent or approximate to those faced by arcade game creators in the 1980s and 1990s. These production methods are augmented with emergent technologies where appropriate, with the aim of realising alternate critical reflective paths for arcade interface evolution.

The resultant body of work is intended to contribute to academic discourse and understanding of the arcade videogame interface as a common thread linking the worlds of new media art, interface design, game studies, and indie-game development.
“Terrainor” is a live performance work that uses the practices of field recording and site listening to provide both raw sound and video material and a structure for the composition built from them. The project is a form of expanded phonography that uses concepts of soundscape to structure readings of landscape. In it specific sites are documented on both micro and macro scales, and use the local acoustic conditions to guide the process of sonic mapping. This approach results in recordings that are not traditionally representational, but instead reflect the experience of moving into the sites’ geographies in ways that are idiosyncratic and reference the social and experiential definitions of site as much as physical ones.

In performance the field recordings are processed and spatialized through a multi-channel sound system accompanied by a single channel of video. The material cycles through a number of scenes each of which provides a distinct and particular method of navigation through it. The structure and pacing of the material is designed to encourage a sustained and focused experience, one that clearly demarcates the shifting representations of audio and video in each scene.
ED OSBORN's focus in electronic media pieces is on materials and content that are not new, but rather are based on phenomena that have been around for some time: kinetics, feedback, mechanical instability, perceptions of physical space. Osborn’s work explores these kinds of conditions and materials rather than to serve as a response strategy for the newest technological developments. The audio and video material in Terrainor cycles through scenes that combine processed audio recordings with slowly evolving video imagery. Like much of his work, the structure and pacing is designed to encourage a sustained, immersive, and contemplative experience.
“Electromagnetic Spectrum Research”. Sound in Nature is a vast field of exploration, from underwater sounds to stratospheric electromagnetic storm interferences, we do find some amazing beautiful vibrational resonances out there. For Almost 10 years now, we’ve been exploring these “inaudible sounds” recording with scientific devices such as VLF (very low frequency) antenna, hydrophones, ultrasound devices, EMF (electromagnetic frequency) machines, piezos and various others types of microphones. In our exploration of stratospheric electromagnetic storms we often came across interference, frequencies that should be avoided for this type of exploration - manmade electricity that generates a recognisable hum at around 50/60hz. In 2012, we decided
to explore this humming by approaching huge electrical pylons with our VLF device, not only did we want to record the electricity but to record at close range!

This interest leads us to record under pylons crossing farmlands and mountains where we could manipulate the device directly under the electrical cable. Beyond the classical annoying hum, others layers of sound developed, which could be considered artefacts and we could hear slight movement within the frequencies with regularity, as if the electricity were somehow containing its own chanson.

Listening back to these recordings without using any manipulation of any kind in the studio, we discovered a musical complexity, a certain beauty in its horror, touching the very deep and subconscious listening to our everyday environment. These sounds contribute to new ideas that occur in contemporary electronic music during the last 100 years, the very elements that we are usually trying to reject or evict from our recording surprisingly compose the most beautiful structures of ourselves, an amazing audio world hidden in our wasted energy.

In order to generate an EM field, you must simultaneously produce:

1. an electric field, out of electric charges
2. a magnetic field, by displacing these electric charges

EM waves come out of the combination of these two fields. In other words, an EM wave is a periodic variation of an electric and magnetic field. Such a wave can be absorbed by a dipole (a type of antenna) moment receptor. Submitted to a sinusoidal or oscillation attraction, a dipole will turn or vibrate. With higher energies however, the connection might get severed. For instance, if we are dealing with an aerial, we choose to install a loop that will produce this dipole moment. When you test the aerial, you find out that you can detect waves via two poles and pick up the outcome from two different angles, but this reception may possibly be better from only one of the two. This is the electromagnetic phenomena, it cre-
ates two phases that could create attraction if you place a magnet in the middle. Beyond this physical inference, there is a reality that can be uncovered by its use in our dérives: the vibration of EM waves and a resulting electromagnetic spectrum can be translated into the waves of a sonic vibration - a small electrically powered amplifier will make these vibrations audible. The dérive then becomes a listening walk - listening to the EM spectrum - and the city is perceived as a bottomless pit full of frequencies and noises generated by a multitude of electrical machines and apparatuses. A soundscape is created in fact by any device that runs somehow on electricity and will find itself in the midst of an EM field and become part of this listening experience.

Audio-geographical dérives and EM listening raise sensory perception to a poetic level inasmuch as the listener can potentially become active, in terms of transposition and sensation, motion and inversion. The listener re-creates for himself the blurred connection between the form: where the sounds are coming from and the physicality of these sounds themselves. In our view, transmitting the technique of capturing/recording, and understanding the related phenomenon, are both essential; even if we just want to think in terms of exploration, our approach to this is different from Christina Kubisch’s work: in that she decides on the option of listening through a couple of earphones connected with a copper coil that amplifies the signal sent to a specific listener, while we broadcast to an ‘outside’, not just one person. Still, her work is captivating, but also poetic and sensory, since she also uses wandering and dérive as uncategorised means to capture the sounds of our environment.

This research has to be considered in relation to another kind of writing: that of the invisible book of EM waves on urban space and machinic architecture. Writing that incorporates fixed signifiers and poetry, where those signs are both static and valuable, meaning is inscribed through a multitude of senses. Urban space and architectures form the pages of
this book that may at once be read as it is written. The movement of the dérive becomes a pen, a writing tool, EM waves – the ink as they put form to the writing. The EM spectrum/spectre (ghost or range) is both a script and a combination of signals that makes sense in audible terms, as well as in terms of machinery, an invisible machinic script that can be decrypted when focused upon with some kind of magnifying glass or a translation machine for a language that remains obscure. The city then becomes an open book where we can compose our own reading, as we pass through its streets and find areas with a high density of EM waves. We come across the symbols of a language full of timbres, rhythms and compositions of heterogeneous and diverse melodies. Such a language may be understood in different ways: from the nature of its machinic and mechinist soul that produces a specific audible extension, possibly with a certain musical charm, or deciphering its sense from its context, not to mention by its significant polar resonance of the earth itself. In one of our dérives, we encounter a form of writing that has sprung out of two different sources: the rough script of the event, as we listen to it, and a form of de-location. Listening and creating a context comes out of our past experiences. Yet, we are dealing here with a temporary, a vanishing script... the sound being the transcription, the urban or building space: the page, the EM aerial and the amplifying/magnifying pen: devices that write and read the context. The readers feel roused, whether they be guests, participants or passers by attracted by the movement/action they happen upon.
**JULIEN OTTA VI** is a mediactivist, artist-researcher, composer / musician, poet and tongues destroyer, experimental film maker and anarchitect, founder and member of Apo33 who is involved in research and creative work, combining sound art, real-time video, new technologies and body performances. His practices crosses different fields from technological development to philosophy, theoretical research, biomimetic analysis and experimentation. Since many years he reflects on the relations between experimental practices and collective practices within the creation of autonomous collective groups, putting in question the authorship strategy of the "art ideology".

**JENNY PICKETT**’s practice crosses: sculpture, sound, drawing, video, interactivity and performance. This plurality of mediums garner layers of meaning, she often explores her subject through the influences of sound upon the gaze and visa versa, altering both sonic and visual counterparts, asking the viewer re-think their encounter with the œuvre. Pickett’s pre-occupation lies at the point at which technology (new or ancient) becomes the landscape or the body by accumulating their prior states, our prior norms.
The artwork depicts the picture as a model of reality. The picture as a fact. The camera becomes part of the body. The natural eye sees only what the artificial eye looks at. A poetic portrayal in 5 sequences of an artist drawing a self portrait, pixelated within the virtual space. The mind begins to question everything and breaks down it’s confidence in seeing as a truth. The visible space becomes mental space.

Seeing is a tricky, dangerously-seeming-easy act of constructing a mental image. We interpret what we see. But what do we understand of what we see? My current artwork addresses the issue of ‘seeing things’ and is grounded in a practice-driven examination of methodology and subjective experience within art on issues of perception, embodiment and representation. Normal perception is a kind of blindness. We perceive what we attend to. Perception is
an act we hardly think about - it is a complex experiencing of spatial relations of subject-object within the environment - focusing on faces, on background objects, depth, colour, shadow, light-dark contrast and sound cues for example, all happening within the bottom-up processing of sensory information and top-down effects of learning, memory, expectation and attention.

We interpret what we see. But what do we understand of what we see? Interested volunteers will have the opportunity to put their own perception skills to the test in the art experiment - to sample a selected art image being flashed at the edge of eyesight, to the right or left visual field only and paint/draw what they perceived after a single visual exposure (up to 4 exposures allowed). The technique used is adapted from neuroscience. It is intended to demonstrate our relationship to the world.

“Image is sorcery.”
Jorge Luis Borges
B-face is a project that proposed hide all textual information of the user interface. All readable element will delete for get a layer of information about the organization of the screen. The procedure tries to reveal the different visual aspects of communication, detecting the component layers and highlight the semantic nature of the tool. Proposes an alternative to undress and examine the structure of the interface. Is a resistance attempt to face the daily over-information.

“The context of his work is characterized by the use of tools and procedures, where the technique is formally manifested as practical and as theme of his work. The training acquired during the industrial school is present as application and conceptual axis. He combines different languages, such as video, installation and drawing.

Has focused its research on the relationship between artistic production and production technique. Taking this idea as a starting point, his proposal is developed in two lines:

- Procedures, processes and mechanisms of production.
- Social configuration of technology, intervention and use of tools.”

DIEGO PAONESSA
“Untitled II” builds on modified membraphones developed by Marianthi Papalexandri-Alexandri as main instruments utilizing Pe Lang’s motor-activated devices. The work creates and explores a soundscape of mechanical-produced long sustained sounds and textures with organic character and without any post processing.

“Untitled V” is a kinetic sound sculpture that consists of miniature speakers acoustically activated by a motor driven mechanism, centered upon a frictional mechanical construction.

In their works, both artists combine mathematics, physics and poetry, making us wonder at what we see and hear, while reminding us that the world is full of surprising and beautiful things that are ultimately explained but never completely broken down into spoken language.
MARIANTHI PAPALEXANDRI-ALEXANDRI (b. 1974) is a Greek-born sound artist working in Berlin. She is known internationally for her subtle sound constructions employing few means, which she makes both herself and together with Pe Lang. Her works are in the borderlines of sound art, musical composition, visual objects and performance, and they explore the factors that link these art forms. The world of sound and the visual appearance of the works are in continuous interaction, and they are uncompromisingly precise, pure and economical in their means.

PE LANG is a Swiss-born artist professionally active in Berlin, whose works are moving constructions. He carries on the tradition of constructivist and kinetic art, doing so in a captivating and fascinating manner. Lang’s works apply and take command of the forces of nature and the phenomena of physics: magnetism, friction, gravity and electricity. His reliefs, sculptures and installations combine self-made mechanical systems with wonderfully severe structures. The results are logically surprising, elegant and fascinating works in which each part justifies itself through its relationship with the whole.
ELLEN PEARLMAN
NOOR—A BRAIN OPERA

VC MC 8/F
Interactive immersive brain opera 2016
30’00”
Ellen Pearlman: Director, Videographer;
Saba Arat: Performer; Taras Mashtalir:
Sonic artist; William Wong: Technical
director; Tommy Martinez: Programmer;
Natalia Fedorova: Librettist, David
Leung: Choreographer; Vincent Mak:
Videographer

epmexico.wix.com/ellen_pearlman

“Noor” (which translates as ‘light’ in arabic) is a brain opera that asks, though metaphor, analogy, sound, text, light, movement, brain sensors and audience interaction with an ‘actor’ wearing an emotiv eeg brainwave headset just one simple question – “is there a place in human consciousness where surveillance cannot go?” Noor is an original ‘brain opera’. Though artists have been working with eegs producing musical events since the 1960s and 1970s, this is a full audio visual brain opera. Using an eeg enabled headset, the performer’s emotional states will, at various times, launch digital databanks of video, audio and a libretto while simultaneously displaying the performer’s brainwaves live-time for audience viewing.

Story. Noor is loosely based on the true story of noor inayat khan, a russian born, european raised sufi muslim princess whose father hazrat inayat khan brought sufism to the west. During wwii noor
became a covert wireless operator for British intelligence by parachuting deep inside occupied Vichy ruled France. For a period of three months, Noor (code name “Nora”) was the only communications link transmitting critical information back to the allies. Caught by the Gestapo, who were unable to break her to find out any information about her transmission cell, Noor was shot inside the infamous Dachau prison shortly before the end of the war. Noor will be used as metaphor to work with issues of surveillance, privacy and faith.

Technology. Using an emotiv headset and max/msp, a databank of images, sounds and a libretto is calibrated to launch according to different emotional states of the ‘actor’. Those states and databases are keyed to the following mental states:

1. Relaxation
2. Engagement (attention)
3. Interest (enjoyment)
4. Stress
5. A fifth screen displays the ‘actor’s live-time brainwaves

Interactive Components – A Continuous, Live-Time Feedback Loop. The performer moves through the audience. The audience either stands, or sits depending on the venue. The spoken word libretto based on the life of Noor is heard along with the sonic environment. The performer’s brainwaves are displayed live-time for the audience to see as they interact with the performer, and the story. As the performer’s emotional states change, different videos, audios, and parts of the libretto are triggered on four different screens. This in turn changes the performer’s emotional state, which changes the mood and responses of the audience. Only the screen displaying the performer’s brainwaves will be active all the time. The other four emotional states will cause the displayed images and sound to ebb and flow, depending on the live-time interaction between the audience and the performer. The fifth screen will display the performer’s brainwaves live time.

“Though artists have been experimenting with the human brain since the 1960s and 1970s, new technologies, research and methods about the brain being developed through global government initiatives in the coming decades raises real concerns over
issues of privacy, surveillance, autonomy and consciousness. Do our brainwaves contain the essence of who we are and what we think? In the future how will our personal neurobiological data be used for security identification, thought reeducation, manipulating memory, and personal ‘brain fingerprinting’? If our cognitive process can be monitored and harvested, how do we prepare for this new frontier?

‘Noor (which translates as ‘light’ in Arabic) - A Brain Opera’ uses the true story of Noor Inayat Khan, her faith, capture and murder by the Gestapo during World War II as a metaphor of the theatre of war to the theatre of surveillance in a live-time immersive, interactive performance triggered by brainwaves. Being able to view someone’s brainwaves during the performance serves as metaphor for the perfect storm brewing of potentially invasive and identifiable tools of cognitive analysis. These methods and techniques will potentially track, categorize, manipulate and surveil the human brain. The opera raises, but does not answer a simple question – ‘Is There A Place In Human Consciousness Where Surveillance Cannot Go?’
“Sounding the Future”. We always speak of ‘visions of the future,’ but what if we were to let the audible lead our imaginings? An immersive, audio-driven hypertext, Sounding the Future uses speculative narratives to consider what the future might sound like and how this may manifest as art. These possible fu-
tures are viewed through two filters: the integration of technology and biology resulting in trans- and post-human conditions; and the exploitation of the sonic potentials of the new cities we imagine. Unavoidably, these futures are informed by the ways in which we listen now and in the past, so a third strand comprising theoretical and documentary material weaves past/present practice into future thinking.

Future fictions. Sounding the Future attempts to imagine different scenarios in which sound is the dominant novum, Darko Suvin’s term for the ‘new thing’ or paradigm that renders a future reality curious. Literary science fiction has often dealt with art as a novum. Fed by research into cyber fiction, literary and media theory, science, technology and architectural advancements and travel to the almost future cities of Seoul, Tokyo and Osaka, the resulting narratives of Sounding the Future congregate around two themes: the Future Human and the Future City. These scenarios are near-future suppositions in which sound is used as a lever to pry open situations that reflect on how we might ‘be’ when current conditions reach their ultimate state of development or decline. This speculation touches on issues including technological determinism; transhumanism and transcendence; individuation versus collectivity; capital-driven environmental destruction; and the powers of noise and silencing.

However ‘Sounding the Future’ doesn’t seek to suppose what the future in general will sound like, rather what art in the future will sound like – art operating as a distillation of civilisation’s desires, fears, virtues and vices. Consequently the scenarios offer more fantastical rather than hard-science fictions: an afterlife as a sonic manifestation; a quantum rift that acts as a sonic drug; a world in which men are unable to understand or make music; noise terrorists hacking a city that sings; and a society with synaptic burnout from audiovisual overload. What binds all the scenarios is something approaching a technostic pursuit of listening as a deeply, although not always positive, transformative act.

Future facts. Fact is often more interesting than fiction, and as William Gibson suggests the future is already here, just unevenly distributed, so in ‘Sounding the Future’ fictional fantasies are matched with the ‘facts’ that prompted them. Comprising over 50 sound/text/video fragments, the visitor is positioned inside a
media-rich, extensively cross-linked hypertext and allowed choice agency. They can follow an idea from fiction to fact and vice versa. The factual material is presented as info-bites covering subjects ranging across subjects such as substrate independent mind upload (SIMU), body augmentation, alternative energy sources, utopian architectures, climate and population projections and quantum sound technologies.

In addition to this, a number of Australian sound and media artists have been interviewed discussing their work in relation to innovation, newness and their attitude to futurity. These are Robin Fox who creates synaesthetic sound and laser performances; Pia van Gelder whose work explores the esoterics of historical media machines; Guy Ben-Ary who has grown an extra mind from his own neurons; Peter Blamey whose sonic practice challenges the notions of consumption and obsolescence; Cat Hope who is seeking new forms of notation; George Poonkin Khut who experiments with sound and biofeedback; and Michaela Davies whose experiments with Electrical Muscle Stimulation turn her musicians into cyborgs. Further interview material is compiled into short features in which key ideas raised in the work are discussed, such as ‘Are there any new sounds left to be found?’

It is inevitable that future dreaming reflects our current situation. As Frederic Jameson writes “Science fiction is generally understood as the attempt to imagine unimaginable futures. But its deepest subject may in fact be our own historical present.” In “Sounding the Future”, the integration of current and factual material with that of the future narratives allows the speculative and the real – the future and the present – to interact with and interrogate each other, creating a kind of ficto-critical time machine.

Hypertextural visions. The overarching interrogation is framed by an historical interest in media art theory from the 1990s and early 2000s, where the present and the future collided through the science-fictionality of ‘new’ media art. While much of the art was technologically unable to deliver, the intoxicating glimpse of the future was delivered via its rhetoric. Forming part of this was the hope for hypertext to become the literature of the future, a dream which did not quite come to pass as expected. As both homage and cross-artform experiment, Sounding the Future revisits the world of hypertext
literature, seeking narrative and structural strategies that integrate sound, text and vision. The resulting saturated radiophonic soundpieces, augmented with navigational animations, create an immersive multisensory experience that works with and around 21st century attention deficiencies and multi-media dependencies. Taking inspiration from Deleuze and Guattari’s idea of the plateau, the work consists of fragments – a series of middles – narrative scenarios without beginnings and endings. The intention is that these plateaus offer ‘views’ (sonic views in this case) into the distance – the future and also perhaps the past – experienced via the installation very firmly in the here and now.

**GAIL PRIEST** seeks to engage creatively and critically with the aural realm, the outcomes manifesting as recordings, performances, installations and writings. Materially she concentrates on the voice, the field recording and the word. These materials are manipulated to play out an argument between figuration and abstraction – how much stretching can the ‘figure’ within the material take before it breaks and becomes abstract filaments? Alternatively, what essence or residue of the figure remains in them? Currently Priest is endeavoring to bring her practice as a writer (of sound/media commentary and creative fiction) into a more direct engagement with her sound making. She is seeking ficto-critical methods of writing about sound, through sound, as a cohesive creative act. While there is an ever-present danger for the word to dominate, her aim is to encourage modes of resistance, ruptures and renegotiations between sound and text in order to find new perspectives on them as independent and yet intertwined languages. In this recent project, Sounding the Future, Priest uses the lens of futurity, drawing on the structures of hypertext to offer movement, non-linearity and media interaction. The intention is that through contemplating a future world of sound, proposed in words about sound, accompanied by sounds, we may further interrogate our present relationship with the aural realm.
In “Neuro Memento Mori: meditations on death”, digital animations and live action video are projection mapped onto a 3D print of the artist’s head and neck. The 3D printed bust is made from data from scanning, firstly using 3D facial scanning and, secondly, brain data gathered during novel MRI experiments, designed in collaboration with two neuroscientists. In these experiments the artist viewed memento mori paintings and meditated on death in the scanner. The life-sized 3D printed sculptures are dissected to reveal the artist’s brain and ‘make real’ fMRI data gathered during the experiments in the
MRI scanner. Computation is used to produce 3D neuroimages, 3D prints and computer animations that are projection-mapped back onto the 3D object. The artworks, made with neuroscientists, are contemporary memento mori made from data. Carl Sagan’s quote reminds us to remember our small scale in relation to the universe and to live better, more compassionate lives, as a result. Memento mori and vanitas artworks, popular in the seventeenth century had a similar function. They supposedly reminded each viewer of their mortality, prompting them to live better lives. Neuro Memento Mori is inspired by an object in the Wellcome Trust Permanent Collection, “Wax model of a Female head depicting life and death” (Unknown 1701-1800). It shows a woman’s bisected head, the left half apparently a detailed portrait of a living woman, open-eyed, with painted lips and blond hair arranged in ringlets. Her left hand frames her face while the right half of her head is shown in post mortem decay. Resting on her skeletonised right hand, her skull crawls with insects, maggots and worms. A snake emerges from her empty eye socket. This compelling object prompted me to question whether, as we look at memento mori artworks, we do ‘remember, we must die’. What parts of our brain are active when we look at these artworks, and, when we contemplate death directly, without looking at memento mori art? Made in collaboration with neuroscientists Zoran Josipovic (NYU) and Andreas Roepstorff (Aarhus University), I looked at representations of memento mori while in a MRI scanner that records my brain function. Following Josipovic’s instructions, I learned to meditate, to contemplate death, and repeated that meditation in the scanner. Neuroimages were processed to produce 3D data of my brain, to make 3D printed sculptural objects. The form of the life-sized portrait sculpture refers to the Wellcome Trust object, the artist’s head is dissected, revealing the skull and brain. Video and computer animations are then projection-mapped onto the sculpture to create a contemporary memento mori.

Discussions of Big Data have drawn attention to the acquisition and manipulation of personal data, including medical data such as neuroimages which provide huge amounts of quantifiable data, most of which is indeterminate to the non-expert. Scholars of media art and comparative literature have drawn
attention to the collapse of boundaries between information and embodiment and the ways that bodies are co-constituted with data, or emerge with data (Paul 2011, Thacker 2003). It is common for such writing to take either utopian stance, described by Katherine Hayles as the wish, “to be raptured out of the bodies that matter in the lust for information,” (Hayles 2008) or conversely, a dystopian view. This work shows that there are porous boundaries, or entanglements, between nonhuman animal and human, between life and death. It uses the artist’s corporeal data as media for artistic expression to subvert the formation of subjects by Big Data. The work specifically addresses the porous boundaries between life and death, growth and decay.

“Neuro Memento Mori: meditations on death” is one of a series of works made over the last twenty years that emerge through interdisciplinary collaboration. To a greater or lesser extent these works each owe a debt to conversations and insights gained from rich collaborative partnerships with engineers, medical researchers, surgeons and scientists. In this case they key collaborative partners are from the field of neuroscience. The MRI experiments were designed by us as a group and then conducted at Aarhus University, lead by Andreas Roepstorff, who is the Director of the Interacting Minds Centre; his colleague, Joshua Skewes, working closely with the artist on the experiment design. From New York University, Zoran Josipovic developed the meditation experiment design and trained the artist for a year to prepare her for the experiments.

JANE PROPHET is a visual artist and theorist in Hong Kong. Her practice-based research and writing emerges through collaborations with life scientists such as neuroscientists, stem cell researchers, mathematicians and heart surgeons. She works across media and disciplines to produce objects and installations, frequently combining traditional and computational media. Prophet’s papers position art in relation to contemporary debates about new media and mainstream art, feminist technoscience, artificial life and ubiquitous computing. Her research foci include the apparatus of contemporary neuroscience experiments, and blended online/offline identities via augmented reality and ubiquitous computing.
EVELINA RAJCA
E-CONDUCTOR

Audiovisual installation 2013
2 Video Channel – Stereo Sound
7 mins Continuous Loop

Other Credit: Ernst Schering Foundation Berlin

www.rijksakademie.nl/nl/resident/evelina-rajca

“e-conductor” is an artifact of the research project “Anästetiker” (2012–2013) by Evelina Rajca. The title is coined by the terms “anesthetic” and “aesthete”. Within this research project different artifacts show experimentally to what extent the density and aggregate “d” state of matter influences the presumed presence or absence of options for action - they culminate in a complex mixed media room installation or they can be shown separately as audio-visual installations. In this research project Rajca was interested in elaborating different methods in
order to figure out “how we can become aware of substances that we, for example do not sense ‘di-
rectly’ but that affect our well-being”.

“E-conductor” is a two-channel audiovisual instal-
lation, here within the right channel an experiment
with solid carbon dioxide (CO₂) is presented, which
doubles as a compositional sound study. Dry ice is
placed in a sealed - partial vacuum - glass box. A
brass pin inside the box strikes and drills through
the dry ice. The pressure in the box rises due to the
sublimation of dry ice. The needle moves in accord-
ance with the concentration of the gas production.
The sound piece ends with the explosion of the glass
vitrine. Computers, sensors and detectors steer the
process. The other channel shows a snowy landscape
made out of dry ice, inspired by early geoengineer-
ing / weather modification experiments.

Solid carbon dioxide, also known as “dry ice,”
does not naturally occur on earth, but it is an indus-
trial product used, for example, for the cooling of
food. As it changes from solid into gaseous form,
there it develops a gas cushion around the carbon di-
oxide, which, when pressed against a suitable reso-
nating body made of metal, generates extraordinary
vibrations. This results in a variety of sounds – cries,
sighs, calls of delight and of horror – that are based
on different parameters such as volume, surface
structure, and temperature of the materials and
thus can be deliberately modulated by the instru-
mentalist. Depending on its density, carbon dioxide
has different effects: analgesia – anaesthesia –
death. Since the density and aggregate “d” state of a
substance determines its level of toxicity, keywords
and ideas such as irreversibility and fetish are also
of central importance in Evelina Rajca research pro-
cess “Anästhetiker” and plays a role in another arti-
fact within this project: the sound instrument “for-
tune teller” made from antique, radioactive uranium
glass plates. Mrs. Rajcas interdisciplinary projects
convince not least because of their surprising, yet
sensitive interconnection of artistic experiment and
scientific speculation. The work by Evelina Rajca is
distinguished by a combination of high technical
skill with the intelligent use of the symbolic and so-
cial aspects of a particular topic.
EVELINA RAJCA’s artistic research and practice focuses on interdisciplinary areas – namely politics of art and science, legacy of poetry and the durability of matter as research topics into art science and the public sphere. These three areas constitute a coherent cluster of intersecting questions in which the politics of art is attached to questions about agencies and critique of art and science itself, as well as to the transformation of relations and materials. Thus the process of perception, control and autonomy in experimental setups is quite vital. Rajca is interested in the analysis of echoes and murky issues generated by art and technology in particular in the field of perception and the production of imagination. In this sense, she believes that ‘hybrid technologies’ open the way to an approach towards ‘public space’ as a ‘new agora’ in which global and multicultural issues affecting our societies could be discussed. Rajca’s interdisciplinary practice is based in between intuitive embodied knowledge and systems that construct processes of documenting these experiences, translating them into interventions, objects, maps and scores. She is using old and new technologies as working materials in an ever-changing process. Her performance based explorations in the form of collaborations, sculptures and interventions in public space stimulate the question of who can possess time and space, since they are continuously shifting. The hypothesis that the motivation to act is carried out by reward systems and that these systems rely (like almost every system of mammals) on sleep is as important for Rajca’s field studies as the assumption that collective imaginations, dreams, values and fears, as more or less socially unredeemed, are enrolled as forceful imaginary reality in public and private spaces and what is left over of a reformulation of nature and memory.
“Hentai Haiku” is a series of interactive 3D environments, each involving the visitor in a virtual erotic encounter. Like traditional Japanese haiku poems each ‘hentai haiku’ aims to condense a rich sensual impression into a minimalist piece of art with no lengthy narrative: all for the visitor to see and play with is always right there in front of them.

Hentai Haiku are outbursts from the vast realm of imagination that spins around physical sexuality, with themes ranging from common fetishes to outright ridiculous fantasies. Slightly beyond the limits of human anatomy, Hentai Haiku introduces characters of a fictitious human-like race that is all and only about our flesh’s desires, and where your mind may take them to.

Hentai Haiku asks the visitor to assume an active role in each environment by providing the means to interact with scene objects. Like with 3D video games, Hentai Haiku visuals are generated in real-time from 100% synthetic character models, which would come to life as an immediate response.
to the visitor’s actions. Turning the visitor’s curiosity into playful exploration like this allows conveying more complex matters, an advantage well-deserved by an intricate topic like physical sexual communication.

To make this experience easily accessible, Hentai Haiku relies on video game technology and related paradigms for user interface design. Originally published for desktop web-browser via a dedicated website (www.hentaihaiku.com), the project’s current implementation for ISEA 2016 is to explore the more casual user experience of touch-screen devices. The series’ pieces are based on a custom framework for procedural character animation. At its heart sits an AI running a model for sexual stimulation that continuously translates low-level sensory stimulus into higher level perceptions, adjusts internal states (such as arousal), and, based on the latter, generates feedback via multimodal expressive behaviors. Each Haiku now presents an arrangement of requisites, dynamic and static, set up to allow the visitor to physically interact with the virtual character’s body at varying degrees of freedom, where some allow to control limb motion restraints applied to the character, and others allow to cause sensory stimulation more or less directly.

With visitor and character entering into this haptic dialogue (a key component of sexual interaction), physical believability becomes important. Here a second technological cornerstone of this work comes into play: All scene objects that may interact with each other (body parts, bars, clamps, ropes,...) are simulated using a state of the art video game physics engine. Best described as a “fully animated ragdoll”, all character motions are carried out by applying appropriate muscle forces to joints of the doll’s skeleton. Muscle forces depend on various factors, such as determination, verve and fatigue, and will, in combination with obstacles and external forces, determine if and how far body expressions will come about.

The result of this unique combination of techniques is playful exploration on the visitors’ part and continuous believable reactions of the characters’.

Hentai Haiku explores a novel way of arts patronage through a custom crowd-funding model: While the series is published online via its dedicated website, the same site allows inclined patrons...
to have their own alias become part of the artworks they contribute funds to, thereby granting a partial virtual ownership.

Hentai Haiku is work in progress, and populating a wide and barely claimed field of artistic expression as well as technological disciplines pointing into the far future, Hentai Haiku is bound to evolve, with respect to visual and physical quality, artificial intelligence, freedom of user interaction and customization options.

First and foremost however, future Haiku can be expected to explore more surreal spatial and mechanical arrangements, dissolving rigid rules of decency, asking what next is exciting, what is love and what is at all thinkable, in sex.

“The human need for sexual connection and unification is a blessing, a gift that is however little appreciated by societies around the globe. Canonized into highly repressive cultural rule-sets (often based on ancient morals), today sexual needs are widely used as a means to exert power on one another, thus cancelling out love, mutual respect and freedom of expression, while turning this graceful gift into addiction and shame.

But we must celebrate sexuality! We are here to explore, express and implement our bodily desires, and to share them with the ones we love!

‘If sex was food, we’d all be on a bread and water diet. Or pretend to be anyway.’

Hentai Haiku is an excerpt from somewhere between the rapidly evolving worlds of 3D games, anthropomorphic robotics and VR erotica. When beginning to work on the by now published exhibition, back in 2013, I realized that proponents in neither of the aforementioned fields would embark on anything like a fusion anytime soon, for reasons both of technical and marketing challenge. Adult 3D entertainment would regurgitate concepts proven to sell, rely on scripted story to build up erotic energy, and then, for the climax, replay sequences showing short statically key-framed animations, with often rather restrictive camera navigation. Nothing procedural here, despite of obvious advantages. Robotics research on the other hand is all about procedural animation! They have to, because their agents must deal with unforeseen circumstances and surprises. But their grants usually won’t be issued for anything
adult-oriented. Even if erotic limb motions should be some of the easiest things to synthesize: Characters don’t need to stand or walk, just lie down. And then move erratically.

So with Hentai Haiku I explore the possibilities in this interdisciplinary no-man’s land. It is as much an endeavor to raise the bar for physical interaction interfaces in adult video games, as it is a leap into uncharted terrain of surreal sexual dreamscapes.”

LASSE RAUS
"BNC B" is a sculptural network of Bayonet Neill-Concelman (BNC) tee connectors and a two-channel video installation. Serving as a monumental analog video mixer, BNC B is also a statement and metaphor for global connectedness. With its sharp 90 degree angles its structure developed out of the aesthetics of L-systems, a class of generative algorithms that have widely been used in the modelling of plants and recursive processes and are representative for the governance of algorithms and data today.

As a combination of sculpture, installation and video art, BNC B is blurring the genre boundaries of current electronic art. Two DVD players and two small flat screen TVs are connected through video amplifiers to a sculptural network of 400 BNC tee connectors that topologically form a tree. Through their connections, the two video signals are mixed.
reiche

analogically, creating effects of colorful distortion and glitch. The two videos running on the DVD players are video works in their own respect, each between two and four minutes in length, consisting of footage taken from the artist’s video archive: all samples have been taken in public spaces in Brazil (Sao Paulo), Argentina (Buenos Aires), Germany (Berlin) and Poland (Warsaw) between 2013 and 2015, feeding the notion of a space in which meaningful inter-human connections can be established. In direct contrast, the almost surgical but still organic-looking sculpture in the middle of the installation serves as a metaphor not only for global connectedness through electronic circuits in its manifold forms, but also as a metaphor for the (usually invisible) inner wirings of modern day technology. While the complete structure is visible to the spectator, its fractal-like appearance, which could have been the result of a Lindenmayer system generator with 90 degree angles, seems hard to trace. Even though being a completely deterministic system without any method of interaction by the spectator, BNC B produces highly colorful and always changing outputs that are seemingly random, but follow a very well-defined pattern that is only determined by the luma and chroma values of the composite video signals being mixed as well as the alignment of the two signals in the time-dimension.

**MARTIN REICHE** is a media artist living and working in Berlin, Germany, with interest in space, perception, digitization and minimalism. His artistic work addresses issues such as international power networks, religion, changes in the human condition through technology, mass surveillance and electronic and physical warfare. He has created interactive installations, sculptures, video works and experimental computer games for festivals, museums and galleries worldwide.
“Face Value”. Famous surrealist Hans Richter knew about the Dreams That Money Can Buy (1947), yet most of the time, they are not for sale but priceless. Still, money can buy many things and some of those are beyond the realms of reality. Concurrently, banknotes are nothing more than colourful inks and holographics on paper or polymer but have the implicit power attributed to them by mighty institutions and individuals. So the bond between money and dreams is fragile but prevalent since both depend on the powers of imagination.

Concept. The world of finance can be viewed as the domineering force of today, but hardly anyone
appreciates the artistic significance of our curren-
cies or even compares the aesthetic value of the
range of banknotes with dead presidents, dictators,
poets and reigning sovereigns. In continental Europe,
these ruling or otherwise influential heads got re-
placed with soulless generic monuments on account
of the introduction of the common currency Euro.

Unlike to the traditional currencies, the artistic
value of credit cards and electronic wallets is basi-
cally unexplored. The correlation between the mon-
ies and the modes of payment has become a rather
abstract one, estranging the consumer from the val-
ue of his assets and accelerating the capital turnover
speed all for the benefit of maximised profits. Still,
the aesthetic appeal of banknotes from various
countries with different styles, colour schemes and
depicted topics is sovereign. Furthermore, artists en-
hanced the value of bills by treating them as canvas
or interpolating in other ways. Ahead of everyone
else was Hans-Peter Feldman, who increased the
worth more than a thousand times of American one
dollar notes by painting a red clown nose on Wash-
ington’s face – an unlimited edition, but each one
treated individually by the artist’s hand. Through
more effort went street artist Banksy with his Di-
Faced Tenner (2004), a well-elaborated counterfeit
of the British ten-pound note, replacing the picture
of the ruling Queen with her daughter-in-law, the
late Princess Diana. Instead of being handled as ille-
gal tender, the prints signed by Banksy of England
circulated apparently and can today score a fortune
at international auctions. Further to mention is Andy
Warhol’s witticism to reproduce banknotes as
screen-prints on canvas in a number of works – a
technique which provides only little detail compared
to the traditional gravure printing. Although some
eyearly currencies, such as in medieval China, were
multiplied by utilising woodcut printing.

Looking at banknotes as objects, the viewer will
notice that in most cases the design is based on a
small scaled painting and, once engaged in it, the ob-
servation of details may result in a never ending ob-
session. While selecting the faces for my piece on
the international financial market, I discovered
among the many obvious features the eyes of the
personalities as the most captivating detail, and of-
ten articulated with a passion for minutiae. The eye
has often been labelled in literature and, particular
in surrealist art, as a window to our soul; and, as suggested in the bible, 'The light of the body is the eye' (Matthew 6:22). If we look a person in the eyes, we mean to see the truth. Looking at the hugely enlarged eyes of banknotes, the details turn into abstraction, the reduction of colours, the circles and lines almost resemble the works by Bridget Riley or other Op-Art artists. For this reason, I desired to employ the eyes as my subject for a series of artworks, culminating in the body of work Face Value. Hugely enlarged eyes are printed and enhanced with an additional Augmented Reality layer, revealing quotes from experts on finance which connect to the issuing country and the famous person.

How did it start. The work began with my painting EyeIIR (2006) ten years ago, showing a detailed eye from Queen Elisabeth II on an Australian five-dollar note. As a relict of British crown colonies, her face still smiles from many international notes – though engraved in different styles and from different portraits, which I tried to examine and compare. Rather than putting the queen’s eye of a different age on canvas, I commenced a series of magnified photographs of commonwealth currencies. Fascinated by the beauty of the hugely enlarged eyes, I investigated into the subject and in 2014 the first six images for Face Value were completed. The macro photographs were edited, vectorised, about two-hundred times enlarged and printed with a particular Giclée printing technique on Tyvek. In this way, a similarity to the surface feel of the intaglio print of the real banknotes was maintained, although printed on a much more durable material.

Theoretically, a common currency inhabits a wide range of benefits, but among the negative aspects is the lack of national identity as their and nonspecific architecture replaced influential personalities and monuments. What if each country would have kept their individual representations in a common design – mixed up throughout Europe and the whole world, just as it happened with the coins?

In the age of advanced capitalism, everything seems to boil down to a single element, now it is all about money – at least if you look at Scrooge McDuck’s eyeballs. Why do we tend to believe that today’s money is not worth anything in itself, that capital has to be constantly on the move, as if it were on
the run. Perhaps we have lost trust in the potential of money, because we fear the big bubble might finally burst. Since the bills with historical faces or accomplishments were substituted by tiny chips, on plastic cards or soldered next to other chips, the issuing institutions have lost their significance.

In the past not everything was better, but those currencies used to have a value which extended beyond paper, ink and numbers. Since money has no longer a real value like the precious metals which preceded it, the attributed worth relies not on numbers but on trust, on the faith in the issuing institution. At least, this much is for sure, a wide range of numbered editions did then exist. Each bill was individually enumerated in inflationary quantities. Sadly their artistic value could never be fully appreciated – until now – in collector’s repositories, as canvas for artists or as curious necessity when travelling to foreign countries.

With the imminent cash abolition, the connection between labour and value of goods diminishes. Although at the same time, it might bring back the days of barter.

**ELKE REINHUBER** is not your average artist, because she became a specialist on choice, decision making and counterfactual thoughts in media arts. As a decidophobic in her own life, she is dreaming of a life on the Holodeck, where we can simply explore alternative realities. When immersed herself for the first time in the panoramic photographs she had prepared for a 360° environment, she knew that the heydays of flat screens and static photographs on the wall were gone forever – photography was finally not longer constricted by the limitations of the frame. In her work she explores different modes of presentation and strategies of storytelling to emphasise the parallel existence of multiple truths of the here and now. While living and studying in Berlin, Reinhuber came across the federal printing facility where all the German banknotes are manufactured, right down her street. The plant – or rather a concrete fortress – was, and still is, heavily guarded, photography was forbidden around the premises, and sometimes at night the sound of heavy machinery was audible – many factors that spiked her curiosity to investigate into the matters of money.
“Burning Too” is a media façade to be presented on the Run Run Shaw Creative Media Centre at City University of Hong Kong. The main façade of the building (55 x 26 m) will be covered with video projections of fire. Humanity was highly dependent on actual fire for warmth, safety and food preparation during former eras, but fire for most people today is an aesthetic experience that provides feelings of warmth or romanticism. Although our feelings of comfort are likely to diminish when a fire becomes larger and more dangerous, we may still be attracted to it for various psychological reasons.

“When we examine the mechanism of media we are pursuing an understanding of what media are, but when we examine the function of media we be-
come aware of what media are doing. The mechanism of digital media art includes its technology, its content and any other descriptive features associated with it. The function of digital media art may often be difficult to recognize because a common perspective is that art has no function, or because more attention is being directed towards the mechanism of media: to the identity and exhibition history of the artist who created an artwork, to the cost of an artwork, or to the specific manufacturer of an artwork’s technology. I believe the common function of artworks created in any medium—including digital media art—is to promote an entity. Media of all types are essentially used to enhance the worthiness of specific concepts, persons or social institutions, and the specific entities being promoted are determined by the criteria we use for judging media. The history of my interest in the artistic use of digital media began with a focus on the mechanism of media, especially on using digital media to create large interactive installations controlled by live music, body motion or voice. Although I am still interested in the mechanism and artistic potential of digital media technologies, I am now primarily concerned with using these technologies to promote certain concepts. The specific hardware and software tools that I use are important from a practical perspective, but I am mostly interested in creating artworks that are reflective of peculiar human values or that promote positive human behaviors through depictions of certain concepts.”

DON RITTER
“Z” is a moving image analysis system that produces abstract representations of video sequences using a system of predefined grayscale disks. Visually, the disks are characterized by two properties: their radial order (the number of concentric rings) and their frequency or repetition (the number of circular sections). Disks of the same order are shown on the same column and those of the same repetition on the same row. The visual content of each frame in the movie is represented by rotations and brightness changes in the various disks. The video is thus rendered as a sequence of changing configurations of circular shapes. This representation does not correspond to any pre-existing concepts used in film theory and criticism. For instance, it is not the case that one disk represents the amount of camera movement while another represents the camera position or angle. None of the information contained in any
of the disks has a clear interpretation in terms of traditional cinematic categories. Instead, Z proposes an alternative paradigm for the perception, description and analysis of moving images.

An important inspiration for this project is Soviet filmmaker S. M. Eisenstein’s suggestion that cinematic images are akin to musical overtones. [1] An image is for Eisenstein the total sum of many visual overtones. The interest of Eisenstein’s proposal lies in the suggestion that we ought to pay close attention to the subtle and varying micro-events of a moving image stream, but the notion of a visual overtone was not precisely defined and has not been adopted by cinema theorists. Z supplies a mathematical formalization of Eisenstein’s idea, enabling a precise decomposition of an image into local harmonics. For this purpose, Z employs a mathematical framework originally devised by physicist Frits Zernike to describe the aberrations of microscopes, telescopes and other optical systems. The circular shape of the disks evokes the images seen through (e.g.) a microscope. Just as the microscope grants perceptual access to what cannot be seen by the naked eye, so the disks in Z draw attention to the often unnoticed micro-events of a moving image.

Z explores the application of Zernike’s framework to the analysis and synthesis of moving image sequences. The overall visual design of the system constitutes a diagram of the various procedural steps in the computation of the Zernike moments of a moving image, self-reflexively exposing the computational process on which the system depends. The graphical composition expresses the idea of a circuit, starting with the source image displayed in the lower part and ending with its reconstruction in the upper part. This visual approach affirms the aesthetic value of process-based diagrammatic representation in the context of computational art.

Mathematical framework. Every frame in a video is projected onto a finite subset of the Zernike Polynomials. The Zernike Polynomials are complex polynomials defined on the interior of the unit circle and expressed in polar coordinates \((\rho, \theta)\). [2] Before introducing the polynomials, we define the one-dimensional and real-valued radial function \(R(\rho)\):

\[
R_{nm}(\rho) = \sum_{s=0}^{\frac{n-m}{2}} \frac{(-1)^s (n-s)!}{s! \left(\frac{n+m}{2} - s\right)! \left(\frac{n-m}{2} - s\right)!} \rho^{n-2s}
\]
The two-dimensional, complex-valued Zernike polynomials are defined as:

\[ V_{nm}(x, y) = V_{nm}(\rho, \theta) = R_{nm}(\rho)e^{im\theta} \]

where \( n \) (the “order” of the polynomial) is a non-negative integer and \( m \) (the “frequency” or “repetition”) is an integer subject to the constraint that \( n - |m| \) is even and \( |m| < n \):

\[
\int_{x^2+y^2 \leq 1} V_{nm}^*(x, y)V_{pq}(x, y) \, dx \, dy = \frac{\pi}{n+1} \delta_{np} \delta_{mq}
\]

where

\[
\delta_{ab} = \begin{cases} 1 & a = b \\ 0 & \text{otherwise} \end{cases}
\]

The Zernike moment of order \( n \) with repetition \( m \) for image \( f(x, y) \) is:

\[ A_{nm} = \frac{n+1}{\pi} \int_{x^2+y^2 \leq 1} f(x, y) V_{nm}^*(\rho, \theta) \, dx \, dy \]

where \( * \) denotes the complex conjugate. This definition is given for the continuous case. Since a digital image consists of discrete pixels, the integrals have to be replaced by summations:

\[ A_{nm} = \frac{n+1}{\pi} \sum_x \sum_y f[x, y] V_{nm}^*(\rho, \theta), \quad x^2 + y^2 \leq 1 \]

To compute the moments of any given source image, its coordinates must first be mapped onto a square of side length 2 and its origin must be translated to the image center. The calculation of the moments will ignore pixels outside a circle of unit radius centered in the origin.

The contribution of the Zernike moment of order \( n \) with repetition \( m \) to the representation of an image is given by:

\[ A_{nm} V_{nm}(\rho, \theta) \]

The orthogonality of the Zernike polynomials implies that there will be no redundancy in the information contained in moments of different orders and repetitions. The contribution of each moment will be unique and independent of the contributions of other moments. It will capture distinct aspects or “overtones” of the source image.

\( Z \) visualizes the contributions of the various moments as grayscale disks, which represent an analysis or decomposition of the input image. The real
parts of the Zernike contributions are shown on the right side and the imaginary parts on the left. Since both the real and imaginary parts may contain negative values, the numbers must be transformed to the standard grayscale interval [0,255] for visualization purposes. For every specific order \( n \) and repetition \( m \), the maximum and minimum values of the real and imaginary parts of \( w_{nm} = \left( \frac{|A_{nm}|}{m} \right)^\alpha \) obtained, and each real and imaginary part is linearly mapped from \([\text{min}, \text{max}]\) to \([0, 255]\). The resulting grayscale values are then weighted to reflect the relative contribution of that Zernike moment to the reconstruction of the entire image. The weights are given by:

\[
w_{nm} = \left( \frac{|A_{nm}|}{m} \right)^\alpha
\]

where \( |A_{nm}| \) is the magnitude of \( A_{nm} \), \( m \) is the maximum magnitude of all \( A_{nm} \), and the exponent \( \rho \) is a parameter in the interval \([0,1]\). A lower value of \( \rho \) will tend to brighten the disks and a higher value will darken them.

The total contribution of the Zernike moments of order \( n \) is given by:

\[
\sum_m A_{nm} V_{nm}(\rho, \theta)
\]

The source image can in theory be perfectly reconstructed by summing up the contributions of infinitely many moments. Since the computation of an infinite summation is impossible, only an approximate reconstruction is possible up to a finite number of orders and repetitions:

\[
\sum_n \sum_m A_{nm} V_{nm}(\rho, \theta)
\]

The real and imaginary parts of the total contribution of each order are shown on the top right and left of the visualization. The real and imaginary parts of the approximate reconstruction of the source image are shown on the top center.

**HECTOR RODRIGUEZ** is a digital artist and theorist whose work explores the unique possibilities of computational technologies to reconfigure the history and aesthetics of moving images. He currently teaches art and science, game studies, generative art, software art, media art theory, contemporary art, and film history at the School of Creative Media, City University of Hong Kong.
"Matière sensible | Sensitive matter" is a sculpture made of very thin and delicate wood veneer sheet. Here the artists use ash wood. These sheet of wood has distinct sonorous touch zones that follow the natural veins of wood. The researches of Scenocosme have enabled them to develop an artistic and technical process invisible and delicate. A meticulous and invisible design work gives them the ability to define a musical score spread over different areas of the wood. They have invented this process that they call «interactive marquetry».

This wood sculpture produces sounds when the spectators touch them. They use sounds to stimulate haptic and gestural behaviour. Thus, the design of these sculpture looks like instruments which reveal by the touch various kind of sounds.

Since many years, Scenocosme’s artists invent
interactive works through a singular process of hybridizations between natural elements and technology. They create symbolic and sensorial relationships between the body and the environment natural or social. This wood sculpture offers a sensory and intimate relationship between the wood and the body of the viewer by revealing a sound memory in physical contact with the matter. The electrostatic energy of the human body is the trigger for this artwork. Interactive zones follow exactly the veins of wood.

Scenocosme has developed a sensitivity and a unique reactivity of the wood material, thus providing a new sensory interaction in the continuity of their artistic hybridizations between nature and technology. They have developed an original marquetry process with the material wood which is invisible, transparent, and sensitive. This approach follows their intent to create interactive, sensory artworks that enhance extra ordinary relationships with natural elements in which the technology disappears.

As media artists, they explore capacities of technologies in order to draw sensitive relationships through specific stagings where senses are augmented. Their works came from possible hybridizations between the living world and technology which meeting points incite them to invent sensitive and poetic languages. They suggest to sound out, to feel elements of reality which are invisible or to whom we are insensitive.

They use the idea of the cloud as a metaphor of the invisible. Because it has an unpredictable form, it is in indeterminate metamorphosis, and his process escapes to our perception. Various natural and artificial clouds surround us (climatic, biological, energetic or electromagnetic). Through their artworks, they evoke invisible energetic clouds (electrostatic) which follow living beings like unpredictable shadows. Sometimes, these clouds cross together and exchange some information. In a poetic way, they interpret these invisible links through sonorous and visual stagings. Then, when they imagine the energetic clouds of living beings, the limits of the body become permeable, and with their technology, in a way they design extraordinary relationships, between humans, and between humans and environment too. Interactions they offer in their works
make invisible exchanges sensitive. Rather than revealing clearly their complexity, they open everyone’s imagination. Between the reality and our perception, there is always a «blind point» which stimulates the imagination.

When they create interactive works, Scenocosme invent sonorous or/and visual languages. They translate the exchanges between living beings and between the body and its environment. They suggest interrelations where invisible becomes perceptible. Materialized, our sensations are augmented. Through a poetic interpretation of invisible mechanisms, technologies allow them to draw sensory relationships, and to generate unpredictable living interactions. Their hybrid artworks play with their own augmented senses. They live with technology and have reactions which escape deliberately to their control.

SCENOCOSME – under this name Grégory Lasserre and Anaïs met den Ancxt work together. They live in France. Their singular artworks use diverse expressions: interactive installations, visual art, digital art, sound art, collective performances etc.... They explore digital technology in order to find substances of dreams, poetries, sensitivities and delicacies. They overturn various technologies in order to create contemporary artworks and to draw sensitive relationships through specific stagings where senses are augmented. Their works came from possible hybridizations between the living world and technology which meeting points incite them to invent sensitive and poetic languages. Their artistic process is characterized by the introduction of natural elements in their technological art installation, like plants, stones, water, wood, human body. They are also interested by the living bodies and the influences of energy as sources of sensitive interactions like electrostatic energy and heat. They also explore invisible relationships with our environment: they can feel energetic variations of living beings. They design interactive artworks, and choregraphic collective performances, in which spectators share extraordinary sensory experiences.
“The Unuseless Machine for Democracy” was created in response to the Umbrella Movement in Hong Kong: We saw a partial image of the Tiananmen Square Incident on September 28, 2014. The spirit of democracy lives on as the quest for freedom extends to the streets of Hong Kong. Forever reminded of the agonizing loss of 1989, we will continue to uphold the torch of democracy in peace.
“The Most Useless Machine, Ever!” is a renowned project, which gave birth to a philosophically challenging theme in the DIY circle through its contradictory ON/OFF function. By subverting this paradox, “The Unuseless Machine for Democracy” celebrates and supports the relentless spirit of the road to democracy. 35 Unuseless Machines are assembled to form the number “928”. Each Machine has an LED candle that randomly burns out. Once the light goes out, a dove will surface to peck at the candle, lighting it up once again. This cycle goes on forever. The project developed further and a stand-alone version of the Unuseless Machine was created for supporters of the Umbrella Movement to make at DIY workshops. All together 52 Unuseless Machines were created at workshops held in Hong Kong, Taipei and Japan, bringing the total number of machines to 87, which symbolizes the peaceful retaliation of the unarmed Hong Kong protesters against the 87 rounds of tear gas fired.

ERIC SIIU

“Eric Siu’s art has a recognizable face, even when it tries to hide it behind the various gadgets, devices and other interface objects that greet the observer. This face bears a broad and slightly impish smile, almost a grin, much like that of the artist himself. Theoretically speaking, we should not mix these two “faces”, no matter how closely they may resemble one other; however, having met Siu face-to-face, the temptation is great. The technological smile of Siu’s artwork reveals a sophisticated prankster, engaged in what I have termed “the art of the meta-gag”. Allow me to explain. Gags are the little, (mostly) innocent tricks that schoolboys play on their classmates and, occasionally, their teachers. The meta-gag elevates such ephemeral, normally benign, bskyut occasionally cruel pranks into a principle of art, investing them with a kind of “surplus value”. Some of Siu’s meta-gags prove to be light and optimistic, whilst others are darker and more enigmatic.” (Text by Erkki Huhtamo).
REMY SIU 蕭逸南,
VICKY CHOW,
PAUL PAROCZAI
FOXCONN FREQUENCY (NO.2) —
FOR ONE VISIBLY CHINESE PERFORMER

Performance
- Multi-media performance 2015
- 21'00"
- Commissioned by the Western Front (Vancouver, BC), with assistance from the SOCAN Foundation. Special Thanks to DB Boyko and the Western Front Staff.
- REMYSIU.COM
- VICKYCHOW.COM

Foxconn Frequency (no.2) — for one visibly Chinese performer investigates the consequences of disconnecting action and labour from sound. Using the poetry of Xu Lizhi (許立志)—a former Foxconn worker—as a structural blueprint to move through a series of dictations and testings, the piece seeks to create a space for failure and stakes. The most obvious and clear negation is the purposeful disconnection between the musician and her instrument. The use of technology here is meant to disrupt, instead of enable; to create a space of new possibilities through subtraction. For the core of the piece, a system was
devised to “test” the performer’s competency with multiple exercises. This system calls these exercises (or “gestures”) differently every performance, keeping the performer present and engaged throughout the piece. The performer must execute these gestures successfully under shifting parameters that determine overall difficulty before progressing forward. This creates a scenario for the player to fail. While traditional scores have created difficulty, a software-driven system allows for new permutations. The generative and responsive nature of the system subverts any attempt for the performer to prepare. The struggle becomes real and perceptible, a part of the piece as it unfolds. There are many reasons for the restriction of “one visibly Chinese performer.” In music composition, we often specify instruments (e.g. for solo violin), but almost never the body itself. By making this distinction, it is my intention to draw focus to the performer’s identity, to engage the eyes as well as the ears, and to bring attention to the “extra-musical,” shifting the mode of audience perception to multiple modalities. It felt necessary to specify race when confronting the narratives of Foxconn and Xu Lizhi’s poetry, as it is the Chinese body at work. The piano, an iconic Western object, is an equal presence to the body, acting as the main resonator and origin of most sounds. They are separated by physical distance, allowing us to see these two entities as separate, and not together (as in most concert music), and to explore this reconfigured space.

REMY SIU 蕭逸南

In the last two years, my practice has shifted from traditional acoustic music to audio-visual new media work. There are three main reasons for this change:

- My shifting priorities as a composer.
- Collaboration with theatre-makers and choreographers.
- The economics of being an artist in Vancouver, BC.

Much of my work thus far involves dancers, actors, and musicians. However, the financial demands of such works have driven my artistic interests toward the construction of automated and variable performance apparatuses. I want to replace the traditional fixed ‘score’ with variable ‘tasks,’ foregrounding the interaction between system and per-
former. I feel the need to create friction; actions with consequences and failure.

A common question in experimental theatre and dance is: ‘How do we create stakes for the performer?’ I find this is rarely asked in the worlds of contemporary new music and new media / electronic music performance. In an attempt to address this question in my own practice, I am exploring ways to problematize software/hardware interfaces and input/output for performance. The mechanics used in experimental video games have been highly influential. I see these concerns as an extension of my compositional practice and the issues at play in the chamber new music world. My approach is informed by James Saunders and his ‘modular composition’ pieces, Johannes Kreidler and ‘new conceptualism,’ the writings of Harry Lehmann on the digital revolution and new music, and finally, Brian Ferneyhough’s criticality of musician to score interaction and the score-object itself. I look forward to continuing this research in my future works.
“Performing Hypo-Linguistics”. Language is, perhaps, the most ancient mediating technology -- one which, for some, is practically indistinguishable from thought, itself. Furthermore, the advances that humanity has achieved would not have been possible without the efficient means by which language allows us to translate perception into communicable media. For many, it is this reality that makes language our most important, most valuable evolutionary advantage. And yet, language remains an imperfect medium. As a mediating technology, it necessarily prefigures the realm of possibility, molds sense experience into its own logic and remains incapable of allowing us to transcend the alterity of “the other.” As a result, we remain obsessed with the possibility of transcending language as exampled by the popularity of mind-reading, mind-melding, and body swapping in popular media.
Moreover, contemporary neuroscience continues to give us radical and exciting insights into how our brains work, mechanistically as well as systemically. The phenomenon of “mirror neurons” is one such insight. Mirror neurons are neurons which (some scientists believe) drive our ability for empathy by replicating (electrically, at the level of neural impulses) in our own brains the perceived neural activities of another. Marina Abramovic explored this concept in her 2013 project, Mutual Wave Machine, wherein participants were asked to simply look at each other while their brain waves were recorded and displayed. Over time, and likely as a result of our natural mirroring ability, the brainwaves of the individuals would synchronize, mirror each other.

Abramovic is not the only artist to work with brain waves. As consumer grade sensors (such as the Muse™) become increasingly powerful and increasingly affordable, many artists have begun to explore the possibilities of interactivity through the reading of brain wave data. Muse™, like other consumer sensors, uses electroencephalography (EEG) to measure the voltages being passed between neurons in the brain. These voltages fall across five levels, which seem to be associated with various states of brain activities such as alertness or relaxation. These “waves” are referred to using the Greek characters: Alpha, Beta, Gamma, Delta, and Theta. Fluctuations in each of these wave levels reflect electrical activities that are taking place within the brain, indicating cognitive and physiological changes such as a move from meditative to active mental states, as it renders a nebulous insight into the emotional state of a subject. While direct correlations between the activity across these waves has yet to be articulated, the ability to read and track their fluctuations certainly gives us one snapshot, or one way to access the complex workings of our brains. Hence, artists Minka Stoyanova and Lisa Park So Young have elected to use this data to poetically and performatively address the aforementioned problem of linguistic mediation.

Utilizing Muse™ brain sensors with customized sensory deprivation headsets, artists Lisa Park So Young and Minka Stoyanova have created a system through which they can perform subconscious communication. Both artists have written code which translates their individual brain rhythms into visual
animation or auditory soundscape; Lisa, the visual and Minka, the auditory. By wearing a headset which limits her senses to either hearing or to seeing and through which all sensory stimuli from outside the system is blocked, each woman is subjected to a sort of sensory deprivation -- in this way, the only sense she is able to experience is the audio/visual simulation being created by the code of the other. Thus, the viewer (Minka) sees only the video being generated by Lisa’s code while the listener (Lisa) hears only the sound being generated by Minka’s code. As the code responds continuously to streaming brainwave data, the system opens a channel for subconscious and hypo-linguistic brain-to-brain communication.

Performing Hypo-linguistics is a performance using this system wherein the audio-visual communication being generated is broadcast via projection and sound to the viewing audience. Thus, the audience is able to experience the feedback loop in real-time, and in a way that neither performer can experience individually. For the artists, the performance becomes completely subconscious -- a non-performance -- whereas the audience becomes a third-person participant, eavesdropping on the exchange. Additionally, as the audience is able to see the two seated artists, each wearing headsets and facing away from each other, the absence of communication outside of the audio-visual feedback system is continuously reinforced.

While Abramovic’s, Mutual Wave Machine illustrates the way in which individuals, engaged in non-linguistic communication, will harmonize their brain waves and eventually enter into a synchronicity, Performing Hypo-linguistics, illustrates the potential dialogues created by neurons reacting to each other across a field of mediation. Performing Hypo-linguistics hopes to create harmonious discourse as opposed to stable mimicry, highlighting that it is not as much our potential for imitation but for collaborative evolution that distinguishes the homo-sapien. Through the use of technical, audio-visual stimulation, Performing Hypo-linguistics suggests a mode of relation beyond those actions which are natural to the human-as-animal -- such as eye contact or facial expressions.
Is there a potential language below language? ...below consciousness? ...beyond the sign? What are the post/para-human potentials for language beyond linguistic signification, below the level of consciousness? What can the subconscious communicate, and what might such communication look like?

Performing Hypo-linguistics considers these questions through its proposition of a technologically mediated, cyborg communication and collaboration system. In this system, traditional linguistic concepts/objects/materialities are impossible to relay. Furthermore, neither performer can enact conscious control of the system. Thus, each performer must rely on the instinctive reactions of their subconscious state to provide ambiguous, but instantaneous, positive or negative feedback to the other. Hence, the system proposes a communicative feedback loop beyond (and below, more visceral than) the consciously mediated realm of linguistic representation. Neural Science, through the discovery of mirror neurons -- neurons which mimic in our brains the mental state of the other -- allows us to imagine the possibility of a para/hyper-linguistic system that is perpetually engaged, but inaccessible to our conscious minds. As we see in Abramovic’s Mutual Wave Machine, these neurons drive a perpetual process of synchronization. However, they also imply a form of communication -- a constant state information transfer occurring just below our sense-experience. It is this communication that we seek to hijack and to hack. As such, we hope to create a harmonious discourse that reveals our distinctly human potential for collaborative evolution. Performing Hypo-linguistics proposes an alternative enunciation of a pre/post-linguistic signification system that is realizable only through the human-as-cyborg.

MINKA STOYANOVA, LISA PARK SO YOUNG
“A Digital Music Box Ensemble” is a Music Box, which reads a punching card. When the holes of the punching cards flick onto a pin of a rotating wheel, it triggers a sound. Takahashi adapted a so-called “Punched Card Music Box” to a digital device.

The most interesting part of the “Conventional” Punched Card Music box is the possibility by any user, even without any musical education, to easily compose music by making holes into a predefined grid on a card. However, no one has ever tried to add the possibility to modify the tone of sound by which the metal flicks.

In order to fill in that gap, this device can convert the data from user created cards. It simply sends MIDI data via a USB cable to the computer built-in
synthesizer, which play their favorite tones.

The pitch has been assigned to vertical axis of a conventional punching card. The holes on the card can be punched on a position on the Y axis from 1 to 8. These holes correspond to a specific audio channel previously set on a computer. This apparently simple device allows a wide possibility of music composition. It recognizes the instrument channels, the tones and the specific speakers. So the users can compose and experiment with many kind of music, which require a complex setting like an orchestra, or other stereophonic sounds that use multi-speaker system.

A concept of the device. Takahashi created this music box in order to highlight the concept that human handwork and computer digital processing can intercommunicate with the help of a simple device. To explain his work in more detail, Takahashi uses the term “soft generative” to describe a human type of input that generates digital data on a computer. It implicates that human inconsistency can also be part of the process of composition.

Takahashi’s artwork was inspired by the contemporary musician, Conlon Nancarrow (1912-1997), who had a very systematic and interesting way to experiment with micro-durational composition. Takahashi would also describe Nancarrow’s work as “soft generative”. “I completely had no interest in a harmony and a melody.” Nancarrow said himself, therefore he always focused on the rhythm and the tempo of the music from the very beginning. So he used his focus on the “Player Piano” in order to invent music, which was far beyond human instrument skills. The player piano is an instrument just like a regular piano but instead of a human player it uses the input of a perforated roll of paper, which contains the score of a song. It uses the power of the air to activate the piano mechanism. The rolls of paper used by Nancarrow are very similar to the punched cards Takahashi used for his work. Instead of writing a regular musical score book, Nancarrow used a different way to compose. He used piano tones and the complicated relationship between rhythm and tempo to make eccentric rhythm and tempo sonification with great precision. It opened new possibilities for the contemporary music field. The device Takahashi have developed is like Nancarrow’s experiment, which combines complicated rhythm and
tempo. No other device uses the legacy from Nancarrow’s innovative ideas to create a simple way to convert human handwork and digital media.

System overview. Height different digital audio channels correspond to height specific positions on the Y axis of a punch card. For example, a hole on the bottom position of the card will activate the number 1 audio channel in the computer and a hole on the top position of the card will activate the channel number 8. On the X axis (left to right), users can punch holes on a defined grid system. They can use any length they want. After making holes into the card and insert it into the “Digital Music Box”, user can turn the handle to play their music. When a hole of the punch card reaches the switches connected to the micro controller, Arduino, inside of the Music Box reads the position of holes, and converts it to a digital signal. If the micro controller senses a hole, it sends a message “MIDI NOTE ON”, or if there is no hole, it sends the message “MIDI NOTE OFF”. After that it uses the hole position to create a flow of MIDI information and send it to the computer via a USB cable. On the computer, Max/msp and AbletonLive8 use the flow of MIDI information of the device, to produce sounds. The algorithm written in Max/msp, was programmed to harmonize the MIDI signal and send it to 8 audio channels in AbletonLive8. Then, AbletonLive8 assign and play a digital instrument on each specific channel. In addition, the device offers the possibility to change the instrument played. The user can assign each audio channel from 1 to 8 in AbletonLive8 to an electric piano to channel 1, for example. Then assign a drum kit in channel 2 and a bass in channel 3 and so on...

TAKUMA TAKAHASHI  Most of Takahashi’s art works explore the similarity of the human activity and software algorithms, the body movements and digital information. Our human society expects the machines to be stable and infallible even under an overwhelming amount of data, which he perceives as a digital noise. Takahashi sometimes feels beauty of an unexpected error. He feels like the balance between the physical world and the digital world is broken. In the networked age, human beings receive positive and also negative noises through computers and devices. Receiving too much information sometimes has two aspects. Noises that lead “stability”
into “chaos” or “chaos” into “stability”. Then, what happens if a human adds purposely noise into a machine? Takahashi thinks it can be a trigger, which expands the limit of the technology. He believes that the by-product of the error from the intercommunication between human beings and machines can produce new forms of expression, which haven’t been discovered yet.
“WM_EX10 WM_A28 TCM_200DV BK26” is a real-time audio/video noise performance. Sound is generated through short circuits the artist produces with his wet fingers on opened devices. The skin’s resistance and the conductance of the human body combined with the components of the circuits modify the sound. This generated malfunctions are used to let the played devices influence each other, as circuits are getting closed and current flows through the performer’s body from one device to the other. The audio signal which is audible through the speakers is sent to a projector and CRT (cathode ray tube) monitors visualizing the signal in flickering and abstract shapes and lines in black and white. On the one hand there are the obsolete analogue devices such as ‘Walkmans’ and ‘Bontempi’ keyboards, to produce the short circuits - the sounds - and on the other there are the CRT monitors. These as well are rather ancient devices, nowadays only found abandoned in basements, trash places and recycling centers. This performance shows the advantage of the
analog and outdate seaming devices and signals very clearly. The speakers and monitors react organically and show the signals as they are. In contrast to digital devices, which will only display a picture or playback sound if the signal is stable and remains this way for a certain time, so the device decides if the signal is suitable for the user. At this performance unexpected and uncontrollable analogue signals are altered and bent by the artist to an audio/video noise escape. The interaction with the devices is not based on scores or presets and therefore improvised, the performer generates and alters the sound and thus the video by touching the circuits. There is no prior modification of the used devices, no additional computer or extensive audio program is needed to create the distortions. The title of the performance refers to the type designation of the sound-producing devices and changes with the objects used.

**STEFAN TIEFENGRABER**’s works often deal with the destruction and modification of objects through force and at first view it seems destruction may be the main topic. On further inspection one finds, that under the physically violent surface he much more focuses on a slow process of disassembling. The act of taking things apart and deconstructing given structures, becomes a method to figure out the function and malfunction of obviously working systems. Tiefengraber deals with these issues through different mediums, spanning from the digital and social media based work (‘User Generated Server Destruction’, ‘Senseless Tweet’) to the modification of ready-made objects (‘rotating lights’, ‘noise #1’, ‘Analog Delay’) and on to performance works and experimental videos (‘WM_EX10 WM_A28 TCM_200DV BK26’, ‘Radio 433’, ‘a to b’).

On the one hand Stefan encourages the viewer to actively participate in the creation of the artwork. On the other hand he uses video and sound to create static or very slow moving sequences, where there is time and possibility to observe the scene and to dip into the happening or not happening.
“Collimation” is composed of two microscopes watching and recording each other and a three screen projection which visualizes the process of interpretive analysis occurring within the software. The system acts as a rudimentary form of AI, where the visual stimuli is translated, in a performative act of seeing, in the centre image (which is comprised of the two microscope feeds concatenated into one). The resulting data is then transposed first to the image on the left, taking the form of a neuron and is responsive in both emergent growth and behavior. The data chain continues, flowing to the right hand image of a neuron. In a “mirror neuron” scenario, this image is influenced by the actions of the first and independently reacts and generates its own growth patterns and behaviors. The audio created by the apparatus itself, coupled with a composed score is introduced into the system where it too acts upon the behavior and responsivity of the images. The systems behavior is,
in a mimetic sense, reflective of several kinds of processes which operate under acts of translation and analysis. The parsing of information, existing as it does at the very foundations of embodied cognition, is central to our understanding of the bodies, networks and ecosystems in which we exist. In the installation, the visual instantiation of complex notions of being collide with features of surveillance and even further into cartographic renderings of both the microscopic, in the form of neuronal imagery to the macro in terms of alluding to the mapping and visualization of connectivity (through data analytics) within socio-geo-political bodies.

**BRAD TODD**’s current research and work focus on installation and sculptural based explorations of a diverse range of themes which are rooted in an underlying context of philosophical inquiry, embracing natural and synthetic systems, networked and augmented objects and reactive or sensitive spaces. Todd is chiefly interested in the interstices between (“soft”) science (specifically cognition, perception and biology/psychology) and technology and the tenets of conceptual, critical and poetic art making practices.

In an increasingly tech saturated environment, the ubiquity of computing has an unprecedented role in shaping our response to space, object, architecture and the screen. As an artist or designer tasked with both creating and examining these rapid changes, the problematic becomes one of how to use the new material and language this process of near-invasive technology engenders to enact a meaningful dialogue about the promise and peril of a techno-philic culture. The practice of probing our psychological/psychoanalytical relationship to technology is a key factor in Todd’s projects, as is uncovering the latent connections between techne and our biological, social and political selves. In light of this the use of emergent technologies in his work acts as a catalyst for articulating, embodying and critiquing the liminal or somatic characteristics of our reliance on and dialogue with, the tools and techniques of imaging, computation and telepresence.
“Cops and Rubbers”. In many nations globally, sex work is a criminal activity and the active status of the condoms as evidence of prostitution policy allows law enforcement to treat condoms as contraband. Advocacy groups internationally are actively promoting to repeal the condoms as evidence policy and to decriminalize condoms. “Cops and Rubbers” is a web-based narrative game adapted in 2016 from a tabletop game of the same name, which was originally commissioned by Open Society Foundations and which launched at the 2012 International AIDS Conference in Washington, D.C. This serious game serves as an interactive alternative to this report by employing role-playing and interactivity. The game allows citizen voters, law enforcement, and policy-makers alike to connect to the human rights and public health issues of arresting for possession of condoms from the perspective of a sex worker, including increased vulnerability to HIV infection.

In countries around the world police carry out legal and illegal searches of sex workers and confiscate or destroy condoms found in their possession. In many cases, possession of condoms has been used by prosecutors as evidence of prostitution. Treating condoms as contraband forces sex workers to choose between safeguarding their health and avoiding police harassment or arrest.

Would you like to play Cops and Rubbers and see the impact of this policy?

Yes, let’s start playing.

Learn more about the condoms as evidence issue.
Game Background. In 2012, Open Society Foundations (OSF) released Criminalizing Condoms, a report documenting the practice of treating condoms as contraband in six countries – United States, Russia, South Africa, Zimbabwe, Namibia, and Kenya – and identifying their consequences on sex workers’ lives, including abuses to their health and human rights and their vulnerability to HIV. Open Society Foundations also commissioned Cops and Rubbers, a facilitated tabletop game, as a companion to this report.

Gameplay. In this serious game, players take on the role of one of six sex workers, who each have a set of game-end goals: to earn enough money for a personal need and to avoid a sexual transmitted infection. In each round, an outreach worker may provide each player with a condom that he or she must then hide from the police. Players can choose to hide their condom in one of three places that surveyed sex workers reported hiding their condoms: shoes or boots, purse or wallet, or underwear. If a player is caught in possession of a condom by the non-player police character, he or she must suffer the consequence, such as police damaging the condom or police extorting money or sex in exchange for avoiding arrest. All in-game police search narratives are inspired by accounts from real sex workers. Therefore, a related quote from an actual sex worker or a real-world statistic is also shared with the player to reinforce the reality of the in-game narrative. In-game character personas also cover a spectrum in terms of gender identification and sexual orientation to reinforce the reality that this practice of treating condoms as contraband is not isolated to a particular sex work demographic.

Adaptation to Online Platform. The digital adaptation of this game uses Twine, an open-source tool for telling interactive, nonlinear stories, to broaden the reach of this role-playing experience. This online version provides the same narrative as the tabletop experience but adapted for an un-facilitated, single-player online experience. The addition of an online game platform allows for extended advocacy efforts, including dissemination via social media, to increase awareness and ultimately to increase opposition to the practice of using condoms as evidence of prostitution.

Empathy in Games for Social Justice. These in-game character narratives provide players the op-
portunity to role-play, a theoretical concept dating back to G. H. Mead, who defined role-playing as being empathetic toward a character and adopting the character’s point of view. Allowing players to temporarily step into the shoes of a sex worker reduces the influence of stigma, particularly as each character has two key goals that are relatable to a general audience: earning money for their personal needs – such as paying rent, providing for loved ones, or saving for education or medical expenses – and protecting their health.

Role-playing as a sex worker provides the opportunity for players to develop empathy for this typically marginalized community. Preliminary data from a 2014 quasi-experimental study indicates that knowledge gain was statistically equivalent between participants who played Cops and Rubbers compared to participants who read the Criminalizing Condoms report but that game players were more likely to oppose the policy. Thus, the game is an effective advocacy tool that can elicit players’ personal reactions and conclusions regarding these policing practices, including increased intentions to oppose the condoms-as-evidence issue.

LIEN TRAN seeks to use interactivity and (sometimes the absence of) choice to bring meaning and clarity to real-world issues through design and games. Engaging in serious games can lead to an individual’s greater motivation, attention, and therefore understanding. These affordances are a result of people truly connecting to a real-world system through experiential learning and play, reflecting, and ultimately revealing their own truth.
“Déjà Entendu. An Opera Automaton”. The structure of language – musical at its origin – is the source of this installation. Based on texts and melodies originating from operas telling the Faust myth (the epic of human curiosity and desire), the installation explores the underlying contour of language. The work is made of industrial objects. 102 screens and speakers creating an emergent space, arranged in repetitive patterns. Blowing up the virtual into space. Phrases and melodies of the vocalists are constantly reproduced using machine learning software. Powerful algorithms, which transform the way we act and think, omnipresent in our society and in permanent interaction with us. A new version of Faust is created, fragmented and with varying degrees of legibility, recreated in light and sound movements.
is a game with the boundaries of perception. The point where language loses its meaning and becomes abstract. Language which is pushed to its limits, where nothing is left but pure rhythmic and melodic structure. It is the organic nature of language, imitated by a machine. This reveals the proper poetics – in all its absurdity – of the digital.

There are two questions at the foundation of this project: Language has evolved from something bound to a materialized object, like the book, to something virtual. It is becoming flexible, alterable, ductile. It is organized by digital machines, which allow us to interpret it in a new way. Our knowledge is regenerated by these machines, which enable us to understand the vast extent of human substance anew. The second question of the project: Our world is full of technical objects conducting us. Displays, images and sounds construct our urban environment. It is crucial for the understanding of our society to understand the nature of these objects and their messages. By the means of alienating their primary functions, their potentials can be explored.

We cut a swath through this tangled world. A straight line loophole for all intents and purposes and a far view over this jungle that only appeared to be intangible, multidimensional, but that we knew would turn out to be flat (once we flattened it). And rasterized. Composed of precisely arranged concrete districts, subdivided by straight tarmaced lines and seemingly sleek concrete walls. With sticky city traffic stuttering between blocks and buildings, a disintegrated flow or stream – transport systems, water systems, communication or media networks, power networks, financial systems, the world wide web... diverse movements that divide and connect people. As we start listening to its rhythms, as we observe its structures, bodies, vibrations, resonances,
its sound, we discover that the city is full of hidden potentials.

Still, it is not the ever-advancing, hyper-engineered, super efficient vision of what is to come. But the idea of advancing in all directions: This future is an ocean and we are navigating on it now. Going nowhere and yet getting everywhere — in circles — or is it spirals? Complex systems and network processes, self-made code and circuits, hacked tools, misused instruments and objects of mass consumption have become crucial components of Truniger’s work. He is engaging in different notions of language, visual and acoustic potentials of algorithmic processes and their ability for an apparently organic behavior. He implements these formal ideas in sculptural objects, multimedia installations, musical performances and instruments as well as compositions.

LUKAS TRUNIGER
“The Porcine Dilemma”. In China’s Zhejiang province in early spring of 2013 dead pigs began appearing in multitudes on the Huangpu River, which supplies drinking water to Shanghai’s 26 million residents. When the count was finally complete, over 16,000 were hauled from the water. Speculations arose about the unchecked productivity of pig farming indicating excessive supply despite increased demand (estimated at over half the world’s pork consumption) and the dispatching of pigs as a desperate strategy to maintain market values. Meanwhile, the polluted water that flows into the city’s taps can only be matched by the toxic visions promulgated by apocalyptic evangelicals in America.

This work is part of the “Repurposed Web Reports” Series, a series of “reports” composed entirely of media collected from the Internet. Using the web as an investigative archive, these works mine the margins of the public sphere for vicarious insights into the contemporary state of humanity. Each work is prompted by a Google search, with the results creating the parameters of information and research as well as the dynamic media (image and sound) to be
used as source material. Typically the subjects or events are at the margins of Western media representation and the content is often generated by non-professionals - amateurs, tourists, and other on site witnesses using portable personal recording devices but in some instances it is either mixed with reports from conventional media outlets or originates from them singularly. Through editing, dialectic audio and sound juxtaposition, lo-fi video and glitch EFX, and text interplay, I then recast and remix this material to better illuminate and critique the deeper meanings and insights that can be generated. This approach is akin to the Situationist’s strategy of détournement – a form of appropriation where the materials are altered and subverted so that rather than supporting the status quo, their meaning becomes altered in order to put across a more radical or oppositional message.

PAUL TURANO’s creative work investigates the complex relationship we have with our environment–our human ecology–in both local and global ways. Not unlike the fine arts approach of painters or photographers, he often works in series organized by specific media forms, shared themes, and commonality of content. For his work with video appropriation, he uses digitally compressed lo-fi imagery sourced from the Internet – the archival repository of the global village, as well as digital remix and glitch strategies. Turano picks events that are at the margins of the public sphere, yet speaks to the more universal conditions of our times. These images are often shot by everyday people and posted via crowd sharing sites, as an alternative to the mass media, another more crowd-sourced and democratized way to tell the “story”. Recasting this source material in Turano’s work allows him to examine the implications of these events more carefully, excavate their hidden meanings, to see what makes them tick. They are a form of subjective and subversive reportage. The series focuses on the brutality of state violence, environmental degradation and destruction, the fantasy of escape, Armageddon and fears of the end. They are a register of things gone awry.
“Rain and sea.” The viewer becomes involved in the art through the contemplation of empty space: a reflection based on the Japanese concept of “Ma”, where the gap or pause between two forms allows for intensification of vision and awareness. Introspection and open interpretation are encouraged. The monochrome images of air and water, sky and ocean explore positive and negative spaces, representing Yin and Yang: the interdependent and complementary notions of Asian philosophy that figure overall balance and harmony.
CEDRIC VAN EENO is an artist, musician, filmmaker and professor. He is affiliated with SciArt Center of New York City, Manhattan Graphics Center, Brooklyn Arts Council and the Artists Rights Society New York.
THE CAPTCHA PROJECT

Installation of 34 paintings 2014
- Oil on canvas

This project was made possible thanks to Shenzen Dafen and Deco Co., LTD and DafenVillageOnline
- www.emiliovavarella.com

“The Captcha Project” aims to highlight the undefined boundaries between humans and machines, originals and copies. The project started as a reflection on immaterial labour and artistic practice in a neoliberal network society and takes the form of a series of paintings created by Chinese painters from the village of Dafen. Despite the fact that their work consists of a mechanical reproduction of preexisting images for the Western market, Dafen painters consider themselves artists and value their work. I signed an agreement with them, splitting the costs and profits of this project in half and sent them screenshots of CAPTCHA codes, which they transformed into precise oil reproductions. CAPTCHA (Completely Automated Public Turing test to Tell Computers and Humans Apart) codes aim to obstruct criminals and companies whose goal is to use online services en masse, using bots and automated pro-
cesses. They are easy for humans to decipher, but impossible for bots. However, it is possible to replace bots with human workers in poor countries, who manually solve thousands of tests every day. These people are required to perform a mechanic type of work that a bot is unable to perform. CAPTCHA was invented partially to distinguish humans from machines, but its effect is the partial transformation of other humans into machines. At the same time, artistic production is shifting. In 2004, Dafen Oil Paintings Village, with its 5000 artists mainly involved in creating accurate reproductions of Western masterpieces for the Western market, was officially declared a “Chinese Cultural Industry Model Base.”

EMILIO VAVARELLA’s methodology presents a combination of four different but interconnected lines of research: using new technologies with alternative (non-productive, poetic, dysfunctional) goals in mind; imagining technology’s future effects through the use of speculative fiction; misusing technology to reveal and highlight its hidden mechanisms; and de-contextualizing technology to gain new perspectives and insights. His work is based on interdisciplinarity and is not limited to any particular media but instead uses a flexible approach that allows for the creation of art projects in different (online, offline, collaborative, interactive) ways and embraces multiple techniques and media simultaneously. In Vavarella’s current research, ample space for theory exists as part of his interdisciplinary approach, making theory an integral part of the process. But he is not interested in the construction of any theory a priori but rather he builds theories through experiments and self-reflection. Vavarella’s projects include both collaborative and collective efforts, employing a methodology that aims to be always open and never definitive. One of the most important goals of this open methodology is to balance online and offline activities, abstract thinking and tangible results. Additionally, a methodology that is open will produce fragmented and dynamic art projects, the process of which can be seen as an ever-changing final product that mediates its relationship with the public and disrupts the conception of art as mere commodity.
“Homes”. The exhibited installation through the means of photography and new media, presents the living space of the fishing village Tai O, with snapshots produced both with traditional techniques and with virtual three-dimensional technology. The photos and 3D virtual interiors on view here are the results of the research project, “Using digital visualisation to preserve local cultural heritage: a case study of Tai Ping Street, Tai O” GRF (General Research Fund). The work was supported by Drs Richard Charles & Esther Yewpick Lee Charitable Foundation and the City University of Hong Kong.
The interactive installation in view presents individual details of the interiors of family houses in Tai O. With the interface connected to the installation, the viewer can look around the interiors and examine the details of the furnishings and household objects up close. The appearance of the interiors, in accordance with the possibilities and limitations of digital technology, is precise and rich in detail. The home interiors presented in the installation are virtual reproductions of the real ones. These virtual 3D objects were realised on the basis of photos. Once they selected the suitable houses and came to an agreement with the homeowners, the artists took several hundred photos of the interiors, and wherever possible, of each object from many angles. There is a selection of these photos on view alongside the installation, as small prints.

There is also a large print behind the computer screen. It shows the part of the village where the house is located. The photos were indispensable in the production of the installations in a number of ways. With the application of photogrammetry technology, the computer is capable of automatically calculating a three-dimensional model on the basis of the photos taken from many angles. While this model could be extremely beautiful and rich in detail, unfortunately, it could not be used in the interactive installation. It was composed of too many details and became overly complicated. It was mainly effective in determining the precise position and dimensions of the objects.

The final models can be realised with either the reconstruction, simplification and paring down of the photogrammetry models, or to design them on the basis of the photos with handiwork. This is an extremely time-consuming, complex work that demands special knowledge. This work added up to a large portion of the time of the artists working in the project.

The artists cover the surface of the models with details taken from the original photos. This texture mapping procedure renders the virtual 3D object true to life. Thus, we might say that the final installation is, in fact, a three-dimensional photo-collage, placing the details cut out from the original photos into the three-dimensional space, in accordance with the dimensions and position of the real objects.
“Hong Kong is an extremely rapidly changing city. The old buildings quickly vanish, and with them, so do lifestyles. By the fact that the artists participating in the project attempted to document these spaces with as much detail as possible, and tried to model these objects as precisely as possible, with time-consuming precise work, the visual representation of these spaces will become a part of the material of a general knowledge, and they will be able to live on, and even constitute the basis for further research.

The technology employed in this project is not new. Many heritage projects use similar software and hardware. This project perhaps differs from the familiar similar projects in two respects. The first is that I have intentionally tried to use inexpensive technology that is accessible to everyone: for instance, open source software, typical cameras. The second is that while most similar projects present historically important and well-known buildings or locations, this project would like to introduce an everyday lifestyle of people living contemporaneously with us.

This work, then, is not a submission for a memorial, but a documentary endeavour. Just as the documentary filmmaker tries with her/his camera to present the lives of people, and just as, in the interest of this, s/he leaves out certain details and emphasises others, and in general tries with the devices of film to give as precise as possible a picture of the subject, in the same way I, in my own way as a new media artist, with my own special devices, and with the techniques and aesthetics that are suited to it, attempt to represent as precisely as possible the reality that I have selected and observed.” TAMAS WALICZKY
ANDREAS WEIXLER
SE-LIEN CHUANG
THE COLOURS OF A WOODEN FLUTE
(VERSION ISEA 2016 HONG KONG)

Performance
- Audiovisual realtime improvisation 2016
- 12’00”
Support by the Federal Chancellery of Austria

“The Colours of A Wooden Flute (version ISEA 2016 Hongkong)”. Fragments of memories (produced both by human beings and by computer) generate a synthesis of sounds and visuals. The sounds of live instruments serve as interface in an audiovisually interactive concert that merges a sophisticated instrumental sound and realtime computing in an amazing improvisation. While visual images and processes are being generated during the concert, a multi channel granular synthesis, spectral delays and virtuoso chances fit together minute tonal par-
articles that make up the instrumental sounds into a constantly changing acoustic stream made up of different pitches, durations and positions in the electro-acoustic space. The musical and visual components interact and reciprocally influence each other in order to blend into a unique, synaesthetic, improvisational work of art.

Improvised instrumental music and audiovisual realtime processes interact and reciprocally influence each other in order to blend into a unique work of art of realtime composition. While visual images and processes interact with the music during the concert, a multi channel granular synthesis and a multichannel spectral delay generate a spatialization of frequency oriented delays, pulses and feedbacks which sometimes sum up to an even reverberating ambience and fit together minute tonal particles that make up the instrumental sounds into a constantly changing acoustic stream made up of different pitches, durations and positions in the electro-acoustic space. Our art work and research describes the hook-up between human and machine, between musical inspiration and digital concepts. Musical instruments act as interfaces for digital audio processing and enable human beings to communicate with digital technologies as well as to generate, receive and exchange data versus emotions.

Nowadays, as different forms of machine musicianship, are blooming where computer act like virtuoso musical instruments we are focusing on a very specialized form of realtime performance with a computer system virtuoso audiovisual interaction with musical instruments. Every performance of our interactive audiovisual works, even of the same title, is unique not only because of the inherent concept of improvisation, but also because the computer system and the programming are further developed for every event. The realtime processes of an audiovisual interactive computer system collude with a free artists musical expression. Our art work and research describes the hook-up between human and machine, between musical inspiration and digital concepts.

ANDREAS WEIXLER, SE-LIEN CHUANG
Talk with Your Hands Like an Ellis Island Mutt” uses new media tools to explore cultural identity in a way that analog tools would not permit, suggesting that identity is the result of multiple lifelong collisions between elements of personality that we have inherited with or without knowing it. Designed for performative screening or interactive exhibition and built in the Korsakow cinema database system, HandMutt embodies my experience as a second-generation American whose ancestors came through Ellis Island from Europe (Poland, Hungary, and Scotland between 1907 and 1914), and whose identity is formed by a multi-generational assimilation process that often feels perpetual. With three of my four grandparents being born outside the US in non-English speaking environments (and the fourth born here not long after his own parents arrived), I have been aware of my own otherness all my life, particularly in regard to my working class and Eastern European heritage.
Part of the expression of that heritage is talking with one’s hands—a habit attributed in America almost exclusively to working class immigrants and their descendants. (One expected result of successful assimilation is the loss of this habit, which I did not achieve.) The idea for HandMutt came during the editing process for my digital lyric memoir daddylabyrinth, which premiered at the International Conference on Interactive Digital Storytelling in 2014 at the ArtScience Museum of Singapore. In its video footage I found many hand gestures that led me to reflect on my own heritage and on the multigenerational assimilation process of American immigrants. This resulted in the birth of HandMutt as a separate project. The technology-enabled fragmentation of story, image, and consciousness in HandMutt reflects the fragmentation of cultural identity itself, which is often so dispersed in our lives that we can scarcely identify it. The work generates a nuanced, intimate understanding of the immigration and assimilation experience that would not be possible with traditional monolinear narrative and noninteractive media.

Talk with Your Hands Like an Ellis Island Mutt is made of interlocking fragments. It consists of 157 short clips (most 8-12 seconds in length) including altered images of my own hand gestures, archived records and objects of my immigrant ancestors, and archival footage of newcomers arriving at Ellis Island—through which the majority of European immigrants passed as America’s population exploded between 1890 and 1920. It offers multiple unique playthroughs in an order determined both by actor choice and the computational operation of its database. The video clips in HandMutt come from four distinct sources, and each is paired with short voice-over commentary by me. The largest group is a set of sixty-four of my hand gestures harvested from the video selfies in my digital work daddylabyrinth. Each of these gestures is isolated from its communicative context and broken down into micromotions—often only a few frames in length—that are repeated, reversed, and subjected to manipulations in frame rate using Final Cut Pro X editing software. This visual idea is an homage to my film mentor Ken Jacobs, whose performative Nervous System films of the 1980s and 90s created a similar “stutter” effect (one that we now see all around us, in
altered form, thanks to GIF culture).

The second group of clips I worked with was harvested from public domain archival footage of immigrants arriving at Ellis Island in 1903 and 1906, which are subject to the same Ken Jacobs-esque manipulations. I left these untouched in terms of color to keep the historical record of immigration as cleanly represented as possible. These images, which were shot with a primitive stationary camera, are blown up to capture the micro-dramas embedded within the larger frame—a squabbling couple, a frightened child, an old woman uncertain of the life ahead of her. HandMutt also includes clips of tangible family relics and photographs from my maternal and paternal families. I have few possessions from either side, and many have achieved near-iconographic status for me no matter how simple or utilitarian they are. The final group is simple text animations of keywords that are used in the Korsakow database that resonated with themes which emerged from the other three categories of clips. These represent the emotions and psycho-social forces that have shaped my relationship with my ancestry. The overall result of these multiple strands in conversation with one another is that of many stories weaving together to form a narrative experience without the benefit of Aristotelian coherence—a mosaic portrait of American assimilation and its multi-generational challenges.

Interactors can experience HandMutt via installation or web browser. They navigate through a series of brief clips, choosing the next one from a set of thumbnail images that appear at the end of each—all representing other nodes in the video database. The short length of the clips forces interactors into an active viewing mode in which they must make frequent choices about which clip to watch next without knowing how that choice will alter their movement through the material. Choosing a given thumbnail affects the next set of choices, but does not set the interactor on a “path,” as there are no predetermined navigations in the work. Instead, the next set of clips is determined by the keywords used to describe the one that has just played; while the number of variations is by no means infinite, the computational operation of the Korsakow database makes it extremely difficult to replicate the same navigation twice. The project is designed so that in-
interactors—or the author in a performative screening—can navigate it in approximately half an hour.

STEVEN WINGATE came to the electronic arts in mid-career as an evolution of his training and work in literature and film—particularly the experimental traditions of both. Because of this twin background he has always been invested in hybrid genre work and invented forms, and his written output leans heavily in that direction.

It was not until this decade that Wingate turned toward digital expression, to which he was drawn because it offers vastly more powerful tools than print and film alone in terms of managing multiple perspectives and combinations of narrative elements. The most important aspect of digital arts to him is the ability to develop stories that are not pre-arranged into traditional Aristotelian act structures. Wingate is interested in creating what Judy Malloy calls “narrabases” and Mark Amerika calls “narrative environments”—bodies of related emotional material that can be encountered in various configurations, each resulting in a unique aesthetic experience that relies on interactors’ choices and calls on their innate ability to co-create stories from discrete elements.

To achieve this, Wingate has sought out software systems designed to offer multiple possible relationships between the nodes in his narratives. Thus far he has worked with Scalar for daddylabyrinth: a digital lyric memoir and Korsakow for Talk with Your Hands Like an Ellis Island Mutt in this exhibition. In the future Wingate is particularly interested in working with software that allows for unconscious interactor choice (using biometric input, for instance), which would enable him to develop ambient or proto-narrative experiences built up from thousands or even tens of thousands of narrative stimuli.
“dist.solo” is inspired from the moment of intimacy in eye contact and the indefinite variables in relationships. “dist.” – the short form of distance or district. It is also a term widely used for mathematical and programming terminology for distance calculation. In this work, it represents as both relational and mathematical distance. We encounter momentary connections with people in our everyday lives. We synchronize and repel with one another from time to time. Attachment and detachment; the rhythmic dance as well as chaotic crash between the two create a metaphor for the momentary, temporary relationship that exists between them.

The work involves kinetic intervention of the pendulum movement as well as the combination of digital sensors. The custom software generates random position of the unbalanced weight, hence the rhythms of swings are always indefinite. The work and the digital screen intentionally combine the rational and irrational rules, dynamic time, expressing the artist's personal feeling towards human relationship in his current time.
Kenny Wong explores the delicate relationship between daily experiences and perceptual stimulations, by finding the hybrids between analog and digital representations.

Wong interested in exploring visual patterns, motions, sound textures and presenting the works in the form of computational kinetic sculptures. Wong also actively collaborate as collaborating artist, multimedia designer, mechanical engineer/designer and art researcher.

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“An Algorithmic Life”. Algorithms experience time as microtemporal, a series of quickly expressed mathematical events, occurring one after the other in a precise order. As humans, we cannot begin to comprehend the microtemporal in its real time unfolding, but we can attempt to approach it with that most flawed apparatus, the eye. What we see with the eye is never the whole story, and in this case it only gives liminal access to the performance recorded in the film ‘an algorithmic life,’ where vibrant virtual matter pushes forth to slice the eye with its microtemporal pulse. Generated using custom shaders and displacement mapping to create terrain out of entirely non-manifold geometry, this work simulates and speculates upon algorithmic ‘life’ as an emergent computational strata. Each frame is generated using parameters set loosely by the artist, over an extensive timeline of 20,000 frames, which is then left to render by itself for up to three weeks. The resulting rendered frames are mostly a complete surprise to the artist, who has taken a step back and allowed algorithms to generate their own performative record. Music is composed by Simon Howden using an improvisational technique that traces the contours of the visual recording.

“The performative is no longer the domain of humans: matter has its own agency, pulse, vitality, rhythm.”
Rewa Wright
“When Leaving Becomes Arriving” is a short digital film generated through analyzing music ‘inter-sax-tive’ using Processing programming. It attempts to elicit the immensely upsetting yet anticipative feel at the ending of a chapter before moving on to our next journey towards the greater possibilities into the unknown. The synesthetic idea of this project has apparent ties to an art movement that commenced in early twentieth century, during which visual artists such as Wassily Kandinsky, Georgia O’Keeffe, etc. were deeply interested in “the idea that music could be translated into something for the eye.” Yet, the creative development of this visual music project as a collaboration of a musician, a visual
artist and a computer programmer reflects the present practice of today’s digital art domain. This work can be viewed as a dialogue among the three creators, and further more, with the computer as an important contributor as well. The music is from Nicholas Scherzinger’s ‘inter-saxtive’, a series of improvisational works for saxophone and interactive computer. It involves a variety of granular synthesis techniques and is produced by the computer and the musician/performer interact with one another in real time.

We then create abstract visual compositions that evolve over time and are linked with the musical riffs and patterns using Processing programming language. Through purposely emphasizing or neglecting certain aspects of music signals, the image arrives as the visual counterpoint of the music. The interplay of visual and music builds novel texture into the artistic rendering and adds extra dimensions to the conversation between artists. The work process is an interactive one rather than a linear one. Through frequent communication between the creative artists and the computer programmer, ideas are inspired, developed, reflected and built upon; and the project is completed only after many iterations of such workflow. Arguably, the computer also contributes to the idea chain via adding controlled randomness as well as materializing human designed algorithms to produce the visual/musical outcome that is not yet conceivable. To certain degree, the computer extends abilities of the artists and the programmer in reasoning and envisioning, thus plays an essential role in building the expressive power of the piece.

As a result of the above approach, this project is neither a direct visualization of the music, nor a simple combination of music and visual, but rather a dialogue where every party contributes but not dominates. The interplay of all elements is more important than any single aspect. And digital technology such as sound analysis and generative graphics programming made it achievable to construct this interplay. Comparing to artwork created in early twentieth century under the metaphor of synesthesia, this project offers a much more sophisticated audio-visual experience to the audience.
REBECCA RUIGE XU’s current research focuses on creative practice derived from real data, particularly artistic data visualization and visual music, with a goal of communicating ideas rather than illustrating information. She believes the expressive power of this relatively new way of art making can be further explored, consequently provide alternate views on the original information. Typically produced in a generative approach working with computer programs, the visuals in Xu’s work range from inventive non-representational drawing to controlled constructions with highly studied shape, color and texture in 3D space. In the process of making, she explores the impact of artistic intention and influence on the final outcome, while trying to find the balance between artistic intervention and computer program’s autonomy as well as randomness and predictability contributing to each particular project. Xu draws her inspiration from her personal experience and culture background. Grown up in Confucius’ hometown, educated in both eastern and western schools, worked in professional fields (as an animator and designer) and academia (as an educator and practicing artist), Xu often observes a hybrid quality in her work that reflects those experiences. Visually, her creative practice is influenced by minimalism and traditional oriental artwork. To both, balance and contrast of color, space, texture, as well as light are essential means to improve visual aesthetics.
“To afar the water flows” reconstructs the city into a high-rise garden utopia, emphasizing a genuine harmony between man-made structures and its natural surroundings. I am influenced by the various architectural styles in Chicago; particularly buildings designed by Louis Sullivan, father of skyscrapers, and
his philosophy on the relationship between architecture and nature. I am also influenced by the concept of multiple perspectives and the fourth dimension found in Cubism. In my cubist cityscape, space and time are unfolded on the same sheet of paper, as if we are inside an exceptional piece of architecture and looking through its eyes—the windows—and being able to understand how a building simultaneously “sees” and represents a city.

My installation is inspired by the concept of architectural relief in Sullivan’s work (a technique where the sculpted elements remain attached but raised above the background plane). The projected video is mapped carefully to fit the surface of the relief sculpture. As the viewers approach the work, they will experience a gradual shift in the appearance and depth of the installation from a flat image to a three-dimensional sculpture with protruding geometric shapes. I am using relief sculpture and projection mapping to enhance the framed glimpses of sceneries as well as emphasize the physicality of digital video.

YUGE ZHOU left her home eight years ago in Beijing, where the rapid transformation of the urban landscape dramatically reshaped the city and people’s lives, and came to America to begin her journey—migrating from China to America, and from Beijing to Chicago. Zhou became deeply intrigued by the dynamics and interplay of the built and natural environment—light, clouds, traffic and footsteps, moving objects and spaces. Especially when she is inside an exceptional piece of architecture and looking through its eyes—the windows—she is moved by the pleasure of being at a distance, “seeing the whole,” and being able to understand how a building simultaneously “sees” and represents a city. Zhou’s work originates from a simple desire to make people aware of their surroundings—both the physical and the psychological world they live in.

Zhou’s chosen medium of digital video has for her both an actual and physical aspect, while it remains fundamentally immaterial and ephemeral. It is a shape-shifting media that sometimes looks like a painting or a photograph, and at other times functions like science or philosophy. Zhou is influenced

“Cities are alive, and the collective thoughts and dreams of their citizenry constitute a process whose identity is greater than the sum total of its parts.” (Kevin Starr).
by the minimalist approach of structural film, as well as by the harmony and flow of energy in traditional Chinese landscape painting and the concept of multiple perspectives and the fourth dimension found in Cubism. Her cubist treatment of videoed urban landscapes probes the soul of modern cities where the pulse of everyday life and cyclical calm converge. Through its endless repetitions, the city inherits the cycles and transcendence of nature.
Our times are characterized by transience, impermanence and change. For the largest screen in the world, we propose a short sequence composed of a swarm of artificial flies. They slowly appear, propagate and gradually invade the whole ICC Tower, before flying away again. A short text “Fly High – Time Flies” reminds us of the beauty of the current moment.

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GENETIC MOO
OPEN SKY ETUDE
開放天空練習曲

Animation 2015
- 3'14"
- Junya Nishimura: Creative Commons license, non-commercial license
- freemusicarchive.org/music/junya_nishimura/instant_ep/03_em

Open Sky Etude celebrates the flux of humans in motion. Each animated sequence has been generated by performers in our interactive film set. Data is gathered and run through our animation generator, recombining it into many different patterns. The possibilities of the program are endless.
LUKE PENDRELL
SUPERLUMINAL

Video 2015
- 2’00”
- Jon Collyer: remix of ‘Ether’ soundtrack, audio

“Ours is a world in vertigo. It is a world that swarms with technological mediation, interlacing our daily lives with abstraction, virtuality, and complexity.” Cuboniks, Laboria, Xenofeminism: A politics for alienation, 2015.

The fractured drift of the perpetual loop and harsh regression of the gif animation with its belligerent stutter both in their own way present new modalities, ruptures in our understanding of time, new paradigms, variant ontologies, recursive action, indefinite progression, endless reiteration. High frequency trading algorithms, twitter feeds, data flow, meme generators, click streams; modernity hums with relentless aetheric data coursing through the veins of our cities.

MARCEL SCHWITTLICK, THOMAS HEIDTMANN
BERLIN CALLING

Animation 2015
- 2’00”
- Lacuna Lab

At the beginning of the sequence, a connection between two poles is slowly established. As the spark leaps over, the true to scale silhouette of the Berliner Fernsehturm flickers in. The Morse code for “Hi” is cast in circular waves. In a second phase, even more dots on the surface of the ICC are connected before the light is shut off. The art piece is an invitation for communication—between people, cities and artists. It is intended to bring a message from Berlin to Hong Kong and eventually, to extend a form of messaging across other cities around the globe.
CLEA T. WAITE
BIG MOON IN HONG KONG

Animation 2015
- 2'12"
- Angelika von Chamier: Sound Design

The Moon represents many things, from the forefront of scientific exploration to the most ancient of archetypal myths. It inspires love poems and lunacy, influences werewolves and the tides. Big Moon Hong Kong evokes the power, presence, and emotional gravity our Moon commands. Created from archival astronomical data, the photos and sounds are courtesy of the Harvard Observatory, NASA, and the Soviet Space Program. This moon shows us views we can’t ever see from Earth, vistas seen only by probes and the astronauts – and perhaps the greater galaxy.

WONG KA CHUNG
DOROTHY, CHUNG KA HEI,
PAN SHI HANG
CITY PATHS 城市軌跡

Animation 2015
- 1'56"

This work of Hong Kong city path has the busiest rhythm in which to soak up the busy atmosphere, sights and sounds of Hong Kong from the scene of busy traffic, streets is teeming with people and noise of the traffic light. On top of these, we transformed the pulsating energies of Hong Kong into geometric lines and flows. With the wave of the rhythm, the strong and straight silhouette of ICC tower becomes soft. Therefore the tower not only become a mirror that reflecting flows and sea waves of Victoria Harbor, but also a corridor that connecting sea and sky.
CMC
1/F & 2/F

AKOVA Duygu Nazli  Kovan / Hive 2014
GREMMLER Tobias  Animation meets Architecture 2015
HEINZ Sandra  Hiatus 2015
VAVARELLA Emilio  The Captcha Project 2014
BAR-SHAI Nurit  Objectivity tentative 2012
DAVIS Shahar  Patterns 2015
HOKANSON Taylor  Three Year Contract 2016
HUI Phoebe  Graphite Piano 2012-2013
KRANIDIOTIS Yannis  Light Catcher 2015
PAONESSA Diego  B-face  2014-2015
PRIEST Gail  Sounding the Future 2015
SCENOCOSME (Grégory LASSERRE / Anaïs MET DEN ANCXT)  
Sensitive matters 2013
SIU Eric  The Unuseless Machine for Democracy 2014
TODD Brad  Collimation 2015-2016
DE MUTIIS Marco Vanishing 2016
EWING Clay / Pablo OBANDO / Brandon WILSON / Andrew C. GAINES Unsavory 2015
LEVY Florencia Landscape for a person 2014
MAIGRET Nicolas War zone #1 2013-2014
MOLL Joana Az: Move and Get Shot 2011-2014

BIASUTTO Aline Ecstasis 1 2005-2014
KNOX Elena Occupation/Pathetic Fallacy/Lamassu Kentauros Wagyu 2014
PROPHET Jane Neuro Memento Mori: meditations on death 2015
WONG Chi-Chuen dist.solo 2016
DAL BO Dana  Marginal Consent 2012
FLITMAN Ian  Jane 2015
I&C(Cedar and Iris)  Surveillance 2015-2016
BEJTIC  ZINKA  Synthetic Curiosities 2016
DAY Tsuan-Hsiang Kevin  The material couplings of immaterial machines 2012
JAI DU  Well-formed breasts…coincidence? 2015
RAJCA Evelina  e-conductor 2013
TURANO Paul  The Porcine Dilemma 2013
WRIGHT Rewa  An Algorithmic Life 2015
CAYLEY John  The Listeners 2015
CHEN I-Chun  Shui Yuan - Lin Legend I-IV 2013-2016
HU Rui  Metropolitan Triangle Garden
BRAIN Tega/Sam LAVIGNE  Intergovernmental Panel on Capitalism 2015

COOVER Roderick/Arthur NISHIMOTO/Scott RETTBERG/Daria TSOUPIKOVA  Hearts and Minds: The Interrogations Project 2016

COPENHAGEN GAME COLLECTIVE  Cunt Touch This 2015

FERRAIOLO Angela  Three Bankers: Volcker Greenspan Friedman 2015

PEARLMAN Ellen  Noor – a Brain Opera 2016

RAUS Lasse  Hentai Haiku 2015

REINHUBER Elke  Face Value 2014-2015

TRAN Lien  Cops and Rubbers 2016
V BENNETT Gregory Panopticon 2015
V CHAN Carla Black Moves in square 2016
V COSTA Anabela In Motion 2016
V DENTON Michael / ANNA McCrickard (OVERLAP) Aquatint 2016
PRG FLEURY Galdric/Antoine FONTAINE Wait and see 2015
V FU Yunxue Snow Tunnel 2015
I KIM Jinku “…what is seen was not made out of what was visible.” 2015
I REICHE Martin BNC B 2015
V VAN EENOO Cedric Rain and Sea 2015
I ZHOU Yuge To afar the water flows 2015
BRASS ART (Chara LEWIS/Kristin MOJSIEWICZ/Anneke PETTICAN) Freud’s House: The Double Mirror 2015

IP Yuk-Yiu S for Sisyphos 2015

LANG Pe Moving Objects 2016

OTTIGER Nicole Visual Space has no owner 2015

PAPALEXANDRI-PETTICAN Marianthi/Pe LANG Untitled V 2013

TAKAHASHI Takuma/Shugo HIRAO A Digital Music Box Ensemble 2015
FLEURY Galdric/Antoine FONTAINE  Wait and see  2015

FUCHS Matthias  33 1/3 Revolutions

GUSKOS Andreas/Irek KURIATA  You will not enter twice in the same river – today, yesterday, tomorrow  2015

HESSELS Scott  The Moon is a Mirror  2015

LAURENZO Tomás Coronel  Walrus  2016

MAURO-FLUDE Nancy  New Game  2015

MILLER Daniel  Ouroboros  2016

NELSON Peter  Extensions of a No-Place  2013

NOLAN Kieran  Control  2013

WANG Jinyi/Nathan HUGHES  Object  2015
CHU Hao Pei  Spaces Places Memories 2015

DAVIS Shahar  Patterns 2015

DENTON Michael / ANNA McCRICKARD (OVERLAP)
Echo Chuckle 2016/Running Forest 2016/ Lazy Wave 2016/
Cloud Edged 2014

FU Snow Yunxue  Tunnel

KLEIN Tobias/Fredrik HELLBERG/Lara LESMES  Mask 2016

RODRIGUEZ Hector  Z 2014-2016

TRUNIGER Lukas  Déjà Entendu. An Opera Automaton  2015

WALICZKY Tamás  Homes 2015

XU Rebecca  When Leaving becomes Arriving 2015
BARES Josef  Consumption Hong Kong (Vol. 1) 2015
BORSUK Amaranth/Kate DURBIN/Ian Hatcher  Abra: A Living Text 2015
CAPONE Sean  A Word Heap 2015
WINGATE Steven  Talk with Your Hands Like an Ellis Island Mutt 2015
IMPRESSUM

ISEA2016 Hong Kong Cultural R>Evolution

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FOR CONNECTING SPACES
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