



TechLab

Experiments

in media art

1999-2019

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**TechLab**

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Experiments

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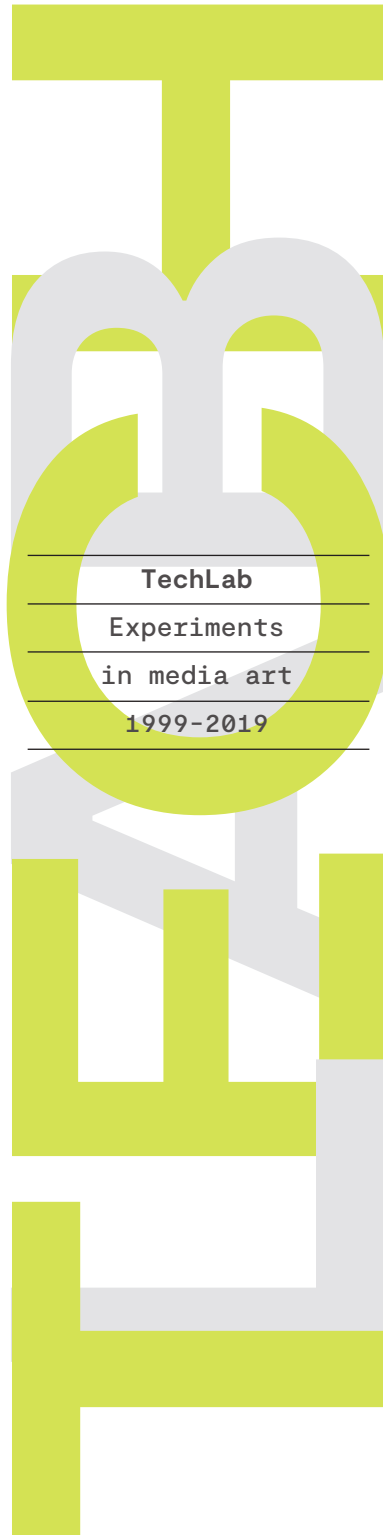
in media art

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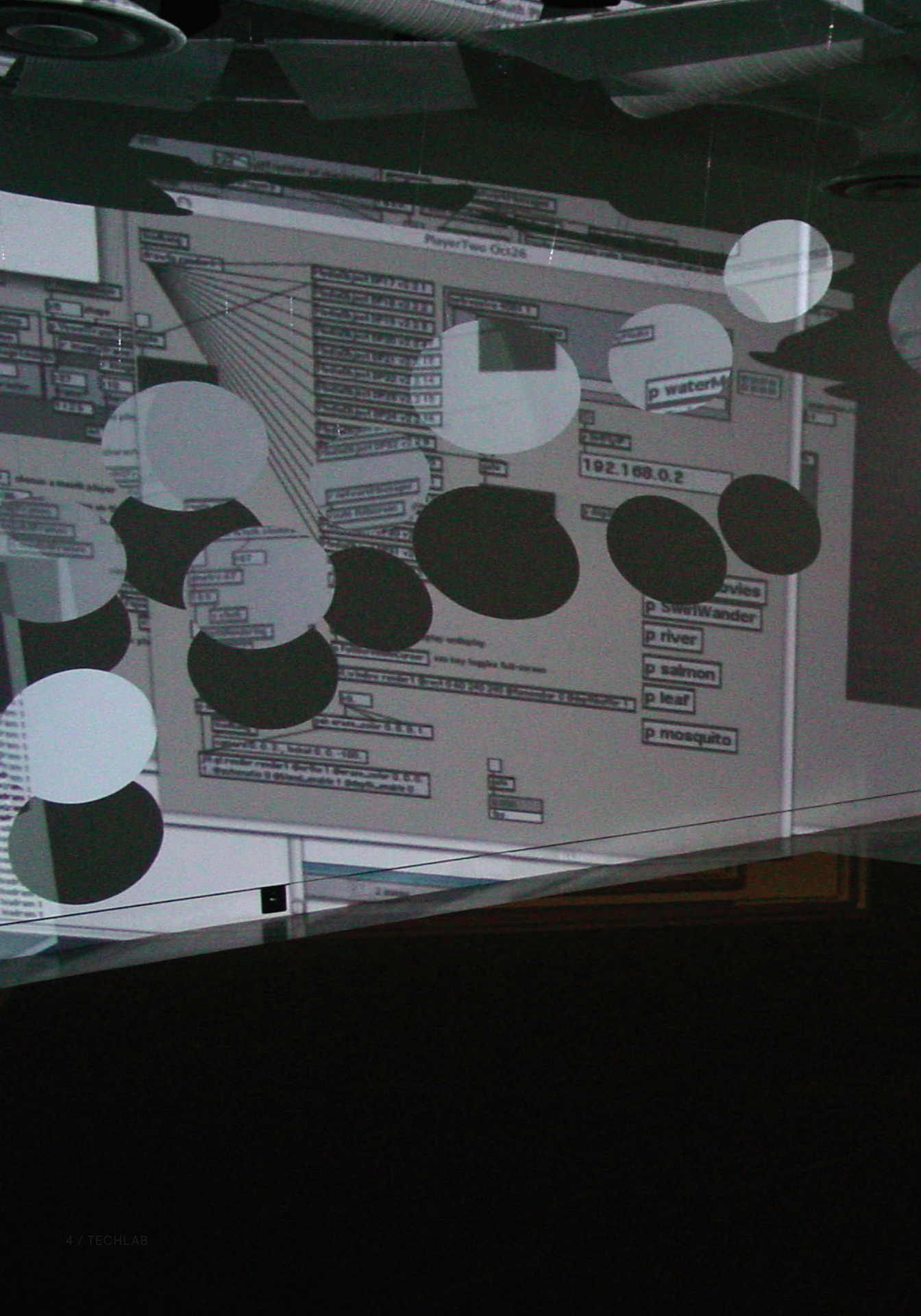
1999-2019

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TechLab  
Experiments  
in media art  
1999-2019



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p waterM

p movies

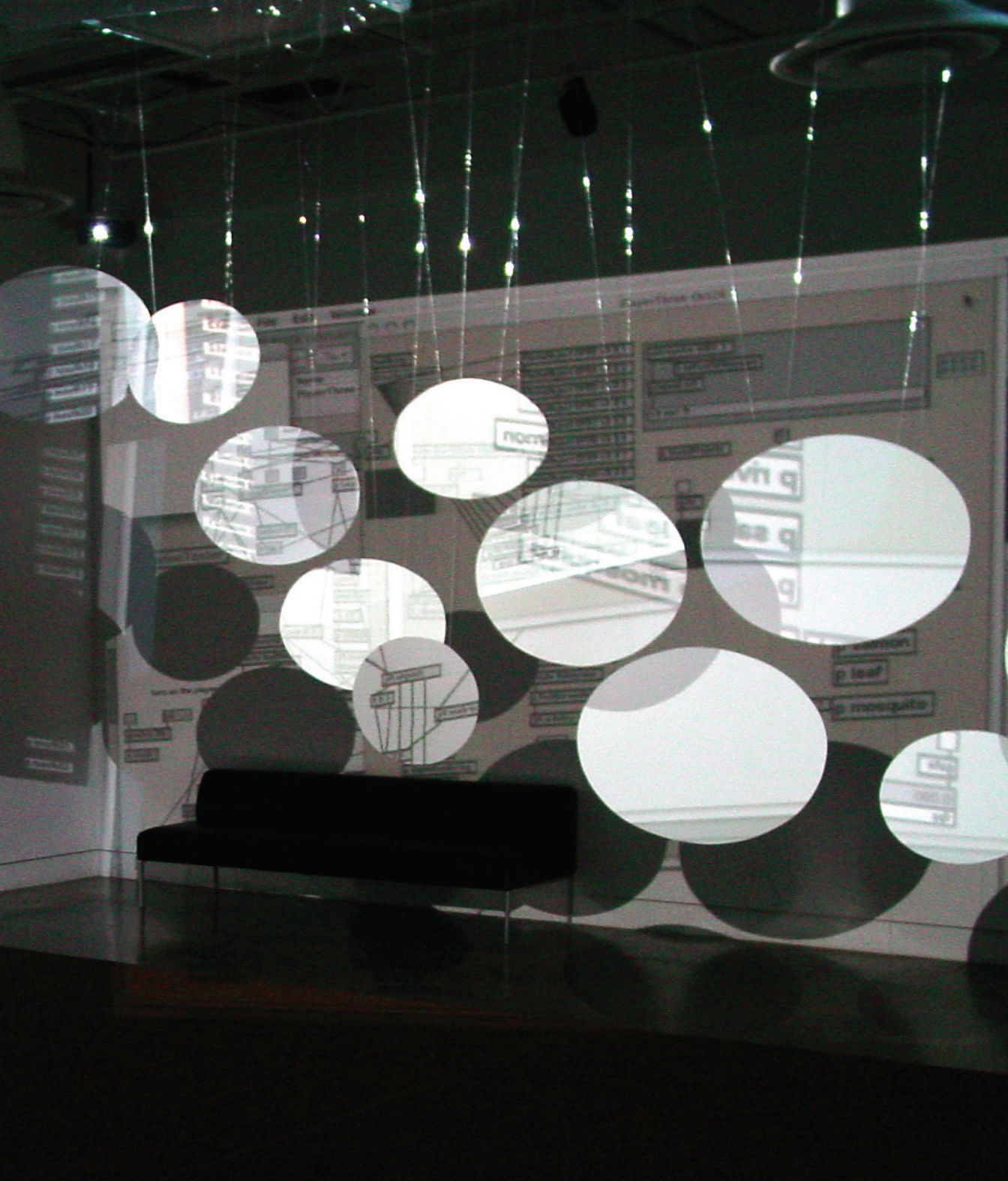
p SweetWander

p river

p salmon

p leaf

p mosquito



Installation view of *One River (running)*, Aleksandra Dulic, Kenneth Newby, Martin Gotfrit, and Dinka Pignon, in collaboration with Milena Dreumeva, Layda Gongora, Alex Matisco, So Young Park, Derek Robinson, and Phil Thomson, 2005, multimedia installation.

# CONTENTS

FOREWORD / Rhys Edwards and Alison Rajah	14
INTRODUCTION / Robin Laurence	20
<b>EXHIBITIONS &amp; RESIDENCIES 1999 to 2008</b>	24
ESSAYS: <u>The Work Will Point the Way:</u>	92
<u>Techlab Residencies at Surrey Art Gallery /</u> Caroline Seck Langill	
<u>Glocal: Exploring a Digital Future Through</u>	104
<u>Collaboration / Robin Oppenheimer</u>	
<u>Conversations 1999-2011 / Kate Armstrong</u>	114
<b>EXHIBITIONS &amp; RESIDENCIES 2009 to 2019</b>	126
ESSAYS: <u>Digital Media as Contemporary Art and its Impact</u>	204
<u>on Museum Practice / Beryl Graham</u>	
<u>Mediating Precarity / Jordan Strom</u>	220
<b>BIOGRAPHIES</b>	238







Installation view of Cultural Mashups: Bhangra, Bollywood + Beyond, Tarun Nayar, Lady Ra, Suez, Leonard Paul, and Niranjana Rajah, 2007, multimedia installation.



Installation views of Surrey\_cine, Veeno Dewan, Maya Ersan, and Nimi Lange; music by "technojerk and the roaming rips," Bruce Henczel, and Coin Gutter, with co-cinematography by Sebnem Koyuncu, 2005, multimedia installation.



# FOREWORD & INTRODU

D  
DUCTION

. . . it is important to trust artists and the power of their imagination, to value it and to honour it. Listening to artists has been key to our past success, and is critical to the Gallery's future direction.<sup>1</sup>

Liane Davison

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As early as the late 1960s, new media practices, particularly with an electronic focus, were emerging through artist-run centres in locations such as New York, Vancouver, Montreal, and Toronto.<sup>2</sup> To borrow a phrase from Kate Armstrong’s essay in this publication, Surrey Art Gallery joined a “larger blossoming” of institutions in Banff, and further afield in Linz (Austria), Riga (Latvia), Karlsruhe (Germany), Rotterdam (the Netherlands), and New York, to provide dedicated, consistent support for artists with burgeoning forms of media practice. Within this global context in the late 1990s, the Gallery initiated the TechLab, enabling space for process-based production as well as the presentation of artworks experimenting with emerging technologies.

In 1998, then-curator Liane Davison sensed this shift in the field, and had the foresight to initiate within the Gallery—which had historically exhibited work in the more traditional media of printmaking, drawing, painting, and sculpture, for the most part—support for these new forms of making in a space that would serve as both a project incubator and an active site for learning. What would define the TechLab’s programming mandate was not technology itself, however, but the people using and propelling it in new ways.

From the get-go, the Gallery foregrounded the role of different specialists across a range of disciplines within the development of the TechLab and its earliest programs. Led by artists, and working with designers, computer scientists, and engineers, the TechLab’s design

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<sup>1</sup> From Beryl Graham and Sarah Cook, *Rethinking Curating: Art After New Media* (Cambridge: MIT Press, 2010), 137.

<sup>2</sup> See Caroline Seck Langill’s essay in this book, “The Work Will Point the Way: TechLab Residencies at the Surrey Art Gallery” for more information about the historical context of artist-run centres and new media art.



anticipated the need to be able to work with forms of technology that had not yet been developed. In many cases the space was driven by the ideas and programming framework of the creative thinkers who would go on to use it to do the work they envisioned, while setting up the conditions to serve the future needs of artists. Central principles of this approach were transparency and collaboration; members of the public would be actively invited to both witness and contribute to the development of artworks themselves.

The following texts delve into the TechLab's history, while contextualizing it within an international community of media artists and scholarship. Multiple authors have outlined its history through descriptions and analysis of each project to have manifested in the space, as well as essays which expand upon the significance of the TechLab. This significance may be broadly defined in two ways: first, as having expanded the discourse surrounding many of the subjects that emergent art practices have engaged with over the past two decades; and second, as having an iterative impact on the reach of the Gallery's programming in numerous other areas.

Throughout the 70 plus exhibitions and residencies that the TechLab hosted over the years, artists have visited recurring themes across wildly different formats. These include, but are not limited to, interactivity and education (*Digital Identities, REMIXX*); representations of nature, the suburbs, and the city (*Every Bus Stop in Surrey, Dana Claxton: Landscape #1, One River (Running), Surrey\_cine, Patrick Cruz: Guildford Drift, and SMPTE Hedge*); ecology (*Julie Andreyev: Greenroom, Suzanne Northcott: Crossing Boundary, Leila Sujir: Forest Breath*), the internet and networks (*Kate Armstrong: Catalogue, Judy Cheung: freeLink, Glocal*); feminism and motherhood (*Toni Latour: You Can Do It!, jil p. weaving: to be continued . . .*); cyborgs, bodies, and machines (*Reva Stone: Imaginal Expression, Nancy Paterson: Stock Market Skirt, jimAndrews4/6.mp4*); new systems of measurement and recording (*Ground Station, Diana Burgoyne: Sound Drawings, John Wynne: Wireframe, Stephanie Loveless: Cricket, Tree, Crow, Ben Bogart: Watching and Dreaming*); and, re-representation (*Stephen Foster: Remediating Curtis: Imagining Indigeneity, High Muck a Muck: Playing Chinese, Cindy Mochizuki: Autumn Strawberry*). In all of these, the TechLab has functioned as a site through which artists have frequently critiqued, subverted, and custom-developed technologies, emerging through military, to then industry and consumer purposes (see Armstrong's essay). In this way, they have fomented unique frameworks to articulate the relationship

between our identities and the world in which we live. In many cases, projects were site-specific or emerged as the result of onsite residencies and localized engagement initiatives.

The TechLab was also an incubator in another sense. While it was the nexus for the Gallery's earliest forays into the exhibition of new forms of digital art (then commonly known as "new media art"), it also influenced the direction of the Gallery's other curatorial ventures. Multiple streams of programming are directly linked to the TechLab. These include the Gallery's Media Wall, which showcases screen-based art in the lobby of the Surrey Arts Centre, and is a legacy of the 2005 *REMIXX* project; UrbanScreen, which emerged as a result of the 2008 *Glocal* residency, featuring site-specific large-scale public art programming at Chuck Bailey Recreation Centre in North Surrey (detailed in this text's companion publication *Art After Dark: 10 Years of UrbanScreen*); *Open Sound* and *Sound Thinking*, an exhibition and symposium series respectively dedicated entirely to sound art (and which later evolved to encompass other kinds of new electronic and digital media), are indebted to the TechLab having first introduced local audiences to experimental art generally; and the Gallery's curatorial and collecting programs, which went on to support the display and collection of digital media art exhibitions in both its principal exhibition spaces and elsewhere. This is why the present publication, along with the essays included within, speak not only to projects which have been exhibited in the TechLab itself, but to many of the other exhibitions whose origin is directly linked to the TechLab's ethos. Though for the most part occupying a small space physically (at times expanding into adjacent gallery spaces from its own dedicated room), the TechLab interfaced with a media environment spanning a global network of idea exchange.

Perhaps the TechLab's most important legacy is the opening of new relationships and experiences between artist and audience. With this inheritance, the Gallery continues to innovate and champion new forms of interactivity through its curation, educational and school programming, workshops (both onsite and remote), and online and in-person engagement initiatives. We recognize, as Davison did in the 1990s, that technology is both a means through which to create new possibilities for the future, and a form of creative democracy—it provides a way for people across a globalized world to witness, participate in, and share vibrant artmaking. This same spirit continues to inform the Gallery's present-day programming, as the TechLab transitions into a responsive, multi-functional space for the creation

and presentation of participatory artworks, artist-led workshops, and residencies. The TechLab also influences the Gallery's future iteration as the Interactive Art Museum (anticipated to be three times the Gallery's current size in Surrey's City Centre). The learnings of the TechLab will inform the new facility, in which, inspired by extraordinary artists, visitors will be empowered to play, to learn, and to connect with art and each other.

*TechLab: Experiments in Media Art 1999-2019* represents the outcome of years of collaborative effort. The Gallery would like to thank all the authors who contributed to the publication, including Robin Laurence, who compiled each project description over many years with Gallery staff, as well as Caroline Seck Langill, Robin Oppenheimer, Kate Armstrong, and Beryl Graham for their essays. Some of these essays were edited by Louise Osborne, who established a style guide for the book, while Visual Arts Programmer Lindsay McArthur conducted additional proofing. The Gallery also wishes to thank every single artist and curator who contributed to the TechLab and its associated initiatives and programs over the years; their biographies are available towards the close of the book. Special thanks go to Isabelle Swiderski and her team at Seven25, who provided a powerful guiding vision on this book's design, and facilitated printing with Mitchell Press. We would additionally like to acknowledge the curatorial work of Curator of Collections and Exhibitions Jordan Strom and former Assistant Curator Brian Foreman for their efforts in carrying forward and growing the vision and dedication for programming excellence over the course of the TechLab's final decade.

In closing, the Gallery would like to thank Liane Davison, whose fierce commitment to arts advocacy not only raised the Gallery's profile as a leading art institution, but laid the groundwork for the creation of the TechLab and the trajectory for all of its associated programming now and into the future.



Upon its inception, Surrey Art Gallery's TechLab was the only space of its kind in a Canadian civic art museum.<sup>1</sup>

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Development first began in 1998 through the acquisition of tools to exhibit digital artwork and a plan to build an audience for new media. In the spring of 1999, the Gallery constructed a prototype digital “media lab” within its main exhibition hall.

This space was inaugurated with a project by artist Paul Williams, one that functioned both within the physical exhibition space and online. The popular and critical success of Williams’ interactive work led to a further commitment to a digital art/new media program at the Gallery. While Surrey Arts Centre was closed for renovation and expansion in 2001–02, the temporary media lab was made permanent as a new and distinct physical space, adjacent to the larger galleries. The redesign of this purpose-built facility was undertaken in consultation with new media artists and technologists. The TechLab thus became the location for open studio-style residencies for digital artists and curated exhibitions of digital art, which continued until the TechLab’s final exhibition in 2019.

Activities within the TechLab are supported by artists’ talks and other public programs, which seek to expand audience understanding of an extensive range of digital projects, from interactive video installations and sound sculpture, to textile art, digital technology, and the ubiquity of user-generated photographic images. TechLab artists may be local, national, or international, and their exhibitions and projects frequently involve interactivity and community collaboration, an awareness of social and environmental issues and conditions, and an integration into cultural and geographic aspects of the rapidly growing city of Surrey.

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<sup>1</sup> Other Canadian arts institutions that had dedicated “new media” exhibition space and regular programs during the 1990s and early 2000s were InterAccess, an artist-run centre based in Toronto, and Banff New Media Institute in Alberta.





Installation view of Imaginal Expression, Reva Stone, 2006, interactive digital installation.



# EXHIBITION & RESIDENCE

NS  
1999-2008  
CIES

Project:

**Untold Tales—Virtually Reality**

**June 13–October 17, 1999**

Artist:

**Paul Williams**

Curator:

**Liane Davison**

Piloted by artist-in-residence Paul Williams, the digital media lab’s mission was to explore the new worlds of digital media, to experiment with and create new digital art forms, and to introduce Gallery visitors to the digital universe. Paul Williams’ project used found materials to create interactive installations in real space while also developing an interactive work in digital format.

Visitors were able to walk and click their way through the artwork in the Gallery and online, exploring the relationship between analog and digital worlds. The digital media lab—the prototype of what would become the TechLab—acted as an artist’s studio, a public classroom, and an experimental laboratory. The “Open Studio” approach made visible to the public the process of making digital art, while simultaneously exhibiting this art form. The project also enhanced the Gallery’s ability to present digital media artworks within the context of other exhibitions.

Williams’ project was so successful that curator Liane Davison determined that the media lab should continue in operation for another eight months, and be made available to exhibiting artists.



Project:

**Digital Identities:  
Transforming Communities,  
Reinventing Ourselves  
October 23–January 23, 2000**

Artists:

**Thecla Schiphorst, bryan  
mulvihill, Ruth Scheuing,  
Christine Stewart, Laiwan,  
Tagny Duff, Leila Sujir, Andrew  
Power, Carla Wolf, Susan Harman**

Curator:

**Elizabeth Kidd**





The exhibition Digital Identities explored how digital technology transformed the way we understand and portray ourselves and how we relate to society. It also reflected a late twentieth century philosophical change in thinking throughout the world—from a linear progressive way of understanding ourselves and society to one that is fragmented, shifting, and infinitely changeable. This digital sampler of multi-media art presented the work of ten artists who have adopted new, transformative technologies to manipulate images, light, and sound, to reinvent themselves, and to re-define what art can be.

Ruth Scheuing's Ada: Queen of Engines and Other Virtual Webs brought the work of historical women (as mathematicians and weavers) together with the technology of the Internet and its metaphors. Thecla Schiphorst's Body Maps: artifacts of touch, informed by her background as a dancer, utilized electro-magnetic sensors and other technology to engage the visitor's physical body directly in an exploration of the digitally represented body. bryan mulvihill's Surrey World Tea Party both digitally documented local visitors to his gallery-based tea party and "netcast" their images (and the event) around the world. Video works by Christine Stewart, Laiwan, Leila Sujir, Tagny Duff, and Andrew Power utilized digital technology to generate sound and images or to edit tapes that were continually projected using a new video/data projector system in the Gallery. Within the domain of the digital media lab, visitors found computer kiosks to view the net art of Susan Harman and Christine Stewart and the websites for Ruth Scheuing and bryan mulvihill's projects. A second computer hosted the CD-ROM work of Carla Wolf. If visitors wished to contribute stories to Ruth Scheuing or Christine Stewart's sites, a user-friendly Mac computer was set up in the lab for their story writing.



Project:

**Second Nature: Autobiographies  
in New Media**

**February 6–May 14, 2000**

Artist:

**Nancy Paterson**

Curator:

**Liane Davison**

Nancy Paterson (1957–2018), one of Canada’s foremost “cyberfeminist” artists, gained an international reputation for her interactive sculptures utilizing computer technology. Featured in the exhibition was the installation Medusa. In her artist statement Paterson wrote, “The Medusa Projection (Autobiography) refers to the relationship between women and power as depicted in both ancient mythology and in post-modern culture. It represents my attempt to directly merge personal history and influences into the production of an installation which addresses my current interest in the relationships that are emerging between feminism, technology, and art.” Other Paterson projects, including 6DOS:The Library, Stock Market Skirt, Hair Salon TV, Wringer/Washer TV, Ex(or) ciser, Bicycle TV, The Meadow, and How the Rest Was Won, were represented in the exhibit through video documentation and links from the Gallery’s website.



**Top:**  
Still from 6DOS: The Library, Nancy Paterson, 1999, virtual reality environment.

**Below:**  
Installation view of Medusa, Nancy Paterson, 2000, installation with assemblage and video projection.



Project:

**Digital media lab**

**artist in residency projects:**

**telerobotics and digital**

**video sampling**

**April 25–September 10, 2000**

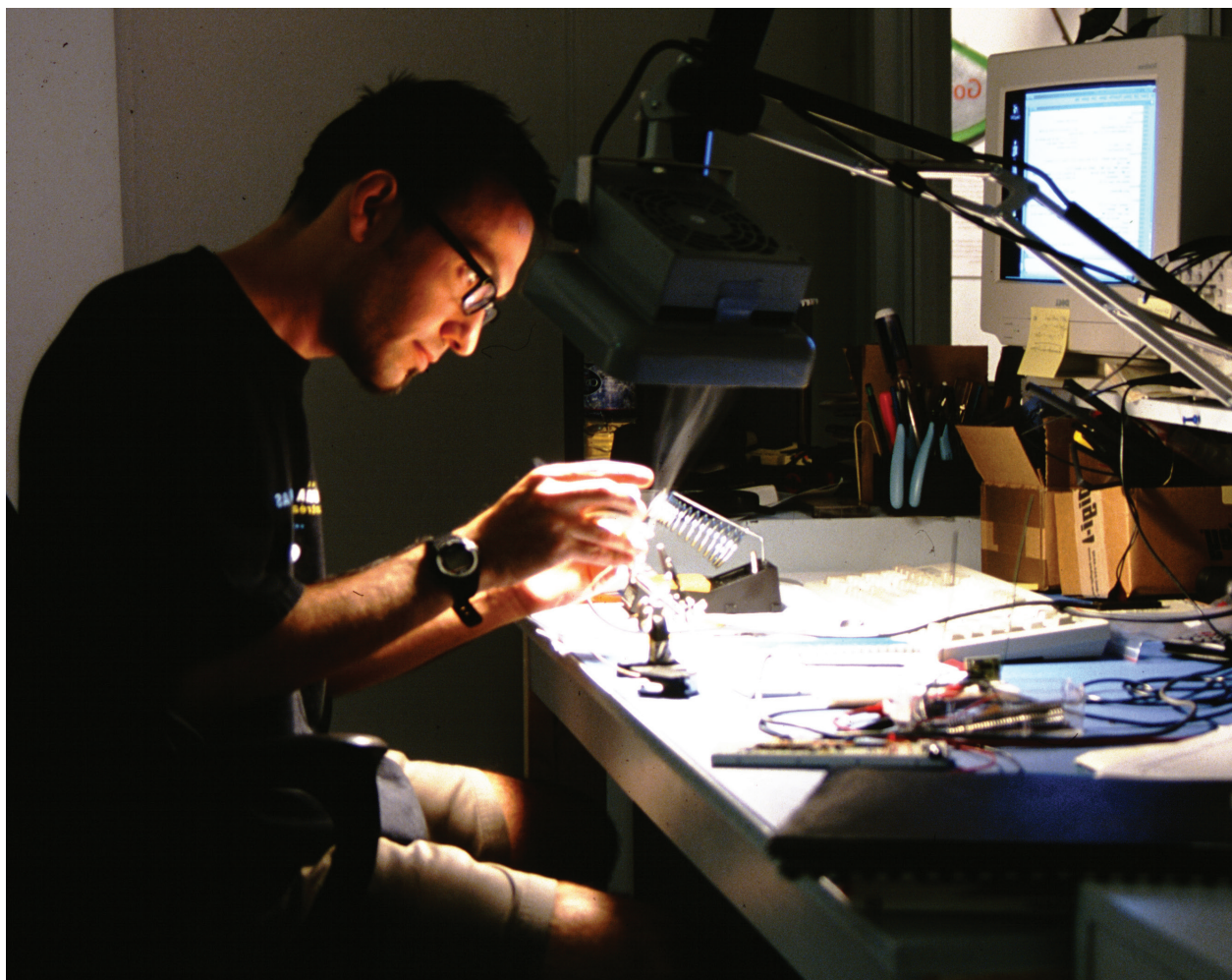
Artists:

**Carlos Vela-Martinez and**

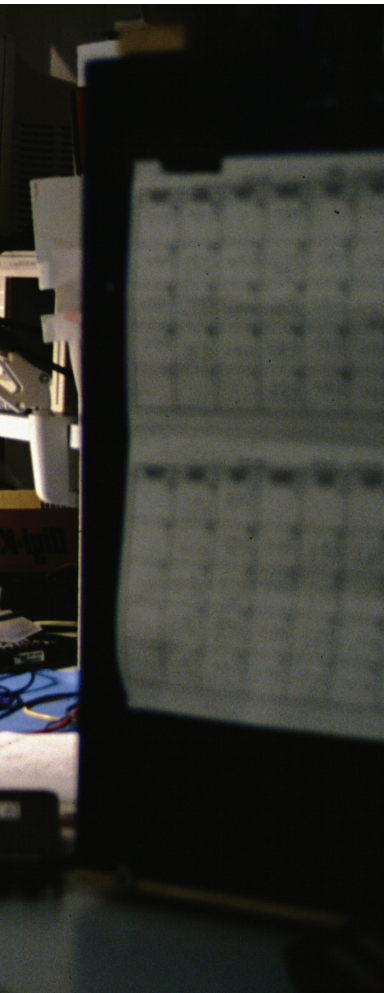
**Archer Pechawis**

Curators:

**Liane Davison and Don Kidd**



Archer Pechawis occupied the Gallery's digital media lab as an artist-in-residence, conducting research and experiments in new territories of computer-assisted art making and tele-robotics. Visitors were able to see works in progress and visit with the artist. During his three-month residency Pechawis developed a "video sampling" mechanism, in which video bites were triggered via MIDI (Musical Instrument Digital Interface) for use both percussively and melodically for his new media performance, Nation. About his work, Archer said: "My current fascination is what I call 'transitional Cree culture,' the place where Cree culture meets the onrush of millennial technology. Using digital technologies, I attempt to locate and query this meeting place, however fleeting. My work is a temporary road map. These maps are signposts of the moment which I create to share."



For four months, Carlos Vela-Martinez was also resident in the Gallery's digital media lab, "redirecting and reapplying" selected communications technologies from their intended industrial and consumer-electronics applications for use in his art. The then-recent availability of cheap, compact modular electronics enabled the artist to pursue the creation of kinetic sculptures with increasingly complex actions, including the ability to respond to the presence and behaviours of visitors. Vela-Martinez worked with micro-controller chips, radio transmitters and receivers, and single-chip web servers.

Project:

**whY2Kare.org**

**June 4–September 17, 2000**

Artist:

**Celine Rich**

Curator:

**Liane Davison**

This digital video and web-based multi-media installation was directed towards a youth audience. It utilized an MTV aesthetic, new digital video technology, and interactive website capabilities to challenge viewers to take responsibility for their future and the environment. The project involved original digital video interviews with selected individuals and environmental leaders about why they cared about the natural environment and how they were manifesting that care. A complex interactive website was also developed for the project's ongoing presence on the internet. The installation presented a multi-media interactive environment and included sculptural elements, computer-controlled sound, interactive games, a computer kiosk for web access, and digital videos continually streamed from a standalone CPU. Visitors were encouraged to continue contributing to the project, both within the Gallery and over the internet.



Project:

**jil p. weaving:**

**to be continued...**

**July 6–August 18, 2002**

Artist:

**jil p. weaving**

Curator:

**Brian Foreman**



jil p. weaving, oil painting from to be continued...,  
1998, mixed media installation.



Using a combination of computers and oil paintings, jil p. weaving explored a possible future for motherhood, indicated by current directions in biotechnology. Through a comic book style storyboard and a website for the “Department of Maternal Affairs,” weaving created a mystery animated by characters that resembled the special agents from the television show The X-Files. The case of the missing “mombots”—cyborgs that substitute for human mothers—encouraged viewers to think about the role and value of maternal labour in today’s society. The Gallery’s TechLab was transformed into an “Office for the Department of Maternal Affairs.” Visitors could imagine themselves in a futuristic waiting room, or could apply online at an available desk, to become a parent.

Project:

**THE PAST: a digital  
performance in four acts**  
September 7–November 17, 2002

Artist:

**Carol Gigliotti**

Curators:

**Liane Davison with  
Brian Foreman**





Carol Gigliotti is an artist, writer, educator, and theorist whose creative and scholarly interests include virtual environments and issues surrounding the ethics of interactive technologies. Her visual art practice and her writing also examine the ways that art changes in response to new technologies. For her video installation in the TechLab, she evoked elements of the past and the present, the personal and the universal, and the handmade and the computerized. Beginning with still drawings, Gigliotti created digitally animated and projected images, with recorded voiceovers. THE PAST was based on large drawings from her earlier series, Waiting, Italy and India, Digging One's Own Grave, and The Future, and became an installation about remembrance and the intersection between digital processes and human cognition.



Project:

**Digital Media Artist  
in Residence: Kate Armstrong**

**November 30, 2002-**

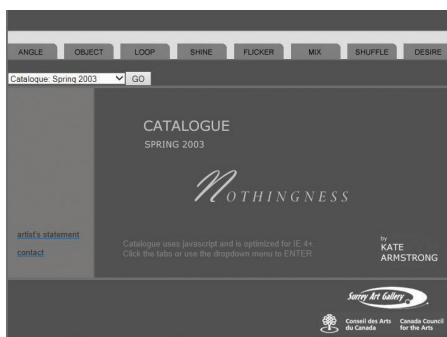
**March 30, 2003**

Artist:

**Kate Armstrong**

Curator:

**Liane Davison**





During her TechLab residency, Kate Armstrong created an interactive, internet-based artwork titled Catalogue, which mixed online shopping technology and public participation to explore art as process. Her project, hosted online at [www.surreytechlab.ca](http://www.surreytechlab.ca), offered visitors the opportunity to browse for, select and “receive” objects and materials—simulating and thus considering the online shopping experience, except that this time viewers would be participating in the creation of an artwork. The look of this interactive net.art piece was influenced by a range of catalogues and advertising, from early Hudson’s Bay ads to contemporary computer pop-ups. Catalogue played with the intersection of art and commerce, and asked what it means to add artistic intention to everyday life.

Project:

**Ground Station**

**February 22–May 11, 2003**

Artists:

**Daniel Jolliffe and**

**Jocelyn Robert**

Curator:

**Liane Davison**





Drawing on research at the STEIM (STudio for Electro Instrumental Music) centre for electro-acoustic research in Amsterdam, British Columbia artist Daniel Jolliffe and Quebec composer and artist Jocelyn Robert developed a collaborative sound installation which took as its central theme and process the surveillance network of global positioning satellites, which are in constant orbit around the earth. The installation made early use of the “cyber sky” composition of US military/aerospace GPS technology, established to aid in military applications and designed for precision, control, and certitude. As has happened in the past, this military technology has found mass-market applications, from automobile design to recreation, and was used in this new work as both method and subject of artistic inquiry. Ground Station took data about the orbiting overhead satellite network and converted it to music played by a stationary grand piano. By appropriating the technologies and shifting their intended use, the work playfully subverted notions of military and computer-based accuracy. The work streams, sifts, chops up, and spits out the continuous data flow meant for the single purpose of navigating human movement and fixing civilian and military locations. The resultant stream was processed and parsed by a sound composing system, which tried to make musical sense of the network’s activities. The compositionally unpredictable outcome was a unique aural narrative for each of the earth’s rotations, informed by the satellites’ positions and the reconfiguration of the data provided. It placed the viewer at the centre of an enormous network, watching and hearing the movements of the satellites themselves.

Project:

**Wet Moon: a digital video  
installation by Eve Luckring**

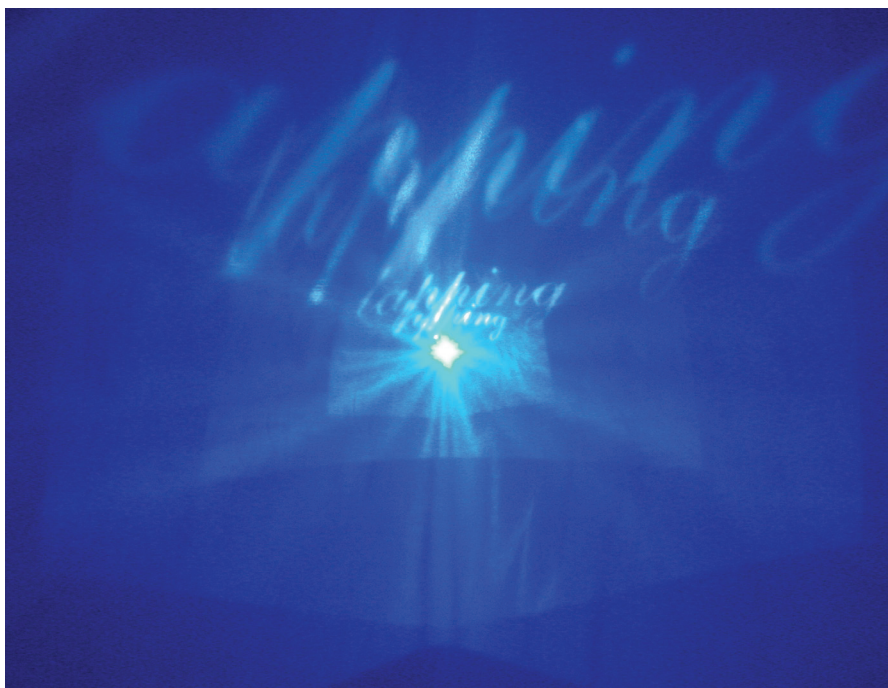
**April 5-June 15, 2003**

Artist:

**Eve Luckring**

Curator:

**Liane Davison**



Imagine entering a room in which you are immersed in sound, light, colour, and poetry, where waves of words float through the air, and appear on sheer screens that waver and move, creating a space that is both sensuous and meditative. Inspired by the Japanese poetry form of the haiku, Eve Luckring's computer-generated video projection, designed specifically for the architecture of the TechLab, created a sensory environment of words, movement, and colour. Words melted and metamorphosed as if liquid, as the projection screens of transparent veils also wavered and moved. This digital video installation was a Canadian premiere for the California-based, interdisciplinary artist.



Project:

**Laura Lamb: Utopias  
in a Little Box**

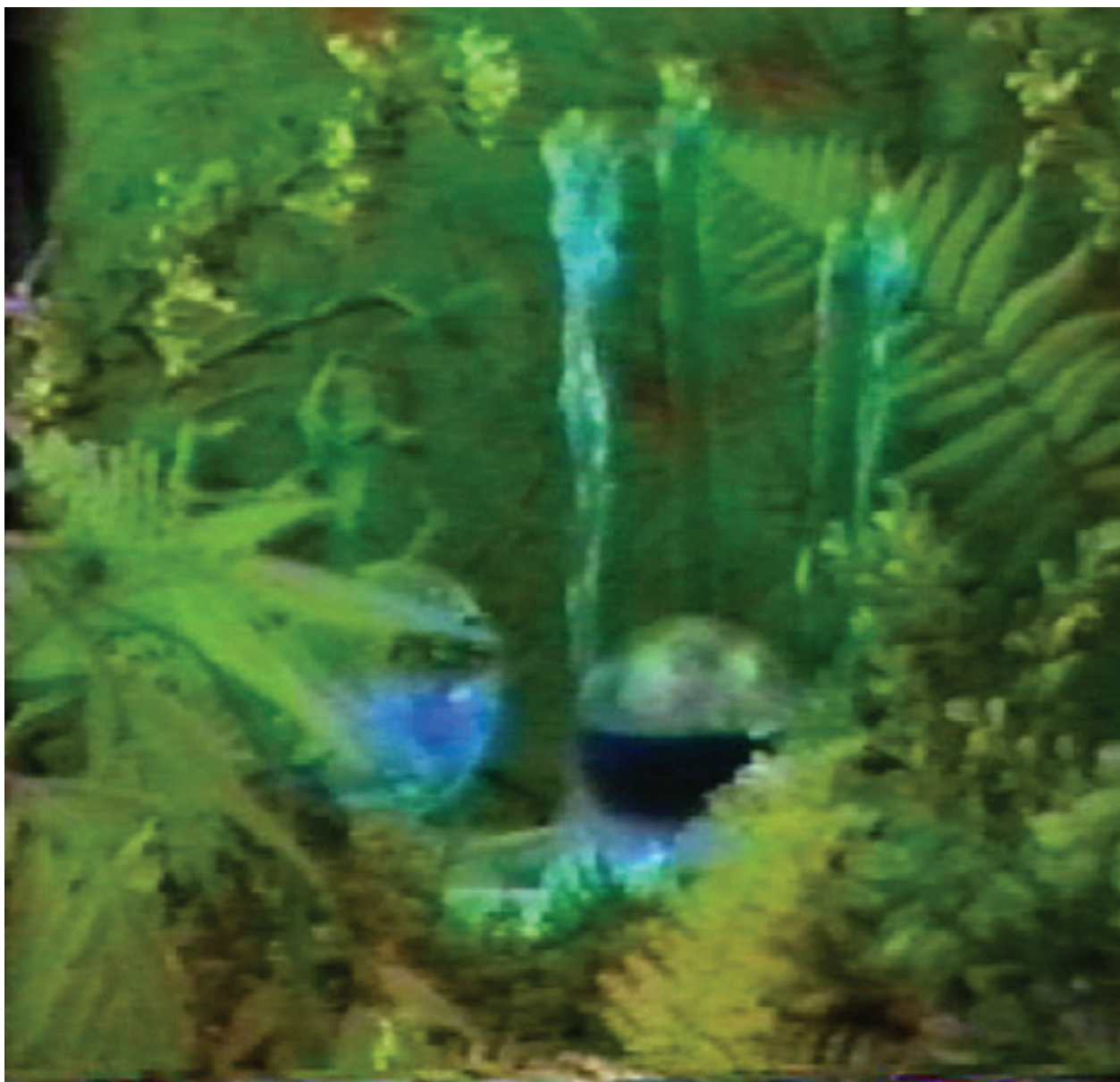
**June 14–September 7, 2003**

Artist:

**Laura Lamb**

Curator:

**Brian Foreman**



Still from The Strangest Dream, Laura Lamb, 1986–87, single-channel video.



Laura Lamb's trilogy of videos, The Strangest Dream, A Day in Glass City, and Reliable Clowns, presented delightful, imagined worlds where common objects, sourced from kitchen drawers and secondhand shops, are magically and playfully animated. Drawing on her life-long interest in puppetry, Lamb created unique theatrical spaces on a tabletop for each video. For Gallery use, the artist reformatted the videos as DVDs and presented them as projections in the TechLab.



Project:

**Digital Media Artist**

**in Residence: C.H.A.R.T.**

**—a youth media internship**

**& project**

**June 30–November 30, 2003**

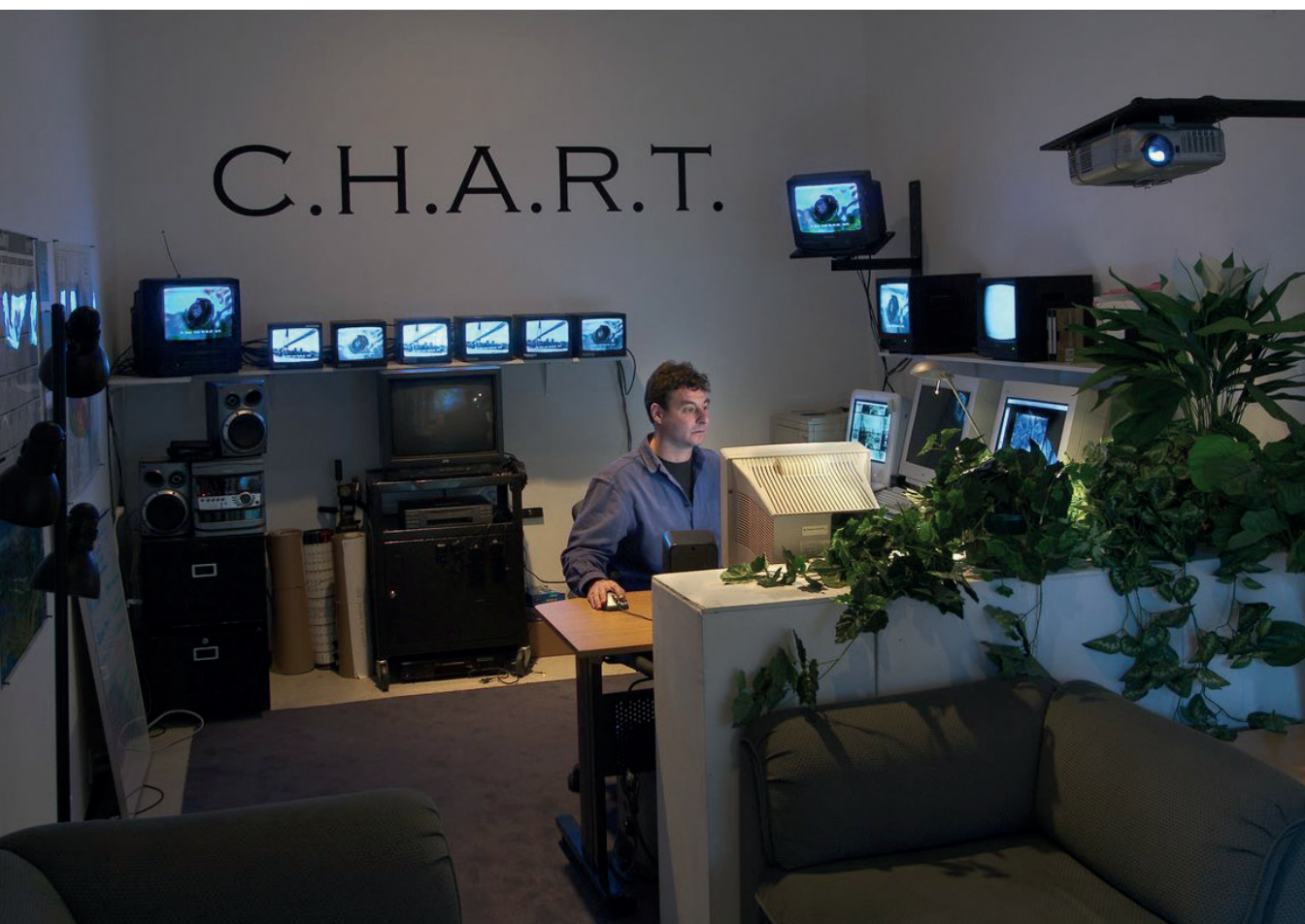
Artists:

**M. Simon Levin, with Theresa**

**Hutton and Alex Konyves**

Curator:

**Liane Davison**





Two young Surrey artists were hired to work with artist and educator M. Simon Levin to create a community-based new media project, C.H.A.R.T. (Confluence Hub for Art, Research, and Technology). As artist-in-residence, Levin reframed the TechLab as a monitoring and mapping station, presented in the context of the adjacent exhibition, The River. From June 30 through August 30, 2003, Levin worked with emerging artists Theresa Hutton and Alex Konyves doing community outreach and collecting source material that was to be presented as a multi-channel video installation exploring the river as a confluence of interests. Community youth hired to work on the project became familiar with Surrey's heritage as they explored the collections of Museum of Surrey and Surrey Archives. They harvested a history of Surrey and examined its intertwining relationship with the Fraser River. Learning about, communicating with and appreciating the diversity of people and natural places within the community, they aimed to create bridges across differences, economic conditions, and geographies. From September 1 to November 30, Levin was in residence by himself, reconfiguring the TechLab into C.H.A.R.T., interacting with visitors and mapping their river-related excursions.

Project:

**Toni Latour: You Can Do It!**

**January 2–April 11, 2004**

Artist:

**Toni Latour**

Curator:

**Liane Davison**

Performance and video artist Toni Latour is known for her sense of humour, whether exploring animal behaviour and our relationships with pets or satirizing popular culture’s fascination with self-help guides and gurus. In this installation, the TechLab was transformed into a venue where visitors could “recover” from their self-doubt. You Can Do It! was first developed in 2000 as a performance work (through an artist-led, audience-interactive, “motivational” workshop) accompanied by a video projection (the artist delivering a ten-minute, stream-of-consciousness monologue of positive messages). For the TechLab, this project was redeveloped as a site-specific installation, fully employing its digital equipment and capabilities. You Can Do It! investigated the business of self-help products, using satire, kitsch, and sincerity within a multi-media venue. The artist originally conceived this work as a satirical means of addressing the many drives, desires, and anxieties surrounding art making. To her surprise, her video has since been purchased and used, with full sincerity, as a motivational aid in self-help seminars.



Project:

**Julie Andreyev: Greenroom**

**April 17–July 25, 2004**

Artists:

**Julie Andreyev, with**

**Jordan Benwick, Max/MSP/**

**Jitter Technologist; David**

**Floren, Sensor Technologist;**

**Sean Arden, Sound**

**Production and Prop**

**Finishing; Ian Cochrane, Sound**

**Production; Penny Leong,**

**Website Writer/Editor; Yi-ting**

**Wang, Website Designer; Tian**

**Tian, Photographer and Light**

**Box Graphics; Helen Roberts,**

**Video Documentation; and Eric**

**Chu and Isaac Lee, Flash**

**production**

Curator:

**Liane Davison**



Julie Andreyev's Greenroom transformed the TechLab into an interactive park environment, both real and virtual. Visitors observed, played, relaxed, and created within Andreyev's "virtual" park environment, and experienced their own "tele-presence." The project utilized sensor technology, faux grass and water, video surveillance systems, data projectors, computers, and the internet in the lab to simulate the experience of being outside elsewhere. Greenroom used park imagery from the natural surroundings of the Gallery and the adjacent Bear Creek Park, and also integrated data streamed from another park in a remote location (Granville Island in Vancouver). The video was visitor-activated to merge, in real time, imagery of themselves and the Lab's "park" setting.

Project:

**Sylvia Grace Borda:**

**Every Bus Stop in Surrey, BC**

**July 31–November 7, 2004**

Artist:

**Sylvia Grace Borda**

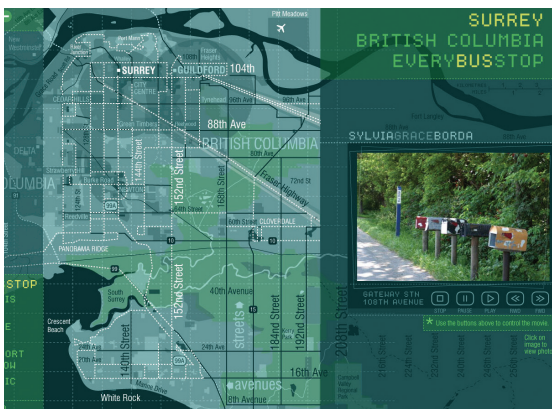
Curator:

**Liane Davison**



Sylvia Grace Borda's project created a composite portrait of Surrey through a database of digital photographs of every bus stop in the city, as the work's title suggests. Collectively, these images created a new kind of digital map, highlighting different aspects of Surrey's diverse geography and wide-ranging neighbourhoods. The artist documented over 1200 individual bus stops across the city's 380 square kilometres. The exhibition consisted of a 38-minute DVD document of the photographs projected at two-second intervals, a computer kiosk which provided access to the interactive database of all 1800+ images, and a series of printed photographs. Borda's project was conceived as part of her then-ongoing series examining transit systems around the world, including a project in which she investigated transportation lines in Tokyo and London as reflections of both globalization and gentrification. These photographs documented each city's evidence of social migration, the international use of super-modernist architectural forms, and the emergence of a working/commuter class of people.

Borda's work is aligned with the practice of documentary photography, concerned with the careful choice and framing of its subject and composition. In Every Bus Stop in Surrey, BC, she also created a critique of digital media and photographic history, exploring what digital technology has to offer while addressing information delivery.





Project:

**Diana Burgoyne:**

**Sound Drawings**

**November 27, 2004–**

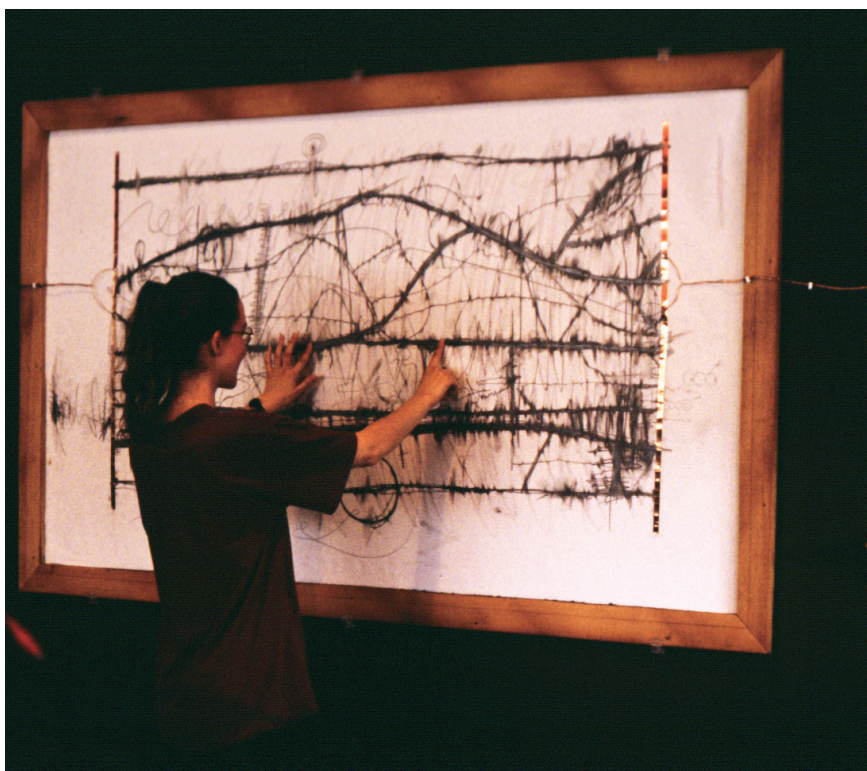
**February 27, 2005**

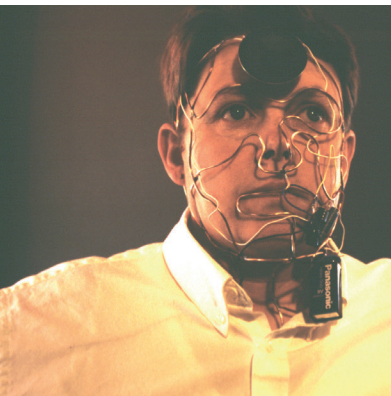
Artist:

**Diana Burgoyne**

Curator:

**Liane Davison**





Diana Burgoyne's work at the time evolved from her performance art practice. She continued to use handmade electronics and performance elements, but with her "sound drawings" she directly involved the Gallery visitor. For her TechLab exhibition, she created drawing surfaces using paper, sensor circuits, and copper wire. These blank, receptive surfaces were installed directly onto the Gallery walls, and visitors were invited to draw on them using graphite pencils. If applied to certain specific areas of the paper, the drawing actions enabled an electronic circuit to be completed, producing sound. The placement and quality of the drawing marks directly controlled the sound frequency, while ongoing manipulation of the artwork (through additional drawing and erasure) affected the nature of the sound. Visitors could thus compose the soundscape as they composed the drawing.

Burgoyne also used the TechLab venue as an artist's studio to continue the research and development of her latest series of "electronic drawings." This project worked with a simple electronic camera (a light detector) and a monitor (a light presenter) to explore the possibilities of drawing with light.

Project:

**Dana Claxton: Landscape #1**

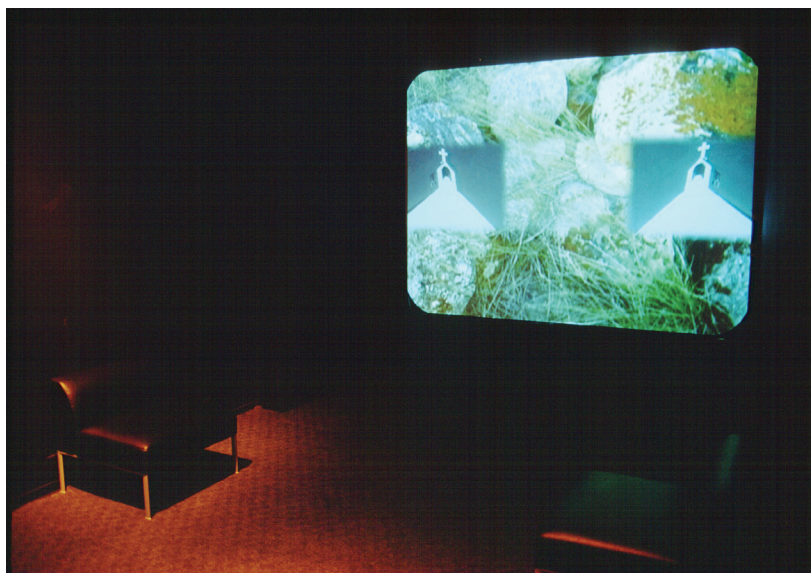
**February 19–May 15, 2005**

Artist:

**Dana Claxton**

Curator:

**Liane Davison**



Media artist Dana Claxton was invited to create a new work in response to the history of Canadian landscape painting. The resulting two-screen video installation Landscape #1 was then premiered by Surrey Art Gallery. In this work, visitors experienced two interwoven landscapes, the physical nature of the Canadian Prairies and the evidence of the cultures who have long lived there. The video work is an expression of the landscape as a living entity, informed by traditional Lakota knowledge and culture, especially Mitakuye Oyasin, which translates as “All My Relations.” As a prayer, it expresses oneness and harmony—a belief in the interconnection with and interrelations between all things, whether plant, human, animal, landform, or the supernatural. Landscape #1 was presented as part of a series of Surrey Art Gallery exhibitions that traced Canadian landscape painting from 1865 to the present.



Project:

**reasonable & senseless:**

**a technical disaster**

**May 21-July 10, 2005**

Artists:

**Donna Szoke, Michael Alstad,  
and KD Thornton**

Curators:

**Liane Davison with  
Donna Szoke**



In reasonable & senseless: a technical disaster, three Canadian artists confronted the seduction and terror of technological disasters, pharmacological mistakes, and ecological mayhem. Rather than accept geopolitical despair, Donna Szoke, Michael Alstad, and K.D. Thornton offered what might be seen as “a fool’s hope.” Szoke’s video installation, reasonable & senseless, viewed on twenty miniature LCD monitors, presented, through found footage, a history of technical disasters and supposed disaster-mitigating methodologies (such as “duck and cover,” a procedure taught to school children in the 1950s and 60s in anticipation of a nuclear war). “Why do we call a technical disaster an accident?” Szoke asked. “It isn’t a magical event—it is a product of human fallibility.” Reason, she continued, “when cut off from our hearts and souls, is a dangerous tool: it is literally sense-less. Often, in the name of reason we make gravely bad choices. Educational, advertising, and promotional films delineate a culture’s values, omissions and biases. By looking at the past we have an opportunity to refresh the lens through which we see the present.”

KD Thornton’s installation, Dairy, included seven ordinary plastic milk jugs that appeared to emit a sinister and mysterious glow. Created during a “level orange terrorist alert” in the United States, this work was inspired by technologies such as ultraviolet radiation, used to process food to make it “safe” for consumption. Thornton said, “We can never really be completely confident that the products and processing practices of today are not the scandalous tragedies of tomorrow. The very idea that water systems or common necessities are vulnerable to contamination strikes fear into our hearts, creating heightened stress and tension in times of instability.” Her other work, Fear, used a software program that searches for the frequency with which technical disasters are written about online. A monitor displayed a website documenting the results of this ongoing search accompanied by an audio response. Our complicity in global warming was explored in Michael Alstad’s interactive video installation MELT. Science warns us that the melting of the polar ice cap will disrupt ocean currents that govern climate around the world. In Alstad’s installation, visitors viewed a satellite image of the cracking and melting of the Ward Hunt Ice Shelf, imagery that initially seemed abstract and visually mesmerizing. Eventually, however, viewers saw an image of themselves merged with the projection of the Arctic’s encroaching ecological disaster, alerting them to the role they were playing in it. “Although technology facilitates our geospatial knowledge, the ‘disaster’ is initially perceived as something separate from ‘here,’ as though only imagined,” said Alstad. “With MELT my intention is to transport the viewer into a space where ‘there’ and ‘here’ converge.”

Project:

**REMIXX: the youth new media  
residency**

**June 30–September 2, 2005**

Mentoring artists:

**Sylvia Grace Borda,  
M. Simon Levin, Leonard Paul,  
and Henry Tsang**

Program Coder:

**Jeremy Thorp**

Project Coordinator:

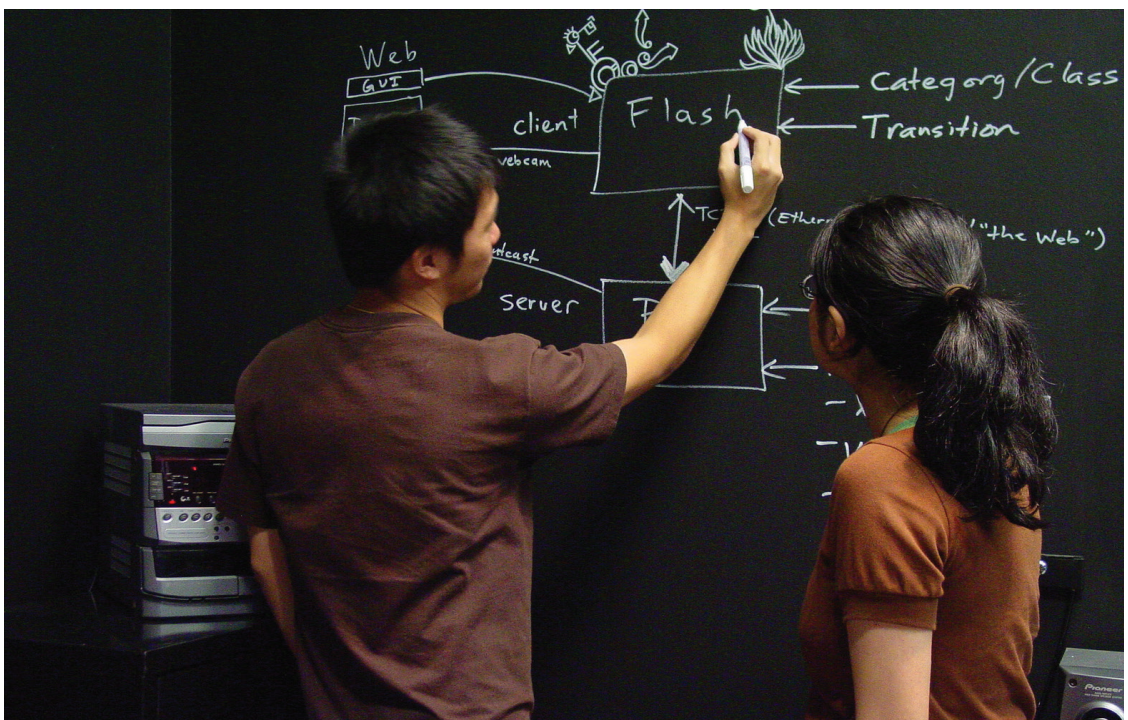
**Fiona Lemon**

Interns:

**Maimoona Ahmed and David Chen,  
with many youth volunteers**

Curator:

**Liane Davison**





REMIXX was conceived as an environment where talented youth artists could explore the growing significance of screen-based and remix culture, in their lives and in contemporary art practice. A team of youth artists and mentoring artists was invited to utilize the Gallery's TechLab environment as a studio. An intensive training/mentoring program was offered, to lead the team in the conceptual and technical development of an exhibition utilizing computers, web cameras, specialized software, and code. This project engaged over one hundred Surrey youth, either as contributors of digital photographs, video, or music, on the theme of Surrey's people and places, or as artists who were part of the volunteer team that worked on the creation of an interactive and performative exhibition of the digital content. The TechLab served as a hub of creative activity for young digital artists and mentors throughout the summer.



Project:

**REMIXX.sur.RE: the youth new  
media project**

**October 8–March 12, 2006**

Mentoring artists:

**Sylvia Grace Borda,  
M. Simon Levin, Leonard J. Paul,  
and Henry Tsang**

Program Coder:

**Jeremy Thorp**

Project Coordinator:

**Fiona Lemon**

Exhibition production interns:

**Maimoona Ahmed and David Chen.**

**Many youth volunteers, with  
contributions of sound, video,  
still imagery, animation  
and text**

Curator:

**Liane Davison**



This exhibition posed the question, “How do Surrey’s youth see Surrey?” Building on the REMIXX residency, the project was one of the most inclusive and innovative youth-art projects using digital media attempted in Canada at the time. The project was youth-driven and youth-led, and challenged a diverse team of volunteers to represent their vision of Surrey using the techniques and capacities of contemporary digital technology. REMIXX was composed of images, sound, interactivity, and software; it used 700 digital photos, 30 digital video and animation clips, text in five languages, six customized songs, and 260 audio clips created by Surrey youth. Its custom-built software engine was designed to produce hundreds of thousands of sound and image compositions from this database. These “remixes” were interactive—REMIXX.sur.RE personalized every visitor’s visual and audio experience. The exhibition was an extraordinary expression Surrey’s people and places, and an example of youth’s sophisticated engagement with technology. It also demonstrated technology’s capacity to reveal the new technological reality of the day. The exhibit included digital content created by 96 youth from all of Surrey’s communities. The exhibition production team (two youth digital art interns, a project coordinator, a collective of volunteer “documentary correspondents,” and five mentoring artists skilled in media arts and technology) configured not only the presentation of the exhibition, but also its system of operation. The team created the program from the ground up, using bi-directional communication between Pure Data and Macromedia Flash. Its real-time motion detection and real-time audio remix, created in Pure Data, is responsive to viewer interaction. The Remixx Client, created in Flash, is an adaptive, XML-driven media mixer. Using a custom XML schema, the REMIXX team created a map of “tags,” i.e., words or phrases that can be used to describe an image, a video, or a piece of text. The Remixx Client used the links between these tags to create the compositions on display, exploring relationships between the media both intentional and unintentional. REMIXX used its large database to create an almost endless number of captivating media compositions, generated live by the movement of visitors in the Gallery.

Pictured, left to right:  
M. Simon Levin, Inder  
Nirwan, Leonard J. Paul,  
Fiona Lemon, Henry  
Tsang, David Chen, and  
Maimoona Ahmed.

Project:

**Suzanne Northcott: Crossing  
Boundary**

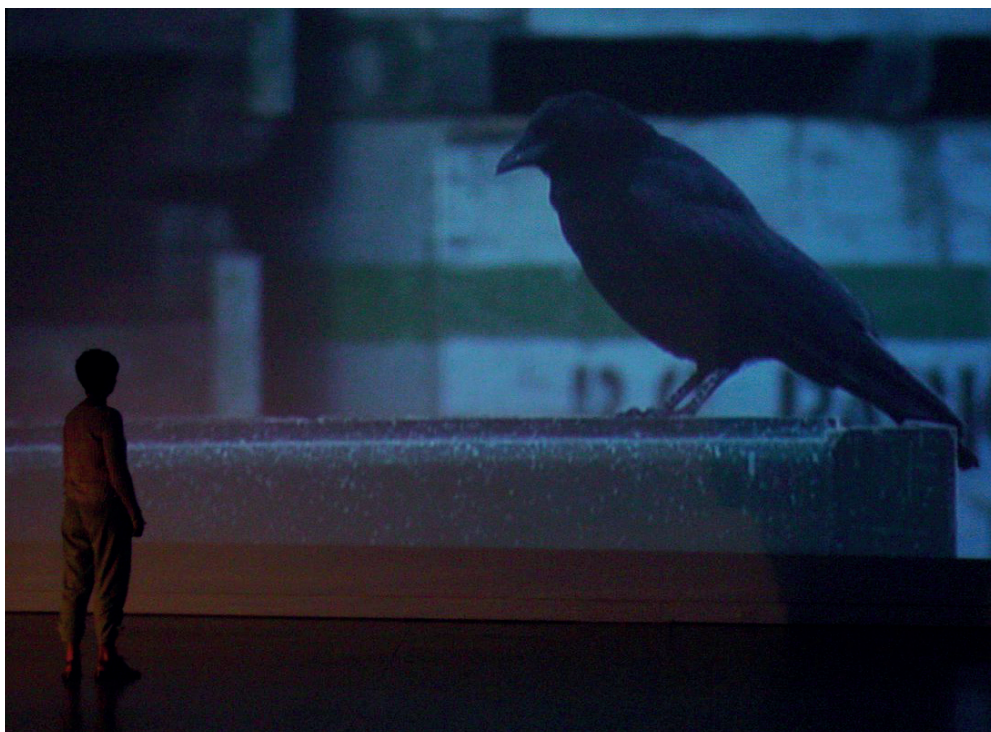
**July 30–October 9, 2005**

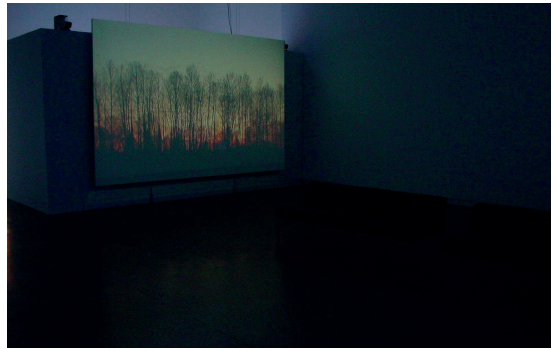
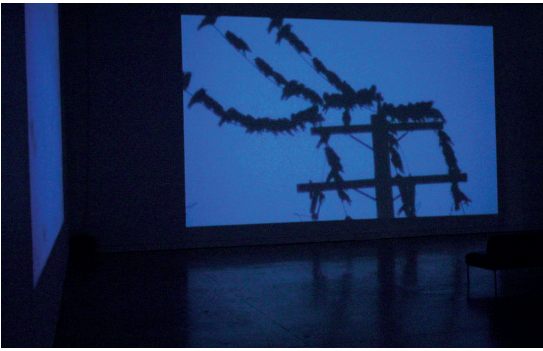
Artists:

**Suzanne Northcott, with  
Rudy Kovanic, cinematographer;  
Laurie Long, video editor and  
post-production coordinator;  
Jean Routhier, sound designer;  
Rishma Dunlop, poet; and Rob  
Butler, biologist**

Curator:

**Liane Davison**





Langley-based artist Suzanne Northcott is fascinated by the behaviour of crows. To her, they represent an “awesome otherness,” especially every evening when 16,000 Northwestern crows migrate from their Vancouver scavenging territories, crossing Boundary Road to a communal roost in Burnaby. Observing them, Northcott saw metaphors in their behaviours on the nature of boundaries and connections, the space between day and night, city and suburb, the mundane and the mythic, and the tensions between. In her panoramic video installation, Crossing Boundary, Northcott also explored the parallels between the crows’ eastward pilgrimage in unruly black ribbons and the highway parade of commuting workers in their cars.

The video installation created an environment that echoes the crows’ movements. The gathering is gothic: crows throng the rooftops of car dealerships and crowd every telephone wire, jostling and calling as they wait to enter their roost in an alder wood grove. By dark they have all found their way into the roost and the cacophony of the gathering dies slowly to an impenetrable canopy of silence. The installation was accompanied by Northcott’s biological studies and drawings and the plans that led up to, and informed, the final artwork.

Project:

**One River (running)**

**October 22–December 18, 2005**

Artists:

**Aleksandra Dulic, Kenneth  
Newby, Martin Gotfrit, and  
Dinka Pignon, in collaboration  
with Milena Droumeva, Layda  
Gongora, Alex Matisco, So-Young  
Park, Derek Robinson, and  
Phil Thomson**

Curator:

**Liane Davison**

This immersive audio environment was filled with narrated stories about Surrey's past or imagined future, recorded by Surrey citizens. Sensors placed through the exhibit were triggered by visitors' movements, activating the artwork's voices and video. One River (running) was an interactive-spatial-audio-visual installation, exploring the tributaries of culture and history that combine to make up a contemporary Canadian multi-cultural community. Voices speaking different languages twined and traveled around the Gallery in an orchestrated polyphony mixed with sounds from Surrey's urban and natural environment. Video images of disembodied talking mouths were distributed throughout the space, seeming to float in mid-air. Visitors walking through the installation triggered various audio events, creating an ever-changing soundscape.



Project:

**Surrey\_cine**

**October 22–December 18, 2005**

Artists:

**Veeno Dewan, Maya Ersan,  
and Nimi Lange; music by  
“technojerk and the roaming  
rips,” Bruce Henczel,  
and Coin Gutter, with  
co-cinematography by  
Sebnem Koyuncu**

Curator:

**Liane Davison**



Three videographers were invited to create a short work each, responding to the city of Surrey's geographic landscapes. Their travelogues explore Surrey as a site of rapid development, a place rich with children, and with the childhood memories of recent immigrants. Veenoo Dewan's Doku'ment Surrey presents a multifaceted snapshot of contemporary Surrey and its natural and human geography. Through time-lapse street footage, still shots, innovative camera angles, and scenes shot at different times of day, viewers were taken on a surreal, high speed journey around the city and its neighbourhoods. The familiar and undiscovered areas of Surrey were juxtaposed using different video techniques including colour masks, split screens, and multiple screens to highlight the region's distinct character. Viewers may have found themselves thinking, "I know this...but where is it?" Or, "I pass by this every day, but I've never seen it like this before." Surrey-based artist Dewan sought to show beautiful as well as raw images of the place. He was interested in its different landscapes, the multicultural, urban, industrial, parks, water, and mountain views. About his work, he said, "Side by side with rapidly changing Surrey, I am also seeking to capture the stillness and unchanging facets of the city—old time neighbourhoods and small strip malls, juxtaposed with rows of nearly identical new single-family houses in standardized symmetrical plots. There are literally hundreds of panoramas people pass by every day and barely notice."

Maya Ersan's animated video Daydream was inspired by conversations with people who had not grown up in Surrey and therefore had to negotiate a complicated emotional relationship with their new landscape. Her intent, she wrote, was "to hold interviews with recent immigrants living in Surrey, asking them their memories about their first toy." Her aim, she continued, was "to investigate these objects as portals into places and times remembered. As a recent immigrant myself, I find that the closer I look at what it means/feels to be culturally and geographically separated from where I experienced my childhood, the closer I become to what my immediate surroundings mean emotionally . . . In this imagined landscape these toys that are reconstructed from memory will play out a story. This will be an attempt/suggestion to replace a feeling of disconnection or absence with an attention to details and subtleties in the immediate surroundings."

In the video titled The Class from 5 to 9, Nimi Langer presents the awakening moments of Surrey BC, from the point of view and thoughts of Ms. Holman, an elementary school teacher, during her commute to school. The morning events the teacher encounters are filmed and layered with her students' voices, which follow her throughout her journey. Together, images, music, and spoken language present a subjective statement on the uniqueness of Surrey as a city and as a home.



Project:

**Reva Stone: Imaginal Expression**

**January 14–April 2, 2006**

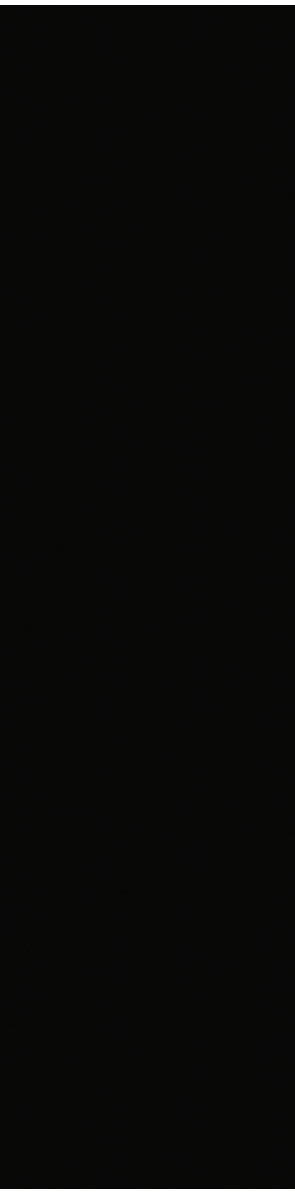
Artist:

**Reva Stone**

Curator:

**Liane Davison**





Reva Stone is one of Canada's most important digital media artists. Imaginal Expression, premiered in a retrospective at the Winnipeg Art Gallery in 2004, is a viewer-activated, computer-generated, real-time animated, 3D environment. The artwork's 3D imagery is based on protein molecules, wrapped with scanned imagery from the human body—flesh, hair, blood vessels, bruises, and scars. As people are sensed in the Gallery, the molecular components begin to animate to form a molecule, to mutate, and to follow the movement of the visitor. When the visitor leaves, the molecule begins to degenerate. Imaginal Expression was an interactive and immersive video installation, utilizing two computers joined with a router, two ATI Radeon 9700 Pro cards, a computer visioning system, and four video projectors. It was in part a response to the technology of modelling the genetic mutation of cells, as well as to contemporary body-imaging technologies such as ultrasound, positron emission tomography (PET), computer-tomography X-ray imaging (CT), and magnetic resonance imaging (MRI). David Kelly worked with Reva Stone to author the DirectX programming and C++ coding.

Project:

**Reva Stone: Exchange—  
a TechLab Artist in Residence  
Project**

**January 14–April 2, 2006**

Artist:

**Reva Stone**

Curator:

**Liane Davison**

Concurrent with her exhibition Imaginal Expression at Surrey Art Gallery, Reva Stone served as an artist in residence in the TechLab. During her three-month residency, she used the TechLab as a studio space to develop a new media project, Exchange. Working with a programmer in Winnipeg, who developed the basic coding for the project, Stone explored forms and ideas around the theme of artificial intelligence. She was interested in examining philosophical and theoretical questions about the nature of sentience at the interstice between humans and machines; that is, at the conjunction of human consciousness and artificial intelligence. Through the use of voice- and face-recognition software, video capture, and graphics, Stone created an interactive digital art work that appeared to have sentience. The public was invited to meet with her during the residency and view her work in progress.

In her statement of the time, she wrote, “For more than ten years I have been investigating the ways in which Western culture is engaged in the modeling, simulating, engineering, and manipulating of biological life. Living matter is being revealed as increasingly mutable . . . I have responded to the technologization of living matter by creating works that seem to mutate, evolve, and respond with a life of their own. I situate my work at the increasingly blurred boundary between what is born and what is manufactured, what is animate and what is inanimate.”



Project:

**Judy Cheung: freeLink**

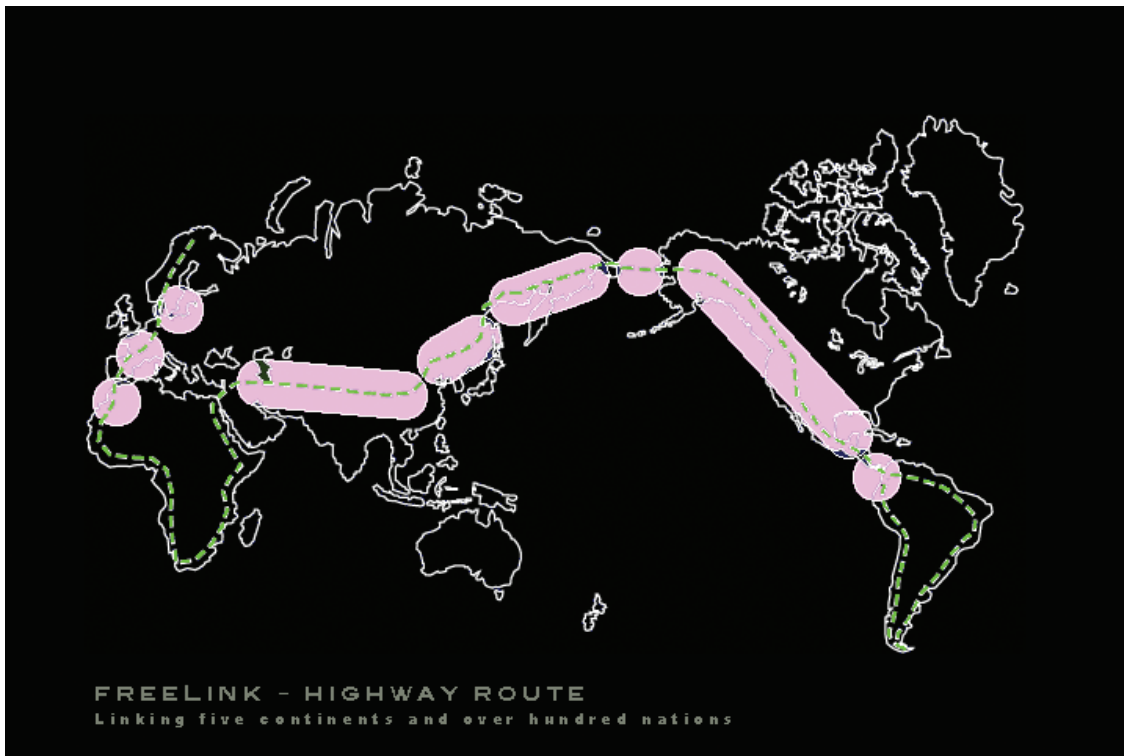
**April 8-July 1, 2006**

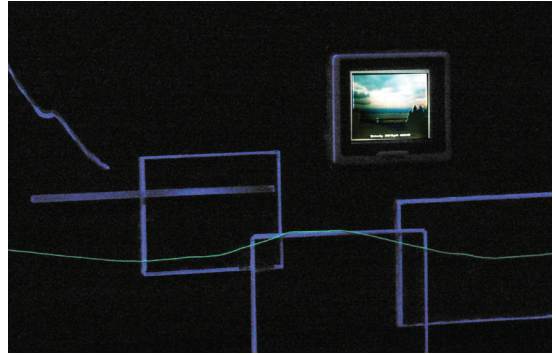
Artist:

**Judy Cheung**

Curator:

**Liane Davison**





Judy Cheung's multi-media installation explored tele-transportation, social organization, public and private interaction, and the desire to find secure ways to connect globally while maintaining distinct regional and cultural identities. Inspired by a 30 year-old engineering scheme—the Bering Strait bridge proposal to join Alaska and Siberia—the freeLink project was a simulated environment exploring how voyagers might travel from continent to continent via one single land- and bridge-based highway. The installation was composed of shallow relief and wall drawings of cities, mountains, and bridges. Within this band of representations, video monitors were placed that provided real time webcam images of live traffic conditions from various cities. There were small speakers broadcasting sounds (traffic noise, radio broadcasts, fictional conversations) collected from the actual sites. The dialogue reflected current affairs pertaining to the various regions and provided viewers with a sense of adventure and interactivity. As in other works by Cheung, freeLink explored the phenomenon of travel, inviting visitors into a sensory and experiential journey. The work spoke to current socio-political consciousness while foreshadowing a utopian future with aspirations of freedom, equality, security, mobility, and speed.

Project:

**Jeremy Owen Turner:**

**Voice of Fire**

**September 16–November 5, 2006**

Artist:

**Jeremy Owen Turner**

Curator:

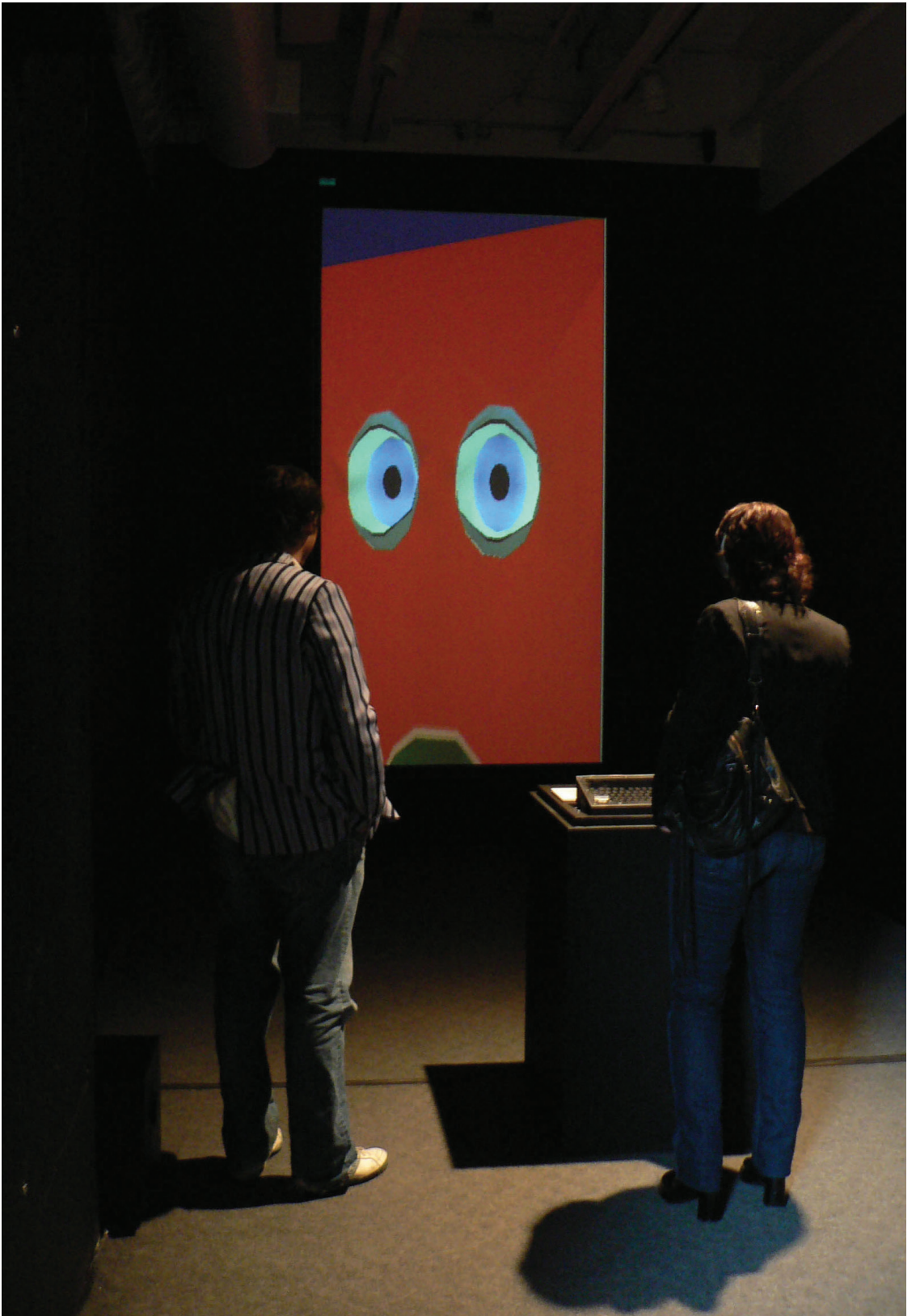
**Liane Davison**

Jeremy Owen Turner's Voice of Fire, which took place online and in the TechLab, was a part of the group exhibition Fiction non Fiction. Both interactive and performative, it referenced the famous 1967 painting Voice of Fire, by American Abstract Expressionist Barnett Newman. Newman's painting, which consists of a red vertical stripe on a blue background, inserted itself into the Canadian consciousness in 1989 when it was purchased by the National Gallery of Canada for \$1.8 million, sparking controversy among conservative elements in politics and the media. Turner chose to use the iconic artwork to both humorously and seriously explore Newman's quote<sup>1</sup>: "Painting, like passion, is a living voice which, when I hear it, I must let it speak, unfettered." In Turner's own work, the idea that the painting was alive and could speak was realized in the form of the chat room avatar, accessible online and through a computer set-up (keyboard and headphones) in the TechLab. Just outside the room, a screen and didactics directed visitors about how to talk to the artwork; a posted schedule indicated when the avatar was available to answer questions.

The installation posed questions about the nature of "reality" in our contemporary world, filled as it is with images shaped and manipulated by the mass media and popular culture. Turner's creation of an interactive chat room environment, and specifically of an "avatar" that could converse with visitors, plugged into the kinds of online strategies, devices, and communications that unsettle our certainties about what or who is "real" and what is staged, what is human, and what is automaton.

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<sup>1</sup> Quoted in MOMA's New American Painting exhibition catalogue, 1959.





Project:

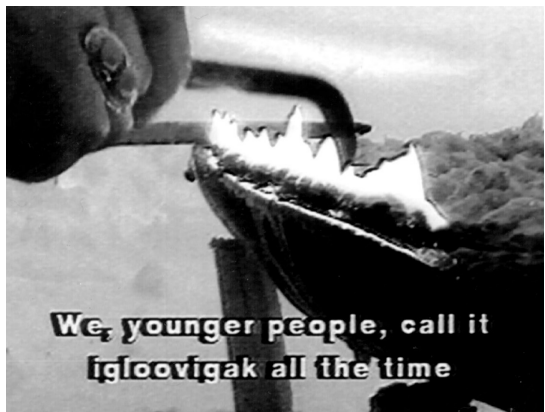
**Three Videos from the Women's  
Video Workshop of Igloolik  
November 18, 2006-  
March 11, 2007**

Artists:

**Mary Kunuk, Arnait  
Video Productions**

Curator:

**Brian Foreman**



**Left:** still from [Aqtuqsi \(My Nightmare\)](#), Mary Kunuk, 1996, single-channel video. **Right:** still from [Qulliq \(Oil Lamp\)](#), Arnait Video Productions, 1983, single-channel video.

This video exhibition asked how one might experience the dawning of the third millennium in a small Inuit community during enormous political and social change. Since its beginnings in 1991, the Women's Video Workshop of Igloolik has revealed the originality of its producers, the context of their work and lives, and their cultural values as unique in Canada. Whether in the form of a series of interviews, or as short works linking songs to the words and re-enactment of traditional activities, the videos celebrate the specificity of the culture of women in Igloolik. The videos included: Qulliq (Oil Lamp), Aqtuqsi (My Nightmare), and Ningiura (My Grandmother). Each work expressed the artist's research into traditional and contemporary Inuit styles of narration. They all also reflected the cultural values of the participants: respect for community events, for Elders, for hunting and fishing seasons, and for certain traditions belonging to particular families. Participants worked as a team to write the scenes of each script, to make the costumes and accessories, and to shape the interaction and performances of the actors. Working in difficult social conditions, the sheer endurance required of the women in the workshop to produce these videos testifies to the importance of the project in their lives.



Project:

**Cultural Mashups: Bangra,**

**Bollywood + Beyond**

**March 31–August 19, 2007**

Artists:

**Tarun Nayar, Lady Ra, Suez,**

**Leonard J. Paul, Niranjan Rajah**

Curator:

**Liane Davison**





This immersive and interactive exhibition was inspired, in part, by the evolution of Bhangra music and dance from their folk roots in India to internationally popular hip hop. Musical influences were paired with the increasing importance of Bollywood films and the emergence of South Asian movie stars within Western entertainment media. This project also responded to the significance of India's contributions to the development of computer technologies, and the changing character of club culture with the globalization and digitization of both traditional and popular music. Using the strategies of DJ and VJ artistry, combined with viewer-activated technology, this edgy mash-up performed “show and tell” as visitors danced. Featuring sound by Beats without Borders, visuals by Suez, and other media effects by project team members Tarun Nayar, Lady Ra, Suez, Leonard Paul, and Niranjana Rajah.

Project:

**(sub)Urban Exchange:**

**EastKilbride.uk<>Surrey.ca**

**A postcard exchange between  
youth photographers from  
Surrey, Canada and East  
Kilbride, Scotland**

**August 18–December 9, 2007**

Artists:

**Sylvia Grace Borda**

**with participating youth  
artists in Surrey, BC and  
East Kilbride, Scotland**

Curators:

**Brian Foreman and**

**Liane Davison**



**Top:** Jena Duncan, East Kilbride postcard, 2007, collage.

For 150 years, postcards have preserved and exchanged the thoughts of travelers combined with images of encountered landscapes. Created to send short messages, postcards quickly became souvenirs, identifying what was considered beautiful or important in specific locations. The (sub)Urban Exchange project modernized this strategy using digital technology, with the exhibition documenting two places in different parts of the world, both with communities in the midst of rapid transformation, together with the thoughts of youth who live there. Surrey's students had been exploring the emergence of Whalley as the planned urban centre of Surrey. Their photography captured vestiges of what was once a village centre in an agricultural municipality, quickly disappearing as it becomes urbanized through densification and modernist architecture. They showed us what was built before they were born, and scenes of the city now emerging. Under the direction of Enver Creek Secondary School teacher, Laura Hackett, and inspired by artist Sylvia Grace Borda, students learned how to rethink and create images of their local environment through postcards and digital photography. Borda knows Surrey well, as a result of her digital photography project Every Bus Stop in Surrey, BC. This project continues the legacy of photographers such as Eugene Atget (Paris), Alan Sekula (Los Angeles) and Stan Douglas (Vancouver), who have sought to photo-document the landscape of their community's moments of transition.

A parallel project, led by Sylvia Grace Borda as an artist-in-residence, engaged students in East Kilbride, Scotland, one of the United Kingdom's "New Towns." Built after WWII, and fuelled by the utopian ideology that people should live in a "garden city," East Kilbride was originally designed to accommodate population overspill from Glasgow. However, East Kilbride's common green spaces, once intended to provide better living conditions, now represent real estate ripe for development. Changing values are making new demands on the town to become a city. Like Surrey, it is experiencing rapid suburban development, growing residential and industrial neighbourhoods, dwindling agricultural lands, and dynamic changes in its cultural demographics through immigration. Some images by EK youth focused on the schools built in the 1950s, now being demolished. They witnessed the loss of acres of green space once serving as their campuses, in contrast to the mega schools under construction on the outskirts of town. Accompanying the postcards were digital slide shows of additional images, an online blog where students in both countries exchanged information, ideas, experiences and images comparing their two cities, a website where postcards could be digitally experienced, and digital videos about each community.

East Kilbride Art Centre presented the exhibition following its premier in Surrey. This project involved approximately 200 youth. The involvement of Enver Creek Secondary school students was sponsored by the Gallery, with support from the City of Surrey, the BC Arts Council, and the Canada Council for the Arts. Sponsorship for Borda and her involvement with East Kilbride Schools in Scotland was made possible with funding from the South Lanarkshire Council and East Kilbride Arts Centre. The project was initiated in Scotland to commemorate East Kilbride's 60th Anniversary celebrations (1947–2007).

Project:

**Linda Sormin: Roaming Tales**

**September 15–December 16, 2007**

Artist:

**Linda Sormin**

Origin of Exhibition:

**MacKenzie Art Gallery,**

**Regina, Saskatchewan**

Curator:

**Timothy Long**

For her contribution to the exhibition Mobile Structures: Dialogues between Ceramics and Architecture in Canadian Art, Linda Sormin was offered the TechLab as a space to create an installation combining ceramics and digital technology. Her installation Roaming Tales (2006) combined the world's oldest technology, ceramics, with what was then the world's newest technologies: LCD screens, surround sound, digital video projections, and live webcam feeds. Sormin's previous installations were collaborative constructions, filling rooms with both fired and unfired ceramics as well as masses of found or donated objects and remnants of other artists' works. In her statement, she wrote, "I am curious about the hierarchies we form around art objects and old and new media. I use discarded sculpture and shards of ceramic kitsch, cheap and valuable ceramic pieces, and personally treasured souvenirs donated by people in the community. A friend just offered me pottery from the collection of his grandmother who passed away this year."

Roaming Tales was originally part of an internationally travelling exhibition that explored the relationship between ceramics and architecture in art. Because Sormin's installations are site-specific, each installation is thematically unique. At Surrey, Sormin addressed the themes of high and low as well as old and new. She wrote, "I'm excited by the potential of deepening/broadening understanding of 'community'—to bring [ideas of] 'dirty' and 'clean,' 'high tech' and 'low tech,' 'wet' and 'digital' . . . into dialogue, into tension in one space." Parts of her installation were constructed to ceiling height and others throughout and around the TechLab, allowing viewers to be physically above, under, and inside the art. At the same time, sounds and moving images were presented on screens ranging from old black-and-white security monitors to brand new portable LCD screens.





Project:

**Janet Cardiff: Forty-Part Motet**

**January 12-March 28, 2008**

Artist:

**Janet Cardiff**

Curator:

**Liane Davison**

Origin of Exhibition:

**National Gallery of Canada,**

**Ottawa, Ontario**



Forty-Part Motet (2001) is recognized as a sublimely beautiful sound installation by one of Canada's most important contemporary artists, Janet Cardiff. It is both an exhibition and a digitally mediated performance. First presented by the National Gallery of Canada in 2001 and then shown at the Museum of Modern Art in New York and the Tate Gallery in England, the work was hosted locally by the Gallery. Here, it made its first appearance in British Columbia, as part of the 2008 Cultural Olympiad.

Janet Cardiff's Forty-Part Motet won the National Gallery's Millennium Prize, the first international prize in the visual arts to be created in Canada. The jury commented, "Forty-Part Motet skillfully combines the languages of music and sculpture with contemporary communications technology, profoundly altering our perception of the space. The jury was deeply moved by this work. Using the most immaterial and most intimate of materials, the human voice, the artist has produced an experience of pure transcendence." In making this artwork, Cardiff reworked "Spem in Alium," by the sixteenth century English composer, Thomas Tallis. It is considered one of the most complex pieces of polyphonic choral music ever written. The artist arranged for forty voices from the Salisbury Cathedral Choir to be recorded separately, and then synchronized their voices to be played back individually through forty speakers arranged in a circle in the exhibition hall. In this work, sound fills the gallery space as though it were sculpture, with viewers invited to walk around and between the speakers, which each stand about head height. "Each speaker unit becomes a mouth and the audience unravels the composition by moving amongst the speakers and hearing harmonies change as if singers were standing next to them." Repeatedly, reviewers and visitors have commented on their wonder at being brought to tears while experiencing this exhibition.

Janet Cardiff  
Forty Part Motet (A reworking of  
"Spem in Alium" by Thomas Tallis  
1556/1557), 2001

40 loud speakers mounted on stands, placed in an oval, amplifiers, playback computer  
Duration: 14 min. loop with 11 min. of music and 3 min. of intermission  
Dimensions variable

Sung by Salisbury Cathedral Choir  
Recording and Postproduction by SoundMoves  
Edited by George Bures Miller  
Produced by Field Art Projects

Forty Part Motet by Janet Cardiff was originally produced by Field Art Projects with the Arts Council of England, Canada House, the Salisbury Festival and Salisbury Cathedral Choir, BALTIC Gateshead, The New Art Gallery Walsall, and the NOW Festival Nottingham.

© Janet Cardiff; Courtesy of the artist and Luhring Augustine, New York.

Project:

**Glocal: Your World in Motion**

**January 1, 2008-**

**March 31, 2009**

Artists:

**Sylvia Grace Borda,**

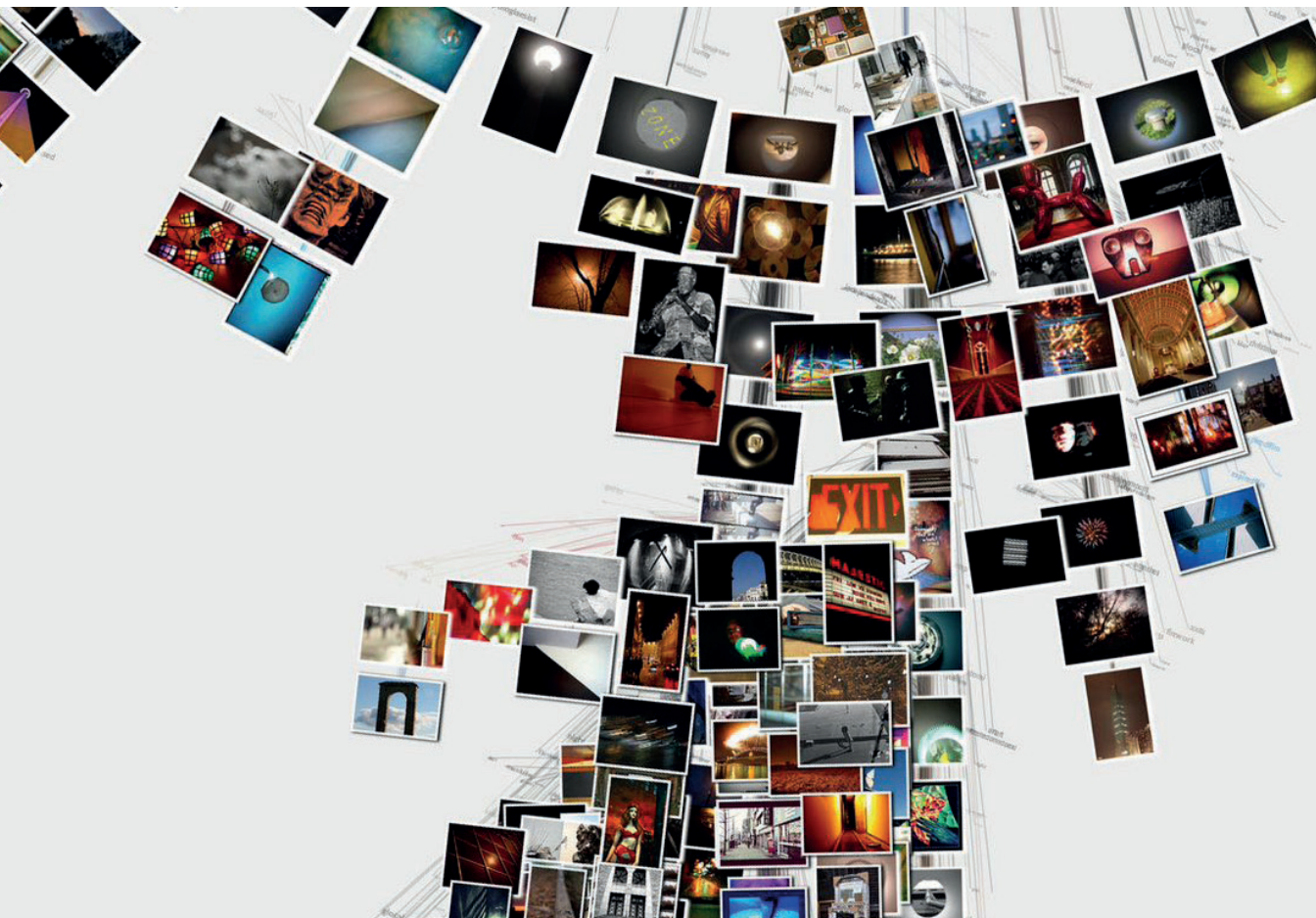
**M. Simon Levin, and Jer Thorp,**

**with contributions**

**by thousands of artists**

Curator:

**Liane Davison**



The Glocal project was a collaborative, multifaceted undertaking that examined the changing role of digital image-making within contemporary culture. As the artists and curator observed, the digital revolution has included the global proliferation of millions of image-taking devices (such as digital cameras, video recorders, cell phones, and PDAs) and the sharing of billions of images through online networking and archival sites (such as Flickr). As this democratization of digital technologies made the ability to take photographic images globally ubiquitous, Glocal looked at the changing roles and relations of images within the visual field. Thousands of individuals, including artists, non-artists, and youth, were invited to participate in ongoing, multi-voiced, digital dialogues and to collaborate in the making of what was then Canada's largest "contributive" digital artwork.

Glocal was particularly interested in exploring the construction and relevance of the "unique" or "originary" image in relation to the multiple or "multitude." Questions posed included, "How can an image retain its 'uniqueness'? Does it remain a relevant concept for digital image making?" Through an interactive installation as well as a series of online platforms, Glocal examined the new digital lives of images. Through its complex of online tools, strategies and communiqués, classroom activities, face-to-face workshops, talks, and seminars, Glocal invited participants to expand ideas around digital imagery. It also asked them to add to its pool of images, which amounted to over 10,000 by the end of the project.

By pooling images, participants were contributing to the creation of the Glocal artwork, whose form and content continued to evolve and to examine the shifting nature of "community" in the digital age. As its title suggests, the project also addressed how global frameworks can reshape conceptions of local identities. It encouraged local voices to assert themselves globally, by contributing individual points of view to a vast visual undertaking.

In the physical context of the Gallery, visitors encountered the in-progress digital artwork through an interactive exhibition prototype. Multiple moving and changing images were projected onto a curved screen whose upper, vertical component was designated as a "view port." Through innovative computer programming, diverse images were juxtaposed or reconfigured according to their formal qualities, such as luminosity, colour, shape, and composition. Gallery visitors might interact physically with the projected artwork by using their hands to select images from the lower, horizontal part of the screen and to flick them upwards into Glocal's constantly shifting and expanding visual dialogue. Through these processes, participants reflected on the ways in which they apprehend and experience the world through image-making.

If one was to ask what exactly spawned the TechLab, a purpose-built space dedicated to the production and exhibition of new media art at Surrey Art Gallery, you might be surprised by the response: “Well it all started with a colour printer.”<sup>2</sup> Funny though this might sound, it is not so very unlikely.

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**The Work Will Point the Way<sup>1</sup>:  
Techlab Residencies at Surrey Art Gallery (2009)**

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by Caroline Seck Langill

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Historically, the acquisition of new technologies contributed to whole artistic movements. In the late 1960s, Nam June Paik acquired one of the first Sony Portapaks available to consumers. According to Max Dean, another went to Vancouver where it acted as a catalyst and a determining factor in the history of art and technology in Canada, as it did elsewhere.<sup>3</sup> The evolution of Western Front was highly dependent on the early acquisition of new technology, as was the Kitchen in New York City, a hybrid performance space founded by Nam June Paik, with Steina and Woody Vasulka.<sup>4</sup> The portable video camera arguably spawned an artistic movement which still has legs, a movement that evolved in parallel with new media art.

Emerging simultaneously in the early 1970s, electronic media art was not embraced by the broader arts community to the same extent as video. Artist and scholar Sara Diamond cites a number of reasons for the resistance of art institutions to engage with electronic media art: the outdated perception of the artist by museums, galleries, and curators; the necessity of upgrades to these works due to their fragile nature; the demands that interactivity makes on the exhibition context; and the lack of predictability in terms of the behaviour of the audience confronted with the work.<sup>5</sup> Diamond's observations

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<sup>1</sup> Estonian proverb

<sup>2</sup> Liane Davison. In conversation at the Surrey Art Gallery, July 2009.

<sup>3</sup> Interview with Max Dean, May 2006.

<sup>4</sup> Western Front is an artist-run centre in Vancouver. Founded in 1973 as an interdisciplinary space, it continues to exhibit and present work across media.

are astute and provide some explanation for the dearth of literature available on the early history of electronic media art. However, there were sporadic exhibitions that occurred during the early years of new media art which contribute documentation of the significant art historical contributions Canadians made to this genre.<sup>6</sup> In any case, a shift has occurred in the latter part of the twentieth century with new media taking on a higher profile within the museum as the ubiquity of computer technologies elevated curator's and museum staff's inclination to engage with digital media.

One of the more significant aspects of new media art influencing the museum's response to the genre, is the changing relationship of the audience to the work. Josée Drouin-Brisebois, curator of contemporary art at the National Gallery of Canada, recently mounted the exhibition *The Viewer as Performer*, acknowledging the participatory nature of much contemporary art that employs new media. In her catalogue essay, Drouin-Brisebois considers how the role of the viewer has changed so dramatically over the last 40 years beginning with the foregrounding of incompleteness or openness in art and literature. We can track the changing relationship of the viewer to the artwork back to Duchamp and Dada performance works, and then to the 1960s where the rise of performance art occurred in conjunction with live events like public rock concerts.

As the spectator was being enrolled into the artwork, artists were opening up their practices to embrace distributed authorship and collective practices. However, the bias against collectivity has been palpable in the museum even though, as Sara Diamond notes, it "is fundamental to the postwar American understanding of the artist and the avant-garde".<sup>7</sup>

Participatory approaches of the Futurists, the Surrealists, and the artists and engineers who collaborated on *9 Evenings: Theatre and Engineering* shepherded in new methods of artistic production.<sup>8</sup> In Vancouver, following on the heels of *9 Evenings* and *Experiments in Art and Technology (E.A.T.)*, the Canadian interdisciplinary collective Intermedia mounted large exhibitions, taking over the Vancouver Art Gallery for expansive exhibitions in 1968/69/70. Their geodesic domes, coupled with installations involving TV sculptures, and electronic circuits suggested a channeling of the whole earth movement from their neighbours to the south. The gradual influx of new technologies into art spaces enabled ease of production and communication among members of these new artistic communities.

However, despite evidence of a burgeoning movement in early new media art practice, resistance from curators and museum staff prevented a wholehearted embrace of early electronic and new media art. Museums were ill-prepared to handle electronic media art. Curators were not conversant in the triangulated history of these new media, which drew equally from computer science and art history. Lack of a common lexicon between the artists working with electronics and computers and the curators, who were already dealing with dematerialization of the art object, made it difficult for these two communities to engage in a dialogue. The galleries themselves could not easily exhibit the work, due to lack of wiring to support electronic components, and the conservators were not electrical technicians or programmers putting maintenance of any work purchased in jeopardy. Electronics inserted themselves gradually into art making during the analogue/digital shift, between the 1950s and late 1970s, resulting in electronic media works that included both analogue and digital components. Over time, these conditions have shifted, but not without the advocacy of the new media art community who have continued to draw from new technologies in order to critique this new field as experts and inform us about its effect. Dedicated spaces for exhibition have emerged—the SAT and Oboro in Montreal, and InterAccess in Toronto—which have given access to audiences interested in how we, as a culture, might engage with technology as a medium of art production and conception.

Yet, there are very few spaces specifically designed to support new media art through all stages of production: from conception, to

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<sup>5</sup> Diamond, Sara. "Silicon to Carbon: Thought Chips." *Beyond the Box: Diverging Curatorial Practices*. Ed. Melanie Townsend (Banff: The Banff Press; Walter Phillips Gallery Editions, 2003).

<sup>6</sup> These exhibitions include, but are not limited to, *Another Dimension* curated by Mayo Graham at the National Gallery of Canada in 1977, Dale Amundson's series of exhibitions, *Beyond Electronics*, for Main/Access, the School of Art at the University of Manitoba in 1989, and *Machinations* curated by Louise Poissant at Galerie Christiane Chassay in Montreal that same year.

<sup>7</sup> Diamond, Sara. "Participation, Flow, and the Redistribution of Authorship: The Challenges of Collaborative Exchange and New Media Curatorial Practice," *New Media in the White Cube and Beyond*. Ed. Christiane Paul (Berkeley and Los Angeles: University of California Press, 2008).

<sup>8</sup> *9 Evenings: Theatre and Engineering* was mounted at the 69th Regiment Armoury in New York City, 1966. Engineers Billy Klüver and Fred Waldhauer and artists Robert Rauschenberg and Robert Whitman, participants in *9 Evenings*, founded *Experiments in Art and Technology* with the intention of continuing with the collaborative practices in electronic media that were so much a part of the germinal event.



production, and finally, exhibition. The TechLab residency program in Surrey is unique in its ability to assist with each stage of new media art practice from inception to completion; whether the production is undertaken by one artist or a collaborative team.

By the late 1990s, Liane Davison, then curator at Surrey Art Gallery in Surrey, British Columbia, recognized the significance of new media, due in no small part to her knowledge of work by pioneers of Canadian electronic media art like Roland Brener, Nancy Paterson, and Diana Burgyone. While Davison was receptive to their practices, she also recognized the challenge for artists working with new technologies to access traditional gallery spaces, and likewise for the public who had little understanding of how to read new media art. A paradox presented itself: the excitement of new media in the broader cultural sector, but the inability of the art world to connect with the art produced by those same media, for reasons already mentioned. Davison appreciated the complexity of the problem. It would not be as simple as putting the work in the Gallery. Instead, a holistic approach was necessary, one that took into consideration the complexity of exhibiting the work, the demands on the artists during the course of production, and the pedagogical role of the Gallery with respect to the audience. The TechLab emerged out of Davison's deep commitment to supporting contemporary artists and their practice, and this included new media, knowing what its production and exhibition would entail.

Back to the colour printer. By 1998, Surrey Art Gallery needed one for its administration but lacked capital funds for equipment. At the same time, it was clear that unless the Gallery was to exclude digital media from its exhibition program, it needed to find the means to continually fund both equipment and expertise. Davison's grant applications for exhibition support began to specifically identify the need for equipment.



Installation view of [Untold Tales! Virtually Reality!](#), 1996.

Not only would the need to fund new equipment begin to make extraordinary demands on the Gallery's budget, so too would the challenge for Gallery staff to stay current with how to use ever-changing software and hardware tools. Davison realized she could never again be in the privileged position of expert—even as a curator—when presenting artwork. She also recognized that the artists working with and creating digital tools necessitated a collaboration between artist and curator. Davison occupied an unwritten position as producer in a very traditional sense of that role, where she funded production at each stage and was ready to relinquish her authority as curator to the artist. So once again, like the Portapak and the video art field, a technological apparatus, in the guise of a printer, spawns an era of production, this time for the City of Surrey and its municipal Gallery.

The TechLab officially began its programming in 1999 with artist Paul Williams, whose project *Untold Tales! Virtually Reality!* investigated the transition from analog to the virtual world of games and software code. Williams' residency was the first in a decade of programming in the TechLab devoted solely to new media art practice. It is worth noting that Davison's approach was unlike any other curatorial endeavour within Canadian public galleries at the time. It was perhaps more akin to ZKM, the centre for art and media, in Karlsruhe, Germany, whose mandate is to “[respond] to the rapid developments in information technology and today's changing social structures.”<sup>9</sup> Although ZKM lists its facility as unique in the world, there is no doubt the TechLab is mirrored in this progressive production centre in Europe.

If there were so few centres that supported new media art production, then how was Davison able to produce such a high-end, state-of-the-art gallery to support new media, which was often produced collaboratively? Like the proverb opening this text, the work pointed the way, which included artists providing significant information on how best to support the production of new media art within a gallery setting.

For Davison, there were challenges with sustaining the TechLab. First, that there can never be expertise as the form of digital art and its technology would constantly change; second, audiences typically say they don't like digital art and that they would prefer looking at historical paintings.

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<sup>9</sup> See ZKM's website at <http://on1.zkm.de/zkm/e/>.

Informed by these observations, artists invited to participate in a residency at the TechLab had three requirements: to make art on site; to help build audience for new media art; to assist Surrey Art Gallery to anticipate new media art and artists' needs in the future. It is not surprising that this approach to new media art practice required extended stays by the artist at the Gallery ranging from a few weeks to a year. Producing new media art necessitates intensive investments in terms of labour and finances required for equipment. In a residency situation, this creates a unique relationship between the Gallery, its staff and the artists.

Cross-communication between the Gallery and the artists set up demanding, but rewarding residencies, which placed artists in the unusual role of not only producing work, but also directing the future of the TechLab itself. Artists have advised the Gallery on changes to infrastructure required by the physical plant in order to support new media production and exhibition. These changes are not necessarily obvious on entering the Surrey Art Centre, but if one looks up, the open raceways for fibre-optic cable, a direct result of consultation with artists in residence, indicate a flexible and smart building that is media friendly. An open dialogue between artists and administrators is rare, especially to this degree, so it is worth tracking the evolution of the TechLab through the residencies themselves in order to see how this unusual relationship between a curator, a building, and a series of artists came about.

Diana Burgoyne refers to herself as an electronic folk artist. Her hand-built, handmade, DIY production method was influenced in part by her mentor, Martin Bartlett, a key member of the experimental music scene in Vancouver. Burgoyne was invited by the Gallery to



Visitors interacting with Diane Burgoyne's Sound Drawings, 2004.

exhibit her *Sound Drawings* in the TechLab. Given the history and opportunity of the TechLab, she asked whether she might modify the installation, so that it could also serve as a studio, in order to undertake some research. The sound drawings she exhibited were large paper surfaces with copper strips at either edge. When graphite was applied, or “erased,” it was possible to complete or modify an electrical surface, thereby causing emanations of sound from the “drawing.” The exhibition installation was modified to accommodate a work that Burgoyne could use to explore the possibilities of LED light drawings.

A significant component of Burgoyne’s research in the TechLab was the observation of the audience’s interaction with her artwork. Working *in situ* in the TechLab presented a unique opportunity to get direct feedback from the public in relation to interaction. Most visitors were more inclined to interact with the sound drawings if they received a verbal invitation from the artist. Burgoyne’s experience of the audience, and the dialogue that ensued, is one of the surprising outcomes of the TechLab residencies. While the TechLab is dedicated to new media art production and exhibition, it is also an unlikely facilitator of dialogue between artists and the public, and, therefore, the Gallery and the Surrey community.

This is nowhere more evident than in the *REMIXX.sur.RE* project, which Surrey Art Gallery hosted in the TechLab in 2005. Addressing the question, “What would digital artwork created by youth, for youth, look and sound like?” *REMIXX* drew from the Surrey community to create a new media art installation that was, and remains, technically innovative and content rich. *REMIXX* was the pilot project that drew from a study undertaken by the Gallery, “Anticipating the Net Generation: A Surrey Art Gallery Research Project on Digital Art and Youth,” which explored the feasibility of developing a youth-centred digital exhibition program. Given Surrey’s demographic, where 41 percent of residents are under the age of 30, and youth’s involvement as early adopters of digital technology, the Gallery was interested in developing a screen-based exhibition venue that presented work by and for youth audiences.

Artists M. Simon Levin, Henry Tsang, Leonard Paul, Sylvia Grace Borda and, later, Jer Thorp comprised the collaborative team commissioned by the Gallery to serve as mentors for Surrey youth. The final installation was an interactive portrait of the people and places of Surrey. It used open source software and webcam tracking to trigger its behaviour. A display of its database mapping as well as an array of screens presented its content: digital photography, video

and animation, as well as text in five languages—English, Punjabi, Mandarin, Korean, and Tagalog. Although it is impossible to get a full understanding of the work without having experienced it onsite, the range of media, in addition to the inclusion of the languages heard on the streets of Surrey, is indicative of the commitment by the Gallery to reflect the local in its programming, a reflection of social geography not often seen in contemporary art. Surrey Art Gallery doesn't just create a unique purpose-built lab for new media art production, but also enables a dialogue between local actors who are invested in the Gallery because it is situated where they live.

Levin has perhaps the longest relationship with the facility. It began with *C.H.A.R.T.* (Confluence Hub for Art, Rivers, and Technology), a dialogical work about people's relationships to the river systems of Surrey, which was produced in 2003, International Year of Fresh Water.



M. Simon Levin with Alex Konyves and Theresa Hutton preparing *C.H.A.R.T.*, 2003.

The first phase involved the collection of stories and memories of Surrey residents, while the second, with the help of GPS and tracking software, moved into deeper investigations of the “relational maps” drawn by users of the rivers as they navigated these historic waterways. Rather than considering the work undertaken by Surrey Art Gallery to be community-based, Levin considers the TechLab to be a site where people can be brought together to be engaged in something in order to gain a new understanding of content, one in which they participate in the production of meaning. Simon Levin's artistic practice involves a social context, even to the point where he could be considered an institutional activist. When producing his work he asks himself how he can address the context he is working in.

Sylvia Grace Borda's work *Every Bus Stop in Surrey, BC*, produced while in residence in 2004, entailed a comprehensive documentation of the 1,100 bus stops of Surrey. Borda recognizes the marginalization of Canada's suburban regions, areas that don't have a dialogue. She has pointed out that Surrey is consistently "annexed back to a Vancouver dialogue."<sup>10</sup> Taking her cue from nineteenth century French photographer Eugène Atget, who was known for his documentation of Parisian architecture and street life, Borda became the self-declared photographer of Surrey. As a city under metamorphosis to such an extent that it is difficult to articulate its identity, with *Every Bus Stop in Surrey*, it becomes every city with a population needing transit capabilities.

In 2007, the TechLab initiated its largest and longest running residency—inviting back artists from previous projects: Sylvia Grace Borda, M. Simon Levin, and Jer Thorp. They were challenged to take the knowledge produced from previous projects, *REMIXX* in particular, and develop a new work that engaged not just the local community, but the global community, and would be supported by wholly original and open source software in order to envision a new digital presentation model. Collectively, the three lead artists were skilled in engaging public participation, providing positive adult and youth educational experiences, writing code and installation design. *Glocal* created a new type of image archive, one that was representative of the world mosaic. Cultural memory, memory of events held collectively over time, as opposed to written histories subjectively documented, is significant within many of the projects undertaken by TechLab residents. With a deep respect for the community they are working within, the artists across the aforementioned projects were committed to dialogical practices, where they drew from the cultural memory of Surrey residents. *Glocal* acknowledged this process, but through imaging, through visual language, as opposed to written histories. The *Glocal* team, adopting the collection methodologies of *REMIXX*, designed a generative work that explores the possibilities of learning through play by producing an open source pedagogical platform. The residency itself produced a massive contributive artwork that supported learning through play, and acknowledged our connection to each other through digital media. A larger discussion of the *Glocal* project is dealt with elsewhere

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<sup>10</sup> Phone interview with Sylvia Grace Borda, July 2009.

in this publication, but it is worth touching on here to point out its significance to the history of the TechLab.

From the examples I have chosen to highlight from the larger TechLab schedule of residencies, it is evident that something else besides new media is afoot here. While the decision to progress new media art through artist and audience interaction within a state-of-the-art, purpose-built digital lab is significant, especially within Canada, an additional purpose of the residencies appears to be the opportunity to engage the Surrey public in building their own history. Drawing from the cultural memory of the community, artists were able to reflect Surrey back to its residents, building pride in its composition, giving the residents an opportunity to see themselves as part of a postmodern city with a heterogeneous topography that is the wave of the future.



Sylvia Grace Borda lectures on Every Bus Stop in Surrey, 2004.

The TechLab has been extraordinarily instrumental for the exhibition of new media art in Canada. Providing opportunities for artists to engage with new media technologies for extended periods of the time, in a dedicated space, is unique within the Canadian landscape of art production centres. The expanded experience of exhibition that includes audience participation reinforces the TechLab's significance. When asked what constitutes the success of a residency, Liane Davison states, with confidence, that it is the next residency. We can imagine what that might mean for new media art exhibition, how the space

might change, how new networking capabilities might facilitate new modes of collaboration. What we cannot anticipate is what it will mean for the broader community of artists and their audiences. What new aspect of the public sphere will be brought into relief? This is the surprise the TechLab affords, and I suspect this is its purpose.

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Drouin-Brisebois, Josée. The Viewer as Performer. Ottawa: National Gallery of Canada, 2008.



Collaboration has not in itself been a radical act since early modernism, when Russian constructivists or the French surrealists . . . used artistic collaboration to escape the constricting consequences of existing individual production methods.

Charles Green,  
The Third Hand: Collaboration in Art from  
Conceptualism to Postmodernism

The rise of networking computing, and the social and cultural practices which have grown up around it, have expanded the ability of average citizens to express our ideas, circulate them before a larger public, and pool information in the hopes of transforming our society.

Henry Jenkins,  
Convergence Culture:  
Where Old and New Media Collide

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## **Glocal: Exploring a Digital Future Through Collaboration (2009)**

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by Robin Oppenheimer<sup>1</sup>

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### ART AND PARTICIPATORY MEDIA CULTURE

The worn-out stereotype of an artist working alone on a painting or musical composition still looms large at the beginning of the 21st century. Despite more than a century of artistic collaborations that have occurred across all disciplines, many people still assume there is always a singular artistic vision guiding the creation of artworks when they go to museums, watch movies, or attend performances. They also think of artists as “special” individuals, sometimes tormented, sometimes visionary, with almost magical skills that enable them to create images and stories beyond the abilities of ordinary people.

This is the century that will change these misperceptions, because this is the century when almost everyone can become a creator/producer of electronic sounds and images as part of his or her everyday communication practices. Almost 10 years into this new century, once-distinct electronic communications technologies—telephone, radio, cinema, and video—have converged to the point where we can carry miniature media production, viewing

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<sup>1</sup> **Author’s note:** This essay describes the successful collaborative aspects of Glocal, a digital media art project commissioned and produced by Surrey Art Gallery in 2006. I have been charged with the nearly impossible task of describing something that [at the time of writing] is recently past but not finished and is a slippery, multifarious subject not easily distilled into a neat linear narrative. I interviewed most of the key players and had access to numerous documents, including a rough cut of a documentary video produced by Terra Jean Long. Every person involved in Glocal has his or her own version of the story to tell. I can only present my version, which is more collage than story, more selective observation and synthesis than eyewitness account, since I was not part of the project.

and distribution centres in our pockets via cell phones and other personal digital devices. As a result, we now have the potential to access, interact with, create, and transform mass media images from magazines, network television and Hollywood movies in the electronic commons of the Internet.

Social networking sites such as Flickr and YouTube make it possible for anyone to become an instant media maker by producing music and videos at home and uploading them to sites accessed daily by millions of people. Text, images, and sounds that were once made by professionals and available only through museums, movie theatres, and recording studios are now freely circulated, manipulated and recycled on the internet in an open source exchange culture of constant image borrowing, (re)creation, and flow. Unlike paintings or even traditional photographs, digital images are not precious or unique but malleable, accessible, and infinitely reproducible. Along with artists, youth are the main early adopters of these mixing, collage-making practices and users of the now-ubiquitous social networking sites and inexpensive communication tools. They are the current and future creators of electronic cultural content, even if they don't think of themselves as artists.



Installation view of Glocal, 2009.

This is the new world of “bottom up” participatory digital culture, mixing with popular culture and high-art images and sounds, that the Surrey Art Gallery’s *Glocal* project explored. *Glocal* continued out of the work of an artist team that had completed a youth-based digital media project called *REMIXX* in 2005. Gallery curator (then director) Liane Davison wanted to use the same collaborative model of artists working together in the TechLab to generate cultural and educational practices that would involve youth creating digital images and interacting with other youth and artists around the world. She envisioned a final exhibition of *Glocal* for presentation as part of the Vancouver 2010 Cultural Olympiad. Davison and *REMIXX* artists Sylvia Grace Borda and M. Simon Levin saw the potential for carrying forward some of the lessons they had learned and for exploring further some of the digital image-making practices they had invented. This was the initial collaboration-based vision for *Glocal*.

### \_WHAT IS COLLABORATION?\_

A collaboration is supposed to produce something. Collaboration is a purposive relationship. At the very heart of collaboration is a desire or need to solve a problem, create, or discover something within a set of constraints. These constraints include [expertise, time, money, competition, and conventional wisdom] . . . Some collaborations—notably in the arts and sciences—feature compatible people with compatible interests . . . These collaborations don’t necessarily fuse radically different perspectives . . . These complementary skills produce the friction that generates creative sparks as well as emotional heat.

—

Michael Schrage, *No More Teams*

Collaboration is a complex creative process that is gaining recognition and importance in the worlds of art, science, business and everyday life. It involves the intentional coming together of people with disparate skills and knowledge to focus on creating or producing something new that they couldn’t make or do alone. It can be both a transformational, exhilarating experience and a long, messy, even painful process due to the complicated nature of people having to work closely for extended periods of time to achieve a sometimes hard-to-define outcome or vision.

Every successful collaboration starts with a shared vision, and the vision for *Glocal* was not an art object like a painting or a novel. It involved collaborative and experimental practices using new communication technologies, some of which were invented by the artists themselves, so that the end products were open-ended, with somewhat unknowable outcomes. This kind of project represents a “collaborative aesthetic” of contemporary twenty-first century art making that involves new technologies, and it has been hard for the public and the traditional art world of galleries and museums to accommodate and understand this emerging definition of art as a process based on dialogue and ideas, not a product. As art historian and critic Grant Kester defines this new aesthetic in his 2000 essay about collaboration and artistic identity, “collaborative artists are as concerned with the experience of collaborative interaction itself, the new insights and new forms of knowledge that are catalyzed through this interaction, as they are with the creation of a physical product. Here the ‘work’ of art refers as much to a process as it does to an object.”<sup>2</sup>

Without visible, tangible outcomes like art objects, it also becomes more difficult to measure success or failure, much less understand where the art is located. The *Glocal* artists saw themselves as inventors, creators, and educators, making databases, hardware, software, and conceptual “toolkits,” and teaching students how digital images are made, understood, and distributed. The outcomes of successful collaboration, these are deeply inventive and educational practices that can change lives and lead to new ways of seeing the world. They are also the unique aspects of emerging global electronic cultural practices that *Glocal* explored and actualized.



A young patron participates in *Glocal*, 2009.

\_THE GLOCAL VISION(S) OF EXPERIMENTATION  
AND COLLABORATION\_

Glocal is an artwork of artworks. Envisioned and developed by a team of artists, led by contemporary Canadian artists M. Simon Levin, Sylvia Grace Borda, and Jer Thorp, Glocal utilizes digital sound, photography, video and animation technology as well as computer code. Like its name, formed by joining together the words “global” and “local,” Glocal intends to dynamically express the interconnection of people sited in one specific place to all people and places in the world. Glocal will be created as an interactive environment, intended for a public venue such as a gallery, a school auditorium, a community center, the atrium of a mall, or an outdoor space. These modern “agoras” or sites of public discourse will become a place where the local is experienced as inextricably connected to the global through the diversity of its citizens.

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Surrey Art Gallery,  
Arts Partners in Creative Development (APCD) grant application, 2007

The Glocal project is an artistic platform. It creates a suite of strategies and methodologies for creative production.

—

Glocal artist M. Simon Levin

Glocal . . . is an immense, collaborative and multifaceted digital art project that examines the making, sharing and exhibiting of images in the 21st century. Working out of the Surrey Art Gallery’s TechLab, the artists behind Glocal pose questions about the nature of photography at this point in our history: What is a photograph? What is a camera? What is a photographer?

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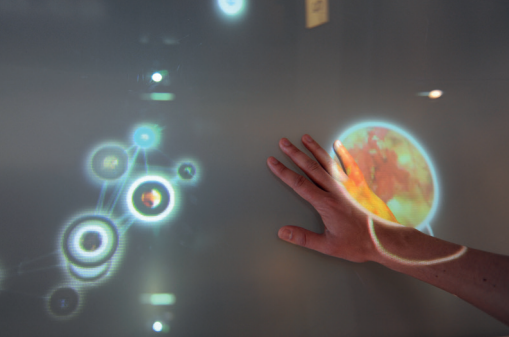
Former Glocal homepage, [www.glocal.ca](http://www.glocal.ca)

In one of the early grant applications, Davison wrote that “*Glocal* will benefit from the same team approach to project production, including the collaborative involvement of youth in the development of the technical architecture and the artworks for the database . . . *Glocal*’s artist team will partner with a diverse team of teachers to ensure they have a core set of skills to enable their students to participate in the project, as well as gain skills to collaboratively learn technology (rather than the teacher serving as experts).” This is a complex vision of collaboration clusters—between artists, between artists and youth, and between artists and teachers working in a school system, all working with Surrey Art Gallery staff and support systems.

*Glocal* began with the Gallery inviting the core team of Borda and Levin, who then brought in Jer Thorp because of his expertise in open source, coding, and Flash software. Borda’s expertise is in the history of photography and in working collaboratively with local communities and students through creating photo-based projects that reflect their lives. She initially asked key questions about alternative viewpoints that change how we see the world, then developed the educational learning tools, modules, artist exchanges, and conceptual toolkits that provided the theoretical grounding for subsequent *Glocal* outreach and education strategies. Levin’s expertise includes teaching creative methods for generating images and understanding the digital culture’s new attributes related to rapid image reproduction and manipulation. The three artists developed software, hardware, and conceptual (visualization strategies) toolkits to create and manipulate images (motion sequences, split screens), a content-sharing website for connecting to youth and artists internationally, an image database and “breeder” that visualized relationships between images, workshops in Surrey schools, and other projects.

All of these projects involved collaboration that generated dialogue, ideas, actions, and electronic images as their outcome. *Glocal*, as a gallery-sponsored project, was designed to connect the artists in the TechLab to anyone in the community, either locally or globally, who wanted to “play” with or contribute images online, in the gallery space or in the classroom. As stated in the artists’ contract written collectively by the artists and the Gallery, “Experimentation, exploration, shared learning, and contribution are the main drivers for the *Glocal* web project and development team.” This describes the ephemeral, egalitarian nature of the artists’ collaborative processes and helps define the project’s more visible, tangible end products,

which included the relational image databases, resource materials on a website, and an interactive light table where people could manipulate images collected from students and artists. This is the heart of *Glocal*, and it also begins to define what making and exhibiting art will look like in the future.



Installation view of *Glocal* interactive database, 2009.

### \_GLOCAL COLLABORATIONS: ONE EXAMPLE\_

In a short video produced for the Gallery by Terra Jean Long, Jer Thorp describes how the artists figured out how to catalogue and examine the relationships between digital images by creating software and building a database that instantly connected images visually. This was all realized as people touched and moved floating image “bubbles” in a playful, tactile manner on the interactive light table that Thorp, Levin, and technologist Dennis Rosenfeld (also an artist and computer hacker) designed and built just outside the TechLab space in the Gallery. Thorp wrote the software program, Levin designed and built the table, and Rosenfeld connected the computers and image-making devices so they all worked together.

Thorp also describes in the video how one of their *Glocal* experiments might help make sense of “nebulous relationships in social network environments” via images by making meaningful connections between people who otherwise might never meet. As he explains, “We don’t know how to describe it yet, but we’ve seen something new here.” That act-of-discovery process actually comes closest to defining the true legacy of the *Glocal* collaborations. It is that “something new here” idea—coming out of those collective inventive processes, sparked by the artists working together and with the public and discovering how to teach people, from students to international guest artists, to see images differently—that defines *Glocal*’s real success as a collaboration. This is where the transformations



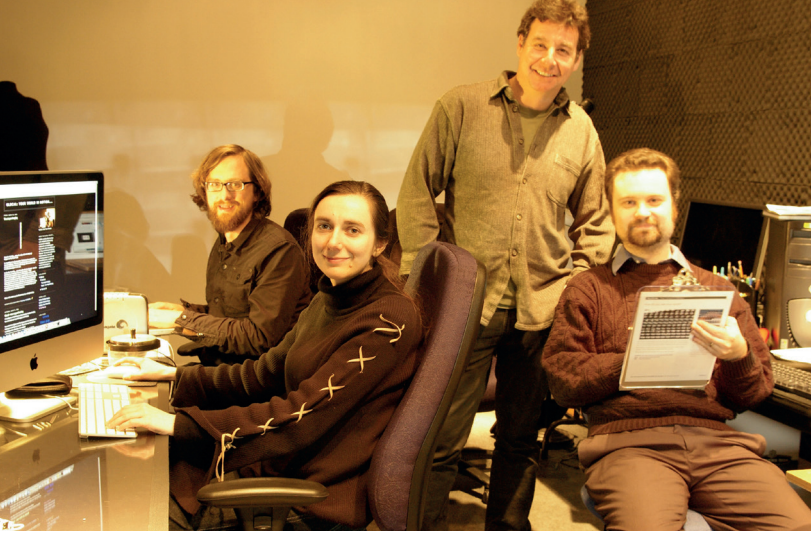
happened, where people stretched themselves intellectually, emotionally and socially. However intangible, these are the definitive measures of a collaborative group's success.

*Glocal* can be defined as a case study of how the artworks of our electronic age are not necessarily seen as finished, concrete things but more as the ever-changing visualizations of innovative, transformative ideas made by creative people in collaborations. The actual *Glocal* outcomes or “products” include artist interviews, conceptual strategies for the public to see and think about how to consider producing and contributing digital imagery, electronic images produced in motion-sequence grids, and relational databases that create “similarity maps” to make sense of millions of images. Kester describes it this way: “. . . the creative process is exploded outwards to accommodate any number of potential levels of collaboration and creative interaction . . . the physical form of the image is simply one manifestation of a larger process, and it is this larger process that constitutes the ‘work’ of art. The creation of the image serves as the occasion for a series of social interactions among collaborators that can operate on a number of different levels: aesthetic and compositional questions, political strategy, and so on. In this sense the resulting image might be said to function as the token or ‘evidence’ of dialogical exchange.”<sup>3</sup>

When viewed through this lens, *Glocal*'s successful outcomes also include Surrey youth who now critique images and think of themselves as artists, Surrey teachers who learned new ways to teach digital media production, and an international public of artists and contributors who were invited to participate in this open process. *Glocal* also supported Canadian artists who are inventing creative practices using digital software and hardware to explore and better understand our complex relationship with the electronic images that increasingly invade our lives. These are not trivial outcomes, and they help us all begin to see our way into an even more digitally connected and collaborative future.

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<sup>3</sup> From “Conversation Pieces: Collaboration and Artistic Identity,” for Unlimited Partnerships: Collaboration in Contemporary Art, CEPA Gallery, Buffalo, New York, July–December 2000, <https://old.cepagallery.org/exhibitions/Unlimited2/u2mainpage.html>.



Glocal production team, left to right: Jer Thorp, Sylvia Grace Borda, M. Simon Levin, and Jeremy Turner.

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When the TechLab was founded in 1999, one of the conversations you would hear a lot had to do with how new media was being integrated—or not integrated—into traditional institutions, and how the work was being handled by the larger art world.<sup>1</sup> It was common to hear reflections on the immateriality of the art object and the consequences this had for new media art as politically resistant to the market, or uncollectible, or both.

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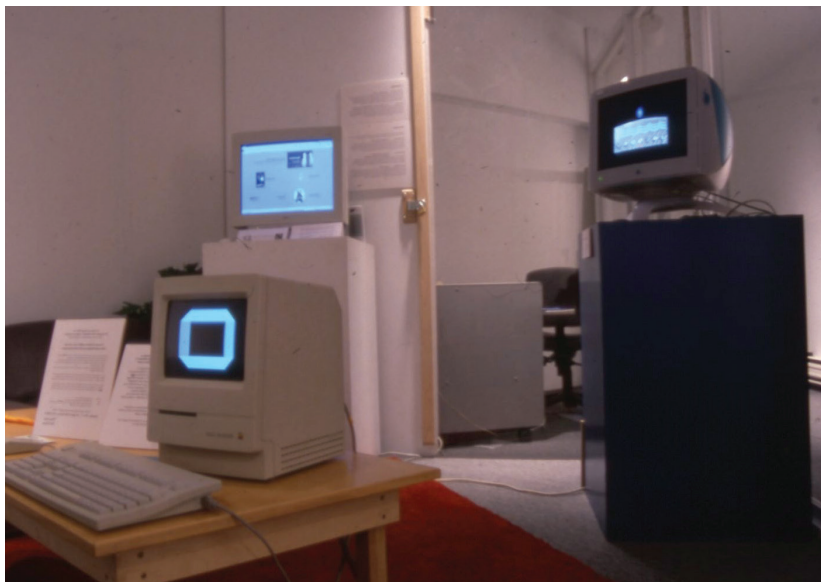
**Conversations 1999–2011**  
**(2011)**

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by Kate Armstrong

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Threads from earlier art histories relating to the evolving position of the museum—from a place of presentation to a place of production—had a crazily literal resonance for the still-new field of new media art. This work involved networks and computers at a time when they were not as resilient or prevalent as they are now, and technical support and resource-sharing were part of the conversation.



Installation view of [Digital Identities: Transforming Communities, Reinventing Ourselves](#), 2000

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<sup>1</sup> Net art was first included in the Whitney Biennial in 2000.

It would have been common in 1999 for a new media artist to own a pantyhose-coloured IBM 486 with a dial-up DSL modem and an 80-megabyte hard drive. The Internet was a slow, cluttered, corporate space; a grassy Microsoft pasture resting lightly and uneasily, like a flag, overtop command lines and exchange servers. In 1999, you would be excited about Internet Explorer 5. It was hand-coded HTML, personal home pages, GIFs with red Xs, shoals of Flash, ASCII, and files not found. Back then, the question was: how can this space be articulated as an artistic medium?

New media art had always sought and sometimes found connections to earlier art histories. It shared sensibilities with conceptual art, drew aesthetically and tactically from Dada, Fluxus, and the Situationists, and experienced a moment of self-recognition in the explosive impact of video when portapaks were put into the hands of artists. By 1999, net art had been around for almost a decade and new media art had had a name for five years, but it was still early for a fluid and responsive set of practices, particularly in light of what has come since.



Installation view of  
C.H.A.R.T., 2003.

Some of the recurring criticisms of new media art—that it is too technically complex to be understood, or that its “button pushing” lacks critical engagement—miss an important thread in its history: namely that at the roots of net art lay intense political and critical thought. Net art, as a specific strand within the larger field of new media art, for the most part explored the cultural ramifications of the tools and practices of the Internet by using the tools and practices themselves. Critically deploying technologies became a way to turn

the technologies of media art into art media.<sup>2</sup> Even if we now see net art as a slightly too-formalist field that did not quite reach maturity,<sup>3</sup> it's important to recognize that in the beginning it was an exciting advance guard that struggled to articulate some of the monumental developments and possibilities in culture that have now reached the mainstream.

In some way, new media art had always engaged the subject of how technology affected culture. Because people were living in a surveillance culture, artists used FBI wiretapping tactics to pull datastreams into their projects<sup>4</sup> and built databases where people could swap identities.<sup>5</sup> Because people were playing video games and surfing the internet, artists subverted the conventions and aesthetics of games,<sup>6</sup> deconstructed the aesthetics of the Web,<sup>7</sup> and invented art browsers.<sup>8</sup> Because the world was transitioning from an industrial economy to an information economy, artists looked at the corporatization of the Internet as well as at the false promises of the “Californian ideology.”<sup>9</sup> As machines got smaller, more powerful and closer to our bodies, artists sought the points of resistance, accounted for feminist perspectives,<sup>10</sup> and investigated challenges to public domain and privacy. Artists saw technologies marching from the military, through industry, and down to consumers, and began to use these tools as a way to critique and represent culture and society. Commercial softwares for connecting people became, in this framework, sites for performance. Structures from the internet such as pop-up windows, chatrooms and spam became environments, themes and objects. Mapping blossomed, opening new

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<sup>2</sup> Mark Tribe and Reena Jana, *New Media Art* (Köln: Taschen, 2006), 7.

<sup>3</sup> Domenico Quaranta, *Media, New Media, Postmedia* (Milan: Postmediabooks, 2010). Excerpt published in English on Rhizome.org, January 12, 2011, [http://domenicoquaranta.com/public/pdf/Postmedia\\_final\\_chapter.pdf](http://domenicoquaranta.com/public/pdf/Postmedia_final_chapter.pdf).

<sup>4</sup> Carnivore, developed by the Radical Software Group (RSG), is a software application that listens to activity on the Internet and allows artists to use it as data in art projects. It was released in 2001, inspired by and modelled on DCS1000, known as Carnivore, an FBI wiretapping software.

<sup>5</sup> For example, Heath Bunting's *Identity Swap Database*, funded by Telefonica, Madrid, Spain in 1999.

<sup>6</sup> For example, Cory Arcangel's 2002 game mod, *Super Mario Clouds*.

<sup>7</sup> For example, [www.jodi.org](http://www.jodi.org) (1995).

<sup>8</sup> For example, Mark Napier's *Shredder 1.0* (1998).

<sup>9</sup> Richard Barbrook and Andy Cameron, “The Californian Ideology,” *Mute Magazine*, September 1995. See: <https://www.metamute.org/editorial/articles/californian-ideology>

<sup>10</sup> Francesca da Rimini, Virginia Barrett, Julieanne Pierce and Josie Starrs formed the influential group VNS Matrix in 1991.

representational possibilities for relationships between space, time, and information, and databases restructured how we could think about history, narrative and the archive.

The way I recall it, it was felt that somehow these practices were distinct from what had come before, and there was a sense of participating in something that was a little bit the same and a little bit separate. It was art, but it was new media art.

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In 1999, digital technologies seemed like a subset of other technologies, in marked distinction from 2011, when it is difficult to locate a technology that is not digital, a company that is not a technology company, or a part of culture that is separate from digital culture. In 1999, someone might have put “computer skills” on their resume or listed “internet” as something they could do.

Against the background of nascent dot-com culture in 1993, and the accompanying burst of energy around emerging or evolving net artists such as Olia Lialina, Heath Bunting, Vuk Cosic, jodi.org, and many others,<sup>11</sup> a range of museums and gallery initiatives became devoted to the exploration of new media art. Some works were housed in existing institutions; others took the form of project spaces, programs, festivals or new organizations. This general period saw the birth of the Banff New Media Institute in 1995; Ars Electronica in Linz, Austria, in 1996; E-Lab (now RIXC) in Riga, Latvia, in 1996; and the Zentrum für Kunst und Medientechnologie (ZKM) in Karlsruhe, Germany, in 1997. There was the complex evolution of the V2\_Institute for the Unstable Media along with V2\_Lab and the Dutch Electronic Art Festival (DEAF) in Rotterdam. Then came the TechLab at Surrey Art Gallery in 1999 and Eyebeam Atelier in New York in 2000.

Also within this time period were early online initiatives for presenting and supporting net art, including Benjamin Weil’s ada’ web (1995–97); Turbulence.org (1996); the Whitney Artport at the Whitney Museum (2001); and Gallery 9 (1997–2003) at the Walker Art Center under the direction of Steve Dietz.

There were groups and mailing lists such as The Thing, founded in 1991 by Wolfgang Staehle; nettime.org, founded by Pit Schultz and Geert Lovink in 1995; Rhizome.org, founded by Mark Tribe in 1996; Faces, founded by Vali Djordjevic, Kathy Rae Huffman and Diana McCarty in 1997; the Upgrade!, initiated in New York by Yael Kanarek in 1999;<sup>12</sup> Dorkbot, founded by Douglas Repetto in 2000; and CRUMB (Curatorial Resource for Upstart Media Bliss), begun by Beryl Graham and Sarah Cook in 2000.

One of the cultural shifts that became more pronounced in the 1990s was the shift from industrial production to the information economy, and from local to global. This was being written into human relationships around new media art in a direct way. Formative dialogues were involving a group of geographically dispersed people and taking place online through mailing lists like nettime. Important physical nodes were taking root in locations that had historically been remote from art centres—places like Karlsruhe and Banff.

A community coalesced to discuss the possibilities of the network for new art forms. This worldwide group orbited a set of questions, which might be characterized by the following: what are the political, aesthetic, and social concerns presented by information technology? What are the possibilities of these new technologies for the production of art? How can we work critically with media forms?

As technology evolved, so did new media art. It was becoming apparent that the appearance and sudden proliferation of multiple modes of digital technology offered strategic and tactical change in broader spheres than just the digital: spheres such as public and social space, language, behaviour, and the body. Spheres that hadn't generally been conceived as technological were becoming technological in a new set of ways.

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Many threads are still traceable from earlier projects in new media art and some have dropped completely, but now the group of artists and the type of work has infinitely expanded in scope. Artists can ultimately be seen to have taken their explorations in a hundred different directions, one effect of which has been the expansion of the number of creative fields and the establishment of new practices and disciplinary intersections between fields.

In the last 10 or 12 years, for example, artists have charted fresh directions with augmented reality, which has affected practices in narrative, video, performance, cinema and activism. We've seen a

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<sup>11</sup> Full accounts of these histories can be found in books such as Rachel Greene's *Internet Art* (London: Thames and Hudson, 2004); Mark Tribe and Reena Jana's *New Media Art* (Köln: Taschen, 2006); and Christiane Paul's *Digital Art* (London: Thames and Hudson, 2008).

<sup>12</sup> The Upgrade! became an international network in 2003 with the establishment of The Upgrade! Vancouver.

<sup>13</sup> On August 25, 2011, 469 cables from the U.S. Embassy in Romania were released by WikiLeaks.



creative explosion in information visualization that is traceable to artists building tools and open platforms, and developing knowledge and community around their use, resulting in new work in web-based interactive projects, print, and installation. Alongside the revolutionary changes in publishing and micropublishing that platforms like WordPress have introduced, artists have charted new cross-disciplinary territory that lies between publishing, research, art books, video, criticism, online and participatory projects, and documentary. There are communities in electronic literature, interactive design, generative art, and wearable computing. It is now possible to hack not only your computer or the encoded cables from the U.S. Embassy in Romania<sup>13</sup> but your garden, your wardrobe, and your life.

Meanwhile media facades and responsive environments are spreading and increasing in influence, rippling through architecture, film, video, live audiovisual practices, public art, and design—opening opportunities for the presentation of art in new spaces. Advances in the possibilities and conventions around digital imaging have allowed artists to articulate new conceptual and imaginative approaches in painting, photography and sculpture. We can see artist-driven initiatives in DIY culture and rapid prototyping that have opened up a new range of tactics around the object. At the same time, there has been a proliferation of artist projects in which mobile technology is brought into fields such as mapping, photography, narrative, public space, audio, literature and geography.<sup>14</sup>

These cross-pollinating developments have produced not only new artists and new projects but new fields, enlarging the boundaries of artistic practice to include to include the contemporary art world



Installation view  
of REMIXX, 2005.

as well as larger cultural currents and emerging modes of creativity, tactics, or methods.

Now, in 2011, technology pulses through design, manufacturing, urbanism, food, information science, and programming, borrowing and exchanging between these fields as much as from performance, installation or photography. Such radical interdisciplinarity is produced as a result that we start to ask whether we should think of new media art as a field at all.

How can we characterize the problem of disciplinary relations between fields from within one that has focused in the past on breaking down divisions, and on opening up rather than filtering out directions, even at the cost of clarity or definition?

Current conversations on the state of these relations between media and art, or between new media art and contemporary art,<sup>15</sup> assert that “new media art” as a term has lost its value, and created the unwanted effect of casting these practices into a medium-specific subset, a historical cul-de-sac within the larger history of art. It is interesting to make, from the position of the new media frame, a matching objection toward contemporary art—or to put it another way, about those practices that are not bounded by this medium-specificity. Perhaps due to an interest in lineage and an ability as a field for self-portraiture, contemporary art is attentive to its own limits and is quick to locate borders, not on the basis of medium, but on the basis of “what is art.” If contemporary art were to pull up and say, “you are just a tiny cul-de-sac in the history of art,” new media art might reply, “contemporary art is just a tiny piece in the myriad possibilities of culture, so why stop there?”

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<sup>14</sup> Early experiments in the combination of GPS or GIS systems with mobile technologies and Wi-Fi networks allowed people to follow new directions in how they could communicate and share information. Interactive and collaboratively produced maps affected how people understood public space or charted social or political realities, and produced a lineage of artists’ projects, sometimes called “locative media,” that predated Google Maps in 2005. For example, Jeremy Wood’s *GPS Drawing* (2001) cast the GPS as a tool for mark-making and projects such as *Urban Tapestries* by Proboscis (2002–2004) broke ground with the idea of live, urban, networked maps created by project participants. Esther Polak’s 2002 Amsterdam Realtime mapped the “mobile behaviour” of citizens in Amsterdam, and *MILKProject* (2004) traced the real-time movement of milk as it was shipped from its place of production in Latvia. Another example is Fallen Fruit’s 2004 map, *Public Fruit*, which for the first time collaboratively mapped fruit growing in public spaces in the Silver Lake neighbourhood of Los Angeles, highlighting issues around local food production, food security, and public space.

<sup>15</sup> Quaranta, 14.

It may be that this approach, above all, is what differentiates the art formerly known as new media<sup>16</sup> from other art communities. And yet it is these artists more than anyone else who recognize the strangeness of looking at technology *qua* technology, and who realize, for example, that in its transparency and slippery instrumentality technology is the ultimate non-subject, and that as a medium, it is more like air than bronze.

If something definitive must be said, then perhaps it is that conceptual art, with its focus on the *idea* as the stuff that feeds across into various material iterations, most closely reflects how some new media artists have worked with and perceived technology.

Technology—the place of it, the effects of it—is, in this formulation, as numberless and varied in possibilities as the idea. Technology, the nebulous, radically interconnected field with ever-evolving extensions everywhere. Technology, which restructures human experience of past, present and future, opens social and aesthetic paradigms, and destroys and reconstitutes communities. Technology, which changes bodily experiences and patterns, and which forces evolution in language, hermeneutics, politics, economics and culture, is felt to be that rare thing, like the idea, that can stand up in the intersection between form and content and remain standing.

But the fact that this last decade has not led to the clear emergence of one single narrative or one new media art but rather to an incredible profusion of creativity in culture has meant that the TechLab has been part of a larger blossoming. New media art—now no longer a logical term, now something that must lose its qualifiers so as to continue its trajectory of opening rather than closing definitions—can't point to one thing and say, "there I am." Rather, it has contributed a reverberative layer of experimentation and articulation. These multiple threads take time to coalesce, if they ever do. Grasping the creative possibilities for art and technology depended on someone creating the space for this work. It took places like the TechLab to step forward and say, this will be a node now. We will have these conversations, and invite this here, if only because we think it's important to see what happens.

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<sup>16</sup> I am using this phrase in a general way, but it must be recognized that this strangely useful shorthand was first widely circulated with reference to the 2005 exhibition, The Art Formerly Known As New Media, curated by Sarah Cook and Steve Dietz at the Walter Phillips Gallery in Banff.



A patron interacts with the installation in [Digital Identities: Transforming Communities, Reinventing Ourselves](#), 2000.



Installation view of Yam Lau: Room, 2008.

# EXHIBITION & RESIDENCE

NS  
2009-2019  
CIES



Project:

**John Wynne: Wireframe**

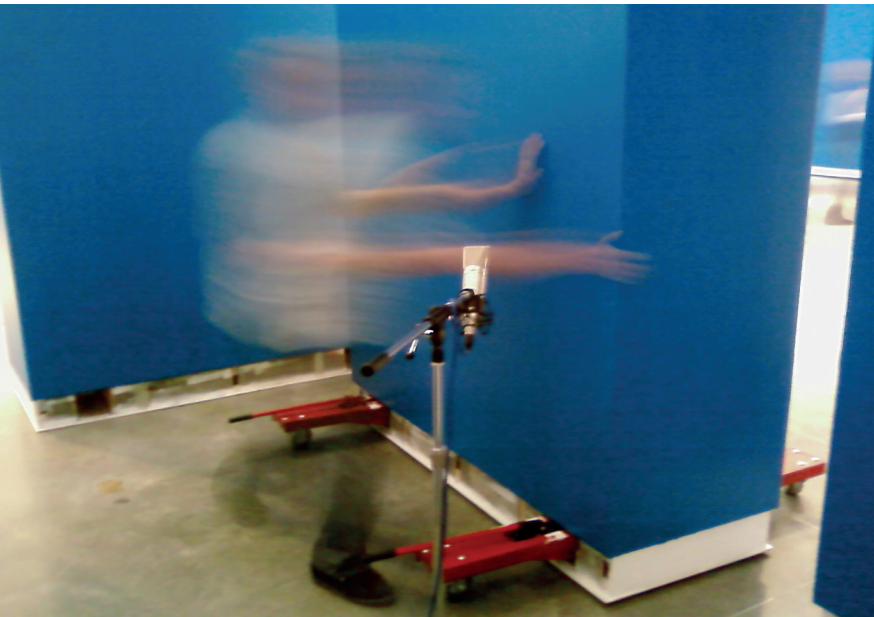
**January 24–March 22, 2009**

Artist:

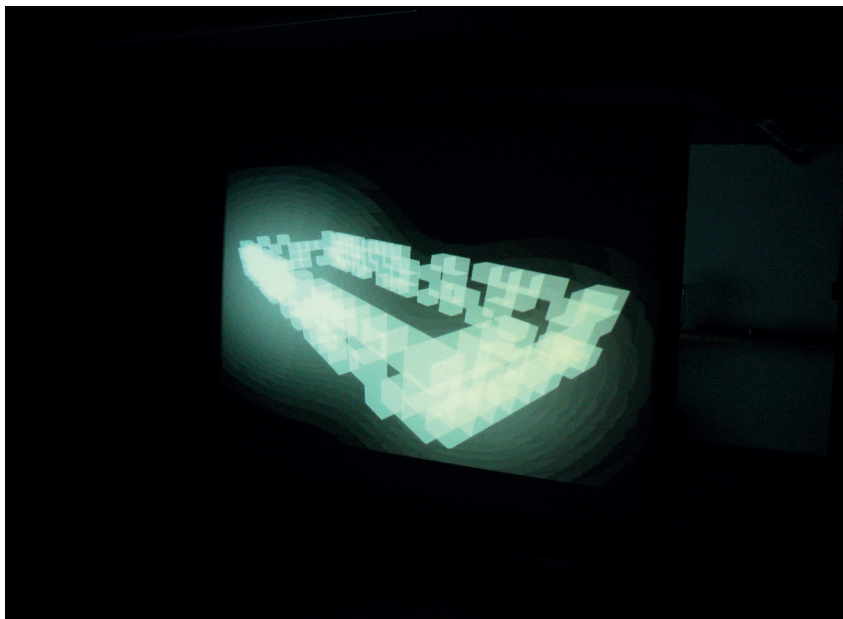
**John Wynne**

Curator:

**Liane Davison**



Wireframe by audio artist John Wynne was a site-specific, 16.1 channel sound art installation. The precise computer-controlled movement of sound traced the three-dimensional form of the exhibition space to create an immersive architectural sound drawing. With the Gallery darkened, visitors heard—rather than saw—the space in which they found themselves. Wireframe was developed from an idea conceived during a residency at E:vent Gallery, London, and was part of Surrey Art Gallery’s ongoing exhibition program showcasing contemporary audio art practice.



Project:

**Heaven's Breath**

**March 21–August 30, 2009**

Artists:

**Chris Welsby, Brady Marks, and  
Scheherazaad Cooper**

Curators:

**Jordan Strom with Liane Davison**

Inspired by an eleventh-century figurine depicting the Hindu God Shiva performing the dance of creation and destruction, Chris Welsby, Brady Marks, and Scheherazaad Cooper's collaborative new-media installation Heaven's Breath combined Oddisi dance with interactive technology and real time weather data, using digital technology to make connections between science, religion, and art. According to the Hindu faith, Shiva's dance brought the universe into existence, not unlike the origin of the universe described by the "Big Bang" theory of Western science. In Heaven's Breath, the animation of images and accompanying sound effects is driven by the power of the wind, which is in turn driven by the rotation of the Earth. In this way the artwork seeks to connect Shiva's dance, via the Earth's orbit, to the gravitational forces of the solar system and the far reaches of the universe. Heaven's Breath draws on the cosmologies of East and West, and the knowledge of the ancient and modern world.



Project:

**Ryoji Ikeda: data.tron/data.scan**

**September 26–December 13, 2009**

Artist:

**Ryoji Ikeda**

Curator:

**Jordan Strom**





In conjunction with the ten-year anniversary of the TechLab's digital art residency and exhibition program, Japanese composer and visual artist Ryoji Ikeda was invited to exhibit [data.tron](#) (2007) and [data.scan](#) (2009) at the Gallery. These two works are part of Ikeda's ongoing [datamatics](#) project, which uses pure data as a source of audio and visual display. That is, Ikeda makes it possible for gallery goers to have a sensory experience of mathematical ideas and data through immersive installations, sculptures, and performances.

The two works on exhibit at the Gallery explored notions of data and randomness and mathematical theories concerning the number of numbers and the numbers of points in a line. [data.tron](#) was a large and immersive installation that uses sound and light in the form of pixels that are strictly calculated and rhythmically ordered according to mathematical principles and that draw upon the vast sea of data present in the world. [data.scan](#) was a visual representation of the mathematical space or "unit interval" between 0 and 1, and was co-produced by Surrey Art Gallery with Le Fresnoy Studio National des Arts Contemporains, and Forma.

Project:

**Ruth Scheuing: Silkroads**

**January 23–April 4, 2010**

Artist:

**Ruth Scheuing**

Curator:

**Brian Foreman**



During Ruth Scheuing's exhibition and residency, she displayed three large and complex weavings related to the theme of the historical silk routes across Asia, visible through the TechLab's front window. At the same time, she created related smaller works on a computerized Jacquard loom, set up at the back of the TechLab. In a public talk about her work, Scheuing described transforming the TechLab space into a combination of shop window, contemporary gallery display, artist's studio, and factory floor.

The creative origins of Silkroads include Scheuing's ongoing interest in the intersection between early computer technology and weaving in the form of the 19th-century Jacquard loom. With its use of punch cards to control intricate weaving patterns, the Jacquard loom of 1801 was the model for a mechanical forerunner of the modern computer. The imagery of the large weavings combined historical Asian textiles (a Krygyz man's vest, a Sogdian child's coat, and a Chinese dragon robe) with contemporary Google Earth images of the lands through which the silk routes passed. The superimposed textile designs, deeply researched by the artist, fit snugly over the digital landscapes, symbolizing both cultural traditions and contemporary geopolitics, together with the visual knowledge provided by GPS technology. The smaller weavings Scheuing produced during her residency addressed the West's fascination with and frequent misunderstanding of what was once designated as "the Orient." Both bodies of work provoked ideas about the exchange of not only goods but also ideas, aesthetics, religious beliefs, and cultural values that occurred along the silk routes in historic times, and suggested parallels with the ways in which the Internet has profoundly affected global culture in our own age. Scheuing's use of the digitally programmable Jacquard loom, one of only six in Canada, also spoke to the combination of the handmade and the computer-assisted in the production of woven tapestries.



Project:

**Ian Johnston:**

**Machine for Singing**

**April 17-June 21, 2010**

Artist:

**Ian Johnston**

Curator:

**Jordan Strom**





Ian Johnston's interactive installation, Machine for Singing, was composed of rows and rows of Chinese-style, celadon-glazed bowls displayed on white shelves mounted on the walls of the TechLab. The bowls were suggestive of those produced in China during the Song Dynasty (960–1276 AD), and evoked both the highly valued and sought-after nature of the historic ceramics and the corresponding international business of producing fakes or knock-offs. Most of the bowls, which were brightly lit, as if in a gift shop, were paired with small electronic devices that tapped against them as visitors arrived or left the TechLab, creating chiming sounds reminiscent of temple bells. Posing questions about the fetishized object and notions of authenticity, the work was electronically activated when visitors walked on the carpeted area at the TechLab's entrance. It also suggested the often incomprehensible distance between the makers and consumers of covetable objects.

Machine for Singing (2007–2009) was part of the solo exhibition Transnational Absolute, which tackled ideas of over-consumption, global refuse, and the origins and afterlife of the material objects in which our planet is drowning.

Project:

**Myfanwy Ashmore: Grand Theft  
Love Song**

**October 2–December 19, 2010**

Artist:

**Myfanwy Ashmore**

Curator:

**Jordan Strom**

MYFANWY ASHMORE  
**Grand Theft Love Song**

In Grand Theft Love Song, Myfanwy Ashmore re-choreographed the main character from the popular videogame Grand Theft Auto IV to perform the boundaries of the game itself. Like other game mod artists, Ashmore takes pre-existing video game technology’s deterministic structures—its machinima, or the use of real-time graphics rendering engine to generate computer animation—and creates new scenarios out of these constraints. In the case of Grand Theft Love Song, she took the ultra-violent character Nico Bellic and made him perform the limits of his “safehouse”—turning his attack actions and aggressive gestures (which for the artist, are expressions of frustration and boredom), into a dance against the lilting swing of Duke Ellington. Eventually the character returns to “the place where he awoke,” says the artist, “back to his slumber—to repeat the algorithmic process” indefinitely. In this way, Ashmore inverted the violent ideologies at the heart of the game.

Grand Theft Love Song was displayed as part of Game Show, an exhibition of contemporary art that explored both games as art and play as a mechanism for making art.



Project:

**There/Here: Germaine Koh +  
Gordon Hicks**

**January 15–March 20, 2011**

Artists:

**Germaine Koh and Gordon Hicks**

Curator:

**Jordan Strom**



The three works in this new media exhibition examined ideas of doubling, “telepresence,” and the ways in which contemporary digital and communications technologies have altered our perceptions of time, space, location, and community. At the same time, they offered ways in which art can redress or ameliorate the alienating impacts of these technologies.

Collaborating artists Germaine Koh and Gordon Hicks created the title installation, There/Here, in response to the role of Skype, mobile phones, and portable computers in disembodiment of human interactions. In an interview with the curator, Koh spoke about recreating an “embodied” experience and physically linking people to digital processes through the sense of touch and non-verbal communication. The installation consisted of two reclaimed, mismatched doors, set into parallel doorframes at a room-length distance from each other; each was operated by a “hacked” automatic door opener with custom microcontroller and linked through an internet data stream, the connection being two-way and simultaneous. Through this interactive work, described as “a spatial diptych,” the actions performed on one door, such as opening or closing, were simultaneously replicated in the other. That is, if a Gallery visitor opened one door, the other door would open at the same time. When the first door closed behind the visitor, the second door also closed, creating an “uncanny” sense of a ghostly or invisible double, exiting a space as the visitor entered. There/Here called up a number of modernist artworks that have employed the image of paired doors while also invoking the symbolic nature of the doorway or portal—of stepping over a threshold into another realm of perception.

Also on exhibit were Koh’s interactive work Call and Hicks’s loop\_02. The former, which Koh has staged in a number of locations, makes use of a vintage telephone and aging technology (of the kind once used to summon a taxi through a direct hook-up in, say, a hotel lobby or a train station) to connect strangers to each other in conversation. When the visitor lifted the receiver of the phone in the Gallery, they would be connected to a volunteer call recipient in the City of Surrey, the recipient being chosen through a randomizing computer program. The intention of the work, which Koh has staged in a number of galleries and cities, is social, inspiring informal conversations between strangers; the interactions are neither pre-determined nor recorded, relating them to a community’s oral histories.

Hicks’s loop\_02, employed a small, 1980s computer monitor located in the Gallery to conjure up an image of a green, looping ribbon that was also projected simultaneously in the Surrey Arts Centre foyer. Through this enigmatic doubling of images, the work reflects the artist’s interest in the ways in which people mentally project themselves and their thoughts through space when they are using digital technologies to communicate.

Project:

**Yam Lau: Room**

**April 3–June 5, 2011**

Artist:

**Yam Lau**

Curator:

**Jordan Strom**



**Top:**

Still from [Room: An Extension](#),  
Yam Lau, 2008, computer-generated  
animation and digital video.

In the two works Yam Lau exhibited at Surrey Art Gallery, both within and immediately outside the TechLab, the Toronto-based artist combined computer-generated animation with digital video recordings of actual scenes and activities in the depiction of domestic living spaces. His hybrid art form repurposes “fly through” animation conventions found in video games, architectural rendering, and wireframe animation. At the same time, it incorporates layered references to cinematic tropes and suggests something of the both beautiful and unsettling as it disrupts ideas of privacy and transparency, mundaneness and mystery, and the supposed place of refuge that is “home.”

In Room: an extension, the camera slowly revolved around what looked to be the open framework of a room floating in space—or perhaps the room itself is rotating in space. Its transparent walls revealed the artist waking, rising, opening his window shade, dressing, and walking through a door into another room, where he goes about other aspects of his daily routine. Layering, reflections, repetition, and the falling away and folding in of architectural elements contribute to a sense of time and space collapsing. While this work is silent, Rehearsal had a soundtrack of falling rain. Through digital animation, the eye is drawn very slowly into a virtual space and the viewer becomes aware of flickering shadows, Chinese latticework, and the mirror reflection of a woman smoking and weeping. Smaller architectural elements of the room revolve in space, giving the sense of multiplying planes and boxes nesting within boxes while playing two- and three-dimensional representation against each other. The purpose of Lau’s work, he has said, “is to subtract weight from the world.”

Lau’s work was presented within the context of “Dwelling,” a series of related Surrey Art Gallery exhibitions that examined the ideas of house and home.



Project:

**Ellen Moffat: vBox**

**June 11–August 28, 2011**

Artist:

**Ellen Moffat**

Curator:

**Jordan Strom**





Created by Saskatoon-based interdisciplinary artist Ellen Moffat, vBox (2008) was an interactive, multi-track instrument of spatialized vocal sounds, using scripted and chance juxtaposition to suggest spoken language. Resembling a long, narrow, wooden box or table with electronic components, the instrument invited the visitor to participate in the production of a variety of soft, sibilant sounds by manipulating a range of physical controllers along its surface. Housed within the work were a mini-computer along with an amplifier, sound splitter, micro-controller, and flat-screen monitor. The sounds produced were fragments of speech such as phonemes—having no meaning in and of themselves, and yet suggestive of meaning through the complex and ever-changing composition that emerged during visitor interaction. Through this work, the artist engaged the audience not as passive listeners but as active co-creators, opening up the idea of authorship. As part of an ongoing body of exploratory work, vBox also sought to position language in space in order to incorporate space into the composition.

Project:

**Dipna Horra: Dhunia Part One**  
**September 9–December 16, 2011**

Artist:

**Dipna Horra**

Curator:

**Jordan Strom**

Originating from the Arabic language, the word “Dhunia” in Punjabi means the present world or earth. Ottawa-based artist Dipna Horra’s sound and video installation, Dhunia—Part One (2001), presented an audible seven-minute parable about the Hindu goddess Parvati’s relationship with material wealth and the world.

The video installation came from a series of artworks that documented the lives of the artist’s United Kingdom-based grandparents. The artist captured her grandmother reciting a story from Hindu scripture, along with separately recorded sounds such as train noise. The combined voice and ambient recordings were played back using a found wood and glass window as a speaker, projecting the sound into the Gallery’s main entranceway. As the voice in the installation recounted the story of Parvati, a screen immediately behind the suspended window, and framed squarely within the windowsill of the TechLab, depicted a sequence of images of hand-drawn black script against a white modulating background. The words in English (along with related Punjabi phrases) translated the artist’s grandmother’s story.

Horra is very interested in what she refers to as the “windows of the world.” The windows of the screen and the architecture of the Gallery served as metaphors for thresholds between private space and the exterior world. These windows, according to the artist, “protect, shelter, provide a view onto an external landscape, and they let the external gaze in . . . At times,” says Horra, “these windows will become a mirror for the listener’s personal experience.”



Project:

**Ming Wong: In Love for the Mood**

**September 17–December 11, 2011**

Artist:

**Ming Wong**

Curator:

**Jordan Strom**



Ming Wong's video installation In Love for the Mood restaged a scene from Wong Kar Wei's 2000 film In the Mood for Love. Ming Wong's version of the film replaced both Maggie Cheung from the original and her object of desire, played by Tony Leung, with a Caucasian actress from New Zealand who was studying in Singapore. Her attempts to speak the lines in Cantonese, repeating Ming's prompts off-camera, were recorded in three loops, played simultaneously on three screens. Each is subtitled differently: for the first and most unrehearsed scene, it's in Cantonese; for the second, as she begins to relax into the character and the language, it's in English; and for the third, it's in Italian, where she has mastered her lines and is able to concentrate on acting. The video's use of repetition draws attention to the performative dimension—and the element of rehearsal—in both learning other languages and speaking them. Wong commonly uses film adaptation as a vehicle to point to issues of cross-cultural translation.

In Love for the Mood was part of Finding Correspondences, a group exhibition focused on the interaction of language and the activities of translation.

Project:

**Cao Fei:**

**Apocalypse Tomorrow**

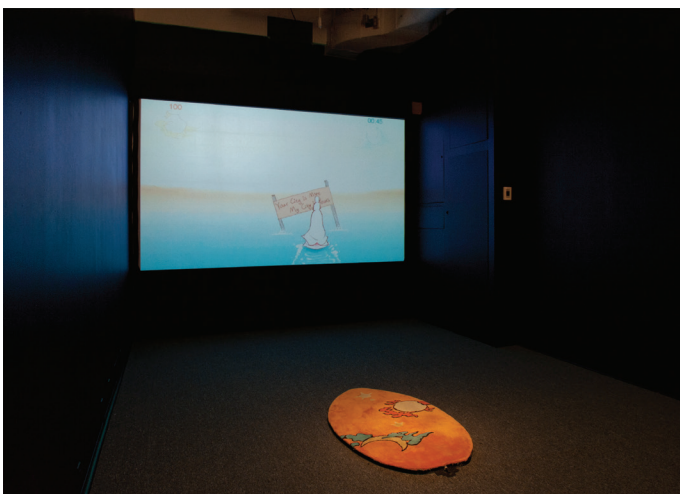
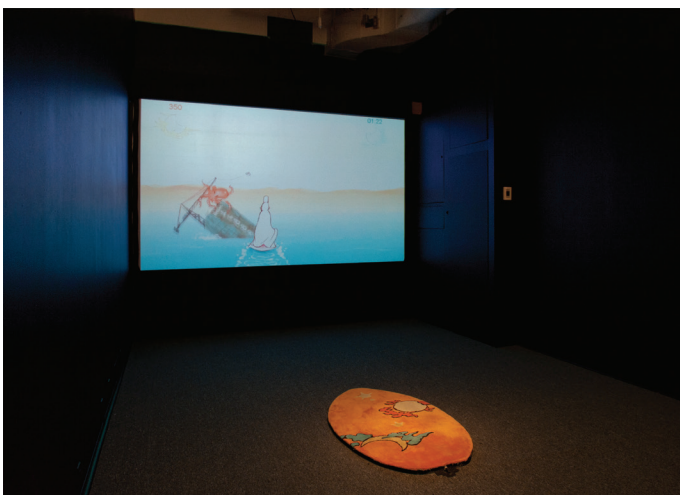
**April 7-June 10, 2012**

Artist:

**Cao Fei**

Curator:

**Jordan Strom**



Apocalypse Tomorrow, by multidisciplinary Beijing-based artist Cao Fei, is a flash game installation based on her futuristic “RMB City.” Fei created RMB City in 2007 and maintained it until 2011 on Second Life, the three-dimensional virtual universe of user-created worlds. There, it functioned as an interactive online art community, platform, and conceptual work, and explored China’s new economic and social order using a theme park-like crowd of architectural, sculptural, and oversized consumerist forms and references.

As presented in the TechLab, Apocalypse Tomorrow foretold an environmentally disastrous end to RMB City. It was a video game projected onto a curved screen with a customized body board by which visitors could operate the avatar, a Buddhist monk, and “surf” the site. The game depicted the monk free-surfing across a swelling seascape, which revealed itself to be a flooded city. Obstacles encountered and circumnavigated by the monk-avatar included not only submerged buildings, monuments, and collapsing factories, but also giant designer handbags, fictionalized trademark logos, a super robot, seated Buddha sculptures, and the Statue of Liberty. Although the surfing monk overcomes the obstacles in his way, he never reaches a final destination, suggesting parallels with the ethical terrain we all must navigate during our lifetimes. As critic and scholar Alice Ming Wai Jim has written, Apocalypse Tomorrow<sup>2</sup> “can be understood to emerge out of the broader contradictions of gaming, user-created content and social media.” It parodies “relationships between China’s state capitalism and free market economies, global capitalism and media democracy, civic politics and human rights, and the art market’s relationship to the virtual economies of an art world online.”

Apocalypse Tomorrow was one of three works presented in Cao Fei: Simulus, a Gallery exhibition that was itself part of Yellow Signal: New Media in China, a multi-venue exhibition project that took place throughout Metro Vancouver between March and September 2012.

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<sup>2</sup> From “The Different Worlds of Cao Fei,” Yishu Volume 11. Number 3, 2011



Project:

**Patrick Cruz: Guildford Drift  
and SMPTE Hedge**

**June 23–August 18, 2012**

Artist:

**Patrick Cruz**

Curator:

**Jordan Strom**



Two complementary pieces by artist Patrick Cruz were exhibited in the TechLab as part of the exhibition Emergent, which showcased the work of three young artists from Surrey engaging with Vancouver's cutting-edge visual art scene from its suburban "fringe." With his mixed-media installation SMPTE Hedge, Cruz created a hybrid form that falls somewhere between painting and sculpture; as well, he made digitally collaged videos that examine the ways in which places, such as the Guildford neighbourhood in which he grew up, may be reinterpreted through ideas surrounding abstraction, globalization, and satellite mapping systems.

SMPTE Hedge consisted of six small artificial trees, each spray-painted a different colour and set in a row running diagonally across the floor in the darkened TechLab, partially concealing the video monitors mounted on the walls. SMPTE stands for the Society of Motion Picture and Television Engineers; the colours allude to the colour bars once used by the society as a television test pattern while the linear configuration of the "hedge" evokes suburban yards and gardens. Together, they were suggestive of correspondences between suburban life, TV culture, and acts of both looking and concealing.

In Guildford Drift, video imagery played across five monitors mounted at different heights on the TechLab walls. Two of the monitors displayed colourful abstract imagery, while three other monitors presented a series of blurred and shifting landscapes. The abstract videos were generated by sampling images from a SMPTE colour bar and processing them through an animation program. The result commented upon and reformulated the ways in which digital information is conveyed, and also spoke to the abstract spatial qualities of the places in which we live. At the same time, the montaged landscapes brought together imagery from the streets of Guildford (Surrey, Canada) and Guildford (Surrey, United Kingdom), alluding to the effects of virtual mapping systems and globalization in creating similarities between places at a considerable geographic distance from each other.

The title of the work, Guildford Drift, was inspired by the activities of the Situationist International (a European political and art movement of the 1950s and 1960s) and their practice of the *dérive*, i.e., unplanned drifting through urban landscapes.

Project:

**jimAndrews4.mp4/jimAndrews6.mp4**

**September 15–December 16, 2012**

Artist:

**Jim Andrews**

Curator:

**Jordan Strom**

Jim Andrews is a net artist and “programmer-poet” whose chosen mode of creation is a form of web publishing that combines literary and image generation. His work often introduces interactive online elements and what he calls “viewer-engaged painterly cinema.” For the two video self-portraits he created for display in the TechLab, he used his dbCinema, a graphic synthesizer and “langu(im)age processor.” Taking as his source material 53 still photographs of himself from infancy to late middle age (he was 53 at the time), he worked with digital brushstrokes to collage, juxtapose, remix, and synthesize images into a form of digital animation. In [jimAndrews6.mp4](#), rapidly montaging images were simultaneously “brushed” with text (the letters of his name) and circles, the resulting staccato sequence of images evoking a Cubist sense of space and time and early Pop art’s fascination with alphabets and portraits. The other video, [jimAndrews4.mp4](#), used a more “painterly” digital brushstroke to create animated images that speak to memory and what the artist describes as “the messiness of how we change” over time, that is, the awkwardness of our physical transformations as we age.

Not only does Andrews’ work speak to the way in which our memories are often linked to photographs of ourselves, but it also addresses the impact of digital technologies on how we see ourselves and our understanding of what it is to be human. His animated videos strive, he says, to use “computers as instruments of art, delight, and insight” while at the same time addressing our fear of machines.

Andrews’ videos were part of the exhibition [Scenes of Selves, Occasions for Ruses](#), which explored the mutability and multi-dimensionality of artists’ self-portraits in the early twenty-first century.



Project:

**Alex McLeod and Brendan Tang:**

**Project Lovechild**

**January 19-March 24, 2013**

Artists:

**Alex McLeod and Brendan Tang**

Curator:

**Rachel Rosenfeld Lafo**



Project Lovechild was the first collaboration between ceramic artist Brendan Tang, then based in Kamloops, and digital artist Alex McLeod, based in Toronto. An augmented reality installation (combining real world images with computer-generated input), it was made up of several seemingly disparate components. These included a ceramic vessel by Tang displayed in a museum case in the middle of the TechLab, and a live video feed of the vessel together with (somewhat ghostly) images of whatever visitors were present at the time. These real-time video images were fed into a computer that overlaid them with McLeod's computer-generated animation, and the resulting combined images were projected onto the rear wall of the Gallery. As guest curator Rachel Rosenfeld Lafo wrote, "This melding of the real and the virtual offers a new way for viewers to interface with an object in a gallery setting, without the need for a smartphone or other device."

Tang has generated considerable acclaim for his series of ceramic vessels and sculptures referencing and fusing historic and contemporary cultural idioms and motifs. The vessel he contributed to Project Lovechild related to his "Manga Ormolu" series, which combined allusions to Chinese Ming dynasty porcelain vessels, eighteenth century French embellishments of Chinese ceramics, and twenty-first century "techno-pop," from video games and robotics to Japanese manga and anime. The resulting mash-up reflects globalization's impacts on cultural identity along with technology's increasing intrusions into the human body.

By contrast, McLeod was at the time creating surreal environments that existed entirely within the virtual space of the computer unless outputted in the form of colour photographs (chromogenic prints), animations, or interactive videos. Elements of his vividly coloured, seemingly three-dimensional and yet patently artificial scenes drew references from Romantic landscape painting, video games, model train sets, and museum dioramas. His animation for Project Lovechild included pulsing, popping images of moving clouds, flying birds, sprouting vegetation, and an eerily molten carpet of grass, all in eye-popping colours. As part of the exhibition the future is already here, Tang and McLeod's collaboration demonstrated how effectively and expressively the ancient technology of fired clay could interface with contemporary computer technology.

Project:

**Ikbal Singh: Giddha**

**April 13–June 16, 2013**

Artist:

**Ikbal Singh**

Curator:

**Jordan Strom**



Giddha was a video installation based on the Punjabi folk dance of the same name. The dance, which is said to have ancient origins, is most often performed at festive or social occasions by groups of women who can range in number from four to more than twenty. The dancers take turns reciting couplets of poetry called boli, and then dancing solo or in small groups at the circle's centre. The poetry may be emotional, comical, or teasing in tone and it and the dancers' movements often address themes of love, nature, politics, domestic chores, and family dynamics. Improvisation, mimicry, and lively movements are also qualities found in giddha.

For her TechLab exhibition, Surrey-based artist Ikbal Singh shot a performance of giddha using four different cameras in fixed positions. She installed four video screens in a tight square, creating a 360 degree sequence of dancers whose flickering forms appeared to float within the darkened room. At the same time, the placement of the video screens immersed the gallery visitor within the performance. Images were played back in sync so that when the viewers moved from screen to screen, they took the position of the dancers participating in the original performance. The four cameras Singh used ranged in quality from professional to domestic, suggesting the diversity of interpretations of the dance. As with many of her artworks, Singh's video installation challenged cultural preconceptions. It also revealed the breadth of expression Punjabi women may find in poetry and dance.

Giddha was part of the exhibition Spectacular Sangeet, which showcased South Asian cinematic influences and traditions of music, song, and dance together with globalized culture in the work of diasporic visual artists based in Canada and Britain.



Project:

**Sylvia Grace Borda**

**Field Studies Residency:**

**Summer 2013**

**This One's for the Farmer:**

**September 21–December 15, 2013**

Artist:

**Sylvia Grace Borda**

Curator:

**Jordan Strom**



During her [Field Studies](#) residency, internationally acclaimed artist Sylvia Grace Borda researched and shot digital, analog, still, and moving imagery of agricultural production in the regions south of the Fraser River, in the growing basin of Surrey and the Fraser Valley. Her particular focus was the farming that took place on lands closely adjacent to or sandwiched between areas given over to urban or industrial development. Often using cutting-edge digital technology, she created portraits of farmers and their daily activities. Her intention was to address the meaning of contemporary Canadian farming in urban life, and to place it within a continuum between past and future art production. As she wrote in her artist statement, farming is not typically the subject matter of contemporary art: “It remains hidden as an activity, seen by most as a fleeting moment often from a moving car traversing a highway.”

Her TechLab installation, part of the Gallery exhibition [Figuring Ground](#), consisted of four distinct bodies of work. Each was created in partnership with the farming community south of the Fraser. Working with Belfast-based, certified Google Street View photographer John M. Lynch and employing what was then brand-new drone technology, Borda created [Farm Tableaux](#) on five different farms in the Surrey region. The work consisted of “dimensional” portraits of farmers in their daily activities. The Google Street View technology required that they stand still for extended periods in the midst of their work, allowing them to be caught in a series of still images by the moving Google cameras. Viewers accessed these images digitally, through computers in the gallery and online through designated web pages.

Elements of Borda’s [Field Studies](#) residency also manifested in [Aerial Fields](#), an exhibition at the Gallery’s offsite UrbanScreen venue, from September 21, 2013 to January 6, 2014.

Also part of the exhibition was [Aura](#), a 3D stereo video viewed on an iPad in the gallery. This work employed doubled and extremely slow moving close-ups of a collapsed stack of baled hay, with occasional glimpses of a pitch fork of hay entering the frame. In a quiet and meditative way, it investigated the relationship between time, place, and purpose.

Project:

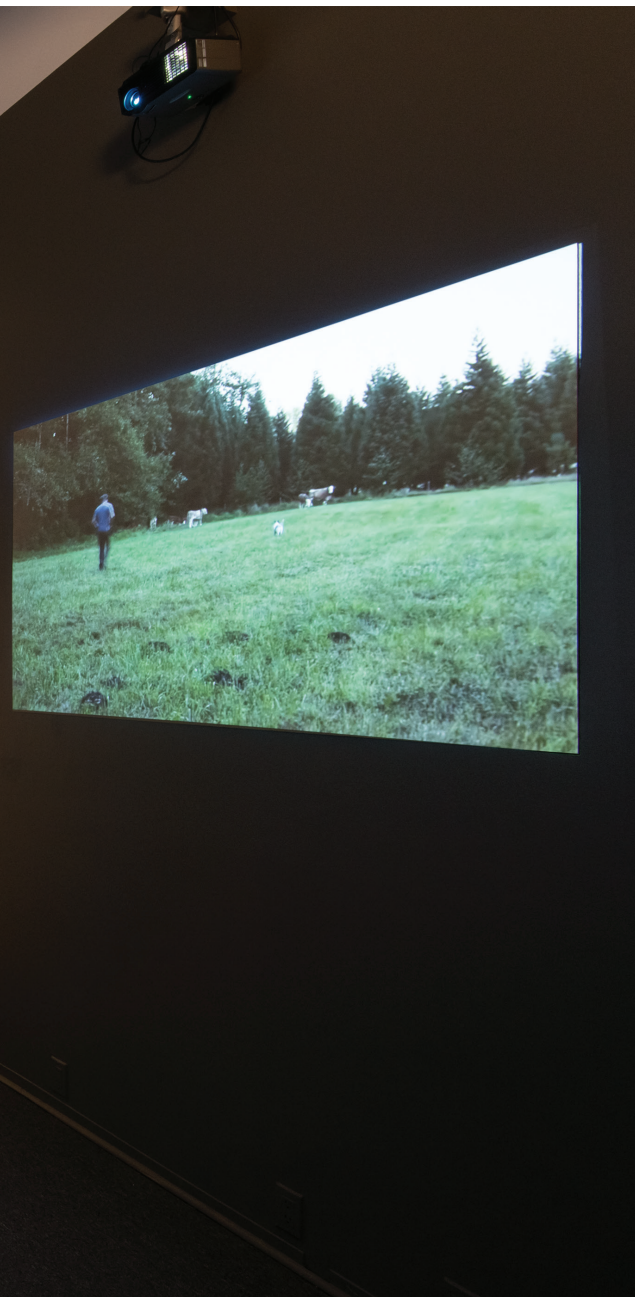
**Sylvia Grace Borda: Field  
Studies and This One's  
for the Farmer (continued)**



In Farm Work, a series of 40 video vignettes shot over a six-month period, Borda recorded farmers as they planned, planted, maintained, and harvested their crops through a spring, summer, and autumn growing cycle. Her multiple camera views of farmers at work, their crops, and their animals in the landscape create an aesthetic appreciation for the subjects but also illustrated the hours of intensive labour demanded by farming. These video vignettes also speak to and in a sense critique the romanticism of nineteenth century paintings of agricultural subjects.

Establishing a different sort of dialogue between the historic and the contemporary, Borda also created Stereoviews: Two points of perspective if not Three. She mimicked Victorian-age stereoscopic techniques, which sought to give viewers the impression of three-dimensionality, by using analog stereo-film techniques to create two different and slightly adjacent still images of farm crops as they grew and matured. Visitors were invited to view these images through old-fashioned stereoscopes located in the TechLab.

Farm Tableaux and the other works in Borda's show pushed the boundaries of what then constituted contemporary online art and photography. At the same time, they created a sense of community and social connectedness with people long excluded from cultural notice. It is significant that the participants in Borda's project excitedly turned out for the exhibition opening and its related public programs.



Project:

**Nancy Paterson:**

**Stock Market Skirt**

**June 20, 2013–January 4, 2014**

Artist:

**Nancy Paterson**

Curator:

**Jordan Strom**

Nancy Paterson's Stock Market Skirt, first conceived in the mid-1990s and created in 1998, is one of the most important works of Canadian cyberfeminism. It was also one of the first kinetic sculptures set in motion by external data available on the internet. Physically, it consists of an array of freestanding computer screens surrounding a blue taffeta and black velvet party dress mounted on a dressmaker's dummy. At the same time that livestock market data register visually on the screens, the height of the dress's hemline is correspondingly affected. When the ticker price of a certain stock rises, the hemline is raised; when the sticker price falls, the hemline is lowered.

The work was designed as a response to the behavioural experts Desmond Morris and Helmut Gaus's theory that women's clothing, particularly the length of their skirts, corresponds to the economic temper of the times. The work's custom-designed computer program constantly retrieves changing stock prices from dedicated websites and sends positive or negative pulses to a stepper motor mounted under the skirts. The motor operates a delicate and complex system of weights, pulleys, and cables, which are attached to the inside of the skirt, so that, again, the hemline rises, falls, or hovers in place in response to the fluctuations of the selected stock. The work's computer is able to track the price of any stock on the New York Stock Exchange, as long as such information is available online (for its TechLab installation, it was cued to Google's stock price). When the market is closed, the work is programmed to draw temporarily on historical data.

Stock Market Skirt is, in the artist's words, "an intentionally ironic exploration of the relationship between the two most interesting . . . expressions of late twentieth century culture and individuality: lust and money." It provokes a number of questions about gender, desire, and the ways in which women may function as objects rather than subjects within the male-dominated realms of finance and technology. Considered Paterson's most important work and recognized as a national treasure, Stock Market Skirt was acquired for the Gallery's permanent collection as a gift of the artist in 2012.

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Project:

**Mass Arrival**

**April 12–June 15, 2014**

Artist:

**Mass Arrival**

Curator:

**Jordan Strom**





Mass Arrival is an artists' collective composed of Farrah Miranda, Graciela Flores, Tings Chak, Vino Shanmuganathan, and Nadia Saad. In August 2013, they created a public performance on a busy street in downtown Toronto to draw attention to the hostile reception to 492 Tamils who arrived on the MV Sun Sea on the British Columbia coast in August 2010. Videos documenting their participatory performance, along with a related collage, were installed in the TechLab as part of the exhibition Ruptures in Arrival: Art in the Wake of the Komagata Maru.

Responding to the fear and anxiety that any influx of racialized “others” seems to stimulate among many Canadians, Mass Arrival’s performance invited “white people dressed in white” to fill a 40-metre boat made of fabric and wood, convey it along the street, and then “disembark” in front of Hudson Bay’s flagship store on Queen Street in Toronto. Not only did the artists seek to draw connections to the Tamil arrivals three years earlier, but they also wanted the public to consider other historic refusals of the Canadian government to admit boatloads of refugees. They cited such cases as the MS St. Louis and its 907 European Jewish passengers, who were turned away in 1939, and the Komagata Maru, when all but 23 of its 376 Punjabi passengers were turned away in 1914.

In addition to three video monitors showing footage of the performance and news coverage of the arrival of the MV Sun Sea, Mass Arrival also mounted a collage of related images and texts on the walls of the TechLab, and invited visitors to use red pencil crayons to write their thoughts and comments there.



Project:

**Stephanie Loveless:**

**Cricket, Tree, Crow**

**July 12, 2014–January 4, 2015**

Artist:

**Stephanie Loveless**

Curator:

**Jordan Strom**



Stephanie Loveless's quadraphonic sound work in three movements used her own voice to channel the voices of cricket, crow, and maple tree and to explore the boundaries, she says, "between human and nonhuman subjectivities." During research originally undertaken in Montreal in 2012, she listened closely to field recordings of different species, read widely, and watched nature videos. As she became more interested in certain species, she began listening more intently to them, and experimented with light processing (stretching and frequency parsing) of selected field recordings. In the creation of Cricket, Tree, Crow (2012), she "sang with" recorded and processed sounds, creating what she felt was a sympathetic vibration with the species she had chosen to work with. According to the artist, the process, employing mouth, throat, and breath, is "very much like prayer." It was also "an experiment in empathy."

Installed in the TechLab, Cricket, Tree, Crow had an environmental message bound into it. Loveless feels strongly that our anthropocentrism has caused both environmental devastation and psychic isolation. Through her sound work, she seeks to learn from the life forms that live with and around her, "creating some form of communion or alliance with them."

Project:

**Taryn Hubbard: Surrey City**

**Centre née Whalley**

**January 17-March 22, 2015**

Artist:

**Taryn Hubbard**

Curator:

**Jordan Strom**





In conjunction with the Surrey Art Gallery's 40th anniversary exhibition Views from the Southbank I and also with the Open Sound 2015 symposium, local poet and sound artist Taryn Hubbard presented her five-channel sound installation Surrey City Centre née Whalley. Together with fragments of found poetry mounted in faint vinyl lettering on the walls of the Gallery space, her installation was composed of soundscapes of recordings made over the period of a year in North Surrey, particularly in the rapidly developing and then still new City Centre along with the larger Whalley region. Ranging from serene to jarring, and from natural to mechanical, the sounds included those found at construction sites and in parks, shopping malls, SkyTrain stations, and crosswalks. Birdsong and human chatter are layered with the rush of human activity and urban development. While responding to Surrey's rapid urban growth, Hubbard invited the listener to pay closer attention to the everyday world around them and to develop a stronger sense of place through the acoustic qualities of the urban environment.

Hubbard described her project as "an audio map of the city" and curator Jordan Strom suggested that it was "a form of counter-mapping or reordering of the places [where] one lives, in order to make them more resonant, more one's own." In installing her work, Hubbard also responded to the built environment of the Gallery, expanding the visitor's understanding of space and place.

Project:

**Stephen Foster: Remediating**

**Curtis: Imagining Indigeneity**

**April 11–June 14, 2015**

Artist:

**Stephen Foster**

Curator:

**Brian Foreman**



Stephen Foster, [In the Land of The Headhunters: Potlatch Dancers](#), 2013, inkjet print for backlit light box.



Through an interactive video installation and a series of backlit inkjet prints, multi-media artist Stephen Foster invited viewers to reconsider cultural stereotypes in historic and contemporary depictions of First Nations peoples. In Remediating Curtis: Remix (2013), Foster montaged together scenes from Edward S. Curtis's 1914 silent film In the Land of the Head Hunters with excerpts from recent and past Hollywood films. The central image in the video is an animated reconstruction of the original set and characters from Curtis's film. The work was interactive in two ways: TechLab visitors wore old-fashioned 3D glasses to view it, and they were also able to remix sound and video elements through their movements, which were tracked by motion sensors in the exhibition space.

Edward Curtis is famous for his (often staged and costume-directed) photographs of North America's Indigenous peoples in the early years of the twentieth century. Influential at the time and again in the 1960s and 70s, his photos have since been criticized for their historical inaccuracies and for propagating romantic notions of "Indianness" along with the misconception of the "vanishing race." In his artist statement, Foster writes that he uses video, sound, and digital photomontage to create work that explores the colonial legacy entrenched in mass-media culture. "My work seeks to complicate, shift, and contradict these representations of 'Indianness,' providing a more complex perspective [and] facilitating an alternative view of contemporary cultural and social issues."

Exhibited in the gallery adjacent to the TechLab, and also viewed through 3D glasses, was Foster's Toy Portraits, a series of 3D prints mounted in light boxes. Set up and shot in the pictorialist style of Curtis's original photographs while also referencing cinematic tropes, these works feature "Indian" toy figurines, greatly enlarged through the heroic scale of Foster's backlit prints. Each photo reveals Curtis's lasting influence on the stereotypical representation of Indigeneity perpetuated in popular culture, from souvenir shops and toy stores to blockbuster movies.

Project:

**The Grove: A Spatial Narrative**

**September 19–December 13, 2015**

Artists:

**Carmen Papalia, Phinder Dulai,**

**Andrew Lee**

Curator:

**Jordan Strom**



This multi-channel soundscape and visual narrative was the result of the artists' research and sound-gathering in a treed area that abuts the Newton bus loop and Newton Recreation Centre in Surrey. Known locally as "The Grove," this area had been frequently traversed by residents who walked between restaurants and shops on one side of 72nd Avenue and the library and recreation centre on the other. More recently, it had been the site of illicit, violent, and tragic events, including drug dealing. In response to the murder of hockey mom Julie Paskell in December 2013, a group of local residents banded together as "Friends of the Grove" in order to reclaim the area as an "outdoor room," a place where people could walk and gather in safety. Passers-by were engaged with art, games, craft shows, and community events.

The Grove, a collaborative project by artists Carmen Papalia and Andrew Lee and poet Phinder Dulai, also functioned as a form of reclamation, reacting to the many uses of the site and "mapping" it through sounds, words, and images. Papalia, who is visually impaired and whose practice includes participatory public projects that explore issues of access, led his fellow artists in a "sound walk" in and around the wooded area. This performance came to be the basis of the TechLab installation. In addition to the multi-channel soundscape installed in the TechLab, the work included photographs of the area and a poetic collage.



Project:

**Paulo Majano: I Was Here**

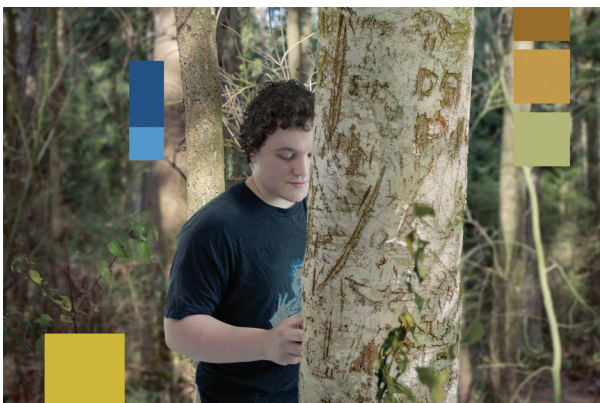
**April 9–June 12, 2016**

Artist:

**Paulo Majano**

Curator:

**Jordan Strom**



**Top:** Paulo Majano, [The Carved Tree](#) [49.01208N, 122.39188W], 2015, digital photographic print with augmented reality component, 2015.

**Bottom:** Paulo Majano, [The River Edge](#), 2016, digital photographic print with augmented reality component.

Using augmented reality technology, Paulo Majano created an interactive photographic installation, comprising images of recreational landscapes and activities in Surrey which fully revealed themselves in surprising ways. The installation initially presented as a series of snapshot-like still photos of understated scenes of people enjoying themselves in three different outdoor or recreational settings: The Carved Tree, The Joke, and The Picnic Party. However, when the viewer held up a smartphone or tablet using the Aurasma augmented reality application, each photo became three-dimensional, and revealed previously hidden or “latent” images. Viewers could interact with each scene and reframe the composition from different points of view, or they could move in for a closer look or glance behind objects that had previously obscured other elements within the two dimensional photos. Like latent thoughts in Freud’s theory of dreams, Majano’s complex images offered the potential for finding new readings and added layers of meaning within each work.

As the artist wrote in his proposal, “The depth of the image lets us see beyond what is initially apparent and, as we see more parts of the scene, different narratives that can potentially change our interpretation are revealed.” Since the viewer had to move around the photograph to fully see it using the augmented reality app, the virtual medium also became a medium for the actual, that is, for active physical engagement with the work.

Reflecting the Gallery’s commitment to supporting innovative art-making, multiple works from I Was Here are now a part of the Gallery’s permanent collection.

Project:

**Jay Bundy Johnson: Being still**

**(life) shows us who we are**

**June 25, 2016–January 10, 2017**

Artist:

**Jay Bundy Johnson**

Curator:

**Jordan Strom**



Jay Bundy Johnson's aural-sculptural environment riffed on the tradition of still life painting while posing questions about what objects sound like, what sonic space tells us, and the afterlife of consumer goods. The sculptor and media artist creates his interactive sound installations out of the electronic components of found objects, including toys, clocks, stereo speakers, and VCRs, all manufactured over the past half century and all largely redundant. Working with these dismantled components, he then constructs intricate pieces that mimic the composition of still life paintings. Rather than being traditional arrangements of domestic vessels, food, or flowers, however, Johnson's sound sculptures are reminiscent of tabletop scenes found in scientific laboratories or electronic workshops. The artist himself drew another analogy, saying, "The work is meant to be skeletal, like a dissected animal laid out for inspection."

For his TechLab exhibition, Johnson also made an interactive wall-mounted work—a relief-mural of circuit boards, motors, gears, speaker cones, light bulbs, and wires. Visitors to the Gallery were able to trigger the creation of soundscapes of things past, including jingles, sound signatures, musical notes, and alarms. As curator Jordan Strom has written, "Johnson's aural-sculptural environment carefully balances movement and stillness, sound and silence, and the symbolism of domestic and industrial spaces."

Project:

**Scott Billings: A Risky Jump**

**January 21–March 19, 2017**

Artist:

**Scott Billings**

Curator:

**Jordan Strom**

Still from [A Risky Jump](#), Scott Billings, 2015,  
video installation.





Employing high-speed film technology usually found in sports broadcasting, artist and designer Scott Billings seems to make a visual play on the phrase—and the state—of “falling asleep.” His references are also highly cinematic, drawing from the writing and techniques of early Russian filmmaker Dziga Vertov, among others. Referencing Vertov’s slow-motion 1918 film of himself leaping perilously across rooftops, Billings employed a high-speed camera (shooting at 7500 frames per second) mounted on a stainless-steel ring on an aluminum I-beam to create his own performance video. The work shows him curled up, eyes closed, on his studio floor and then falling through a trap door, the fall seeming to jolt him awake before he lands on a crash pad below and then returns to a sleeping state. Projected in extreme slow motion (the one-second stunt is stretched to seven minutes in length), the work reveals the artist’s contorted and fearful facial expressions as he freefalls, evincing what would otherwise be an undetectable cognitive and emotional state between waking and sleeping. At the same time, the artist’s body appears to hover between stillness and motion, as if he were magically levitating before gravity overtakes him.

During the shoot, the camera moved vertically along the I-beam, in perfect sync with the artist’s fall. For the work’s TechLab installation, Billings mounted the projector on the same apparatus, so that the life-size video image would very slowly slide down the wall, in sync again with the artist’s fall and ending at floor level. At the end of the scene, the image turns black, the projector moves back up to the top of the I-beam, and the looping video begins again. Because the work is set in Billings’s studio, it suggests that the condition of instability depicted here is a metaphor for creativity—that the creative act itself is a form of freefall. The artist also makes explicit use of what Vertov called the “Kino-Eye,” that is, the capacity of cinematic technology to make visible what the unassisted human eye cannot see.

Project:

**High Muck a Muck:**

**Playing Chinese**

**April 8–August 26, 2017**

Artists:

**High Muck a Muck Collective**

**(Nicola Harwood, Fred Wah, Jin**

**Zhang, Bessie Wapp and Thomas**

**Loh) together with Hiromoto**

**Ida, Tomoyo Ihaya, and Phillip**

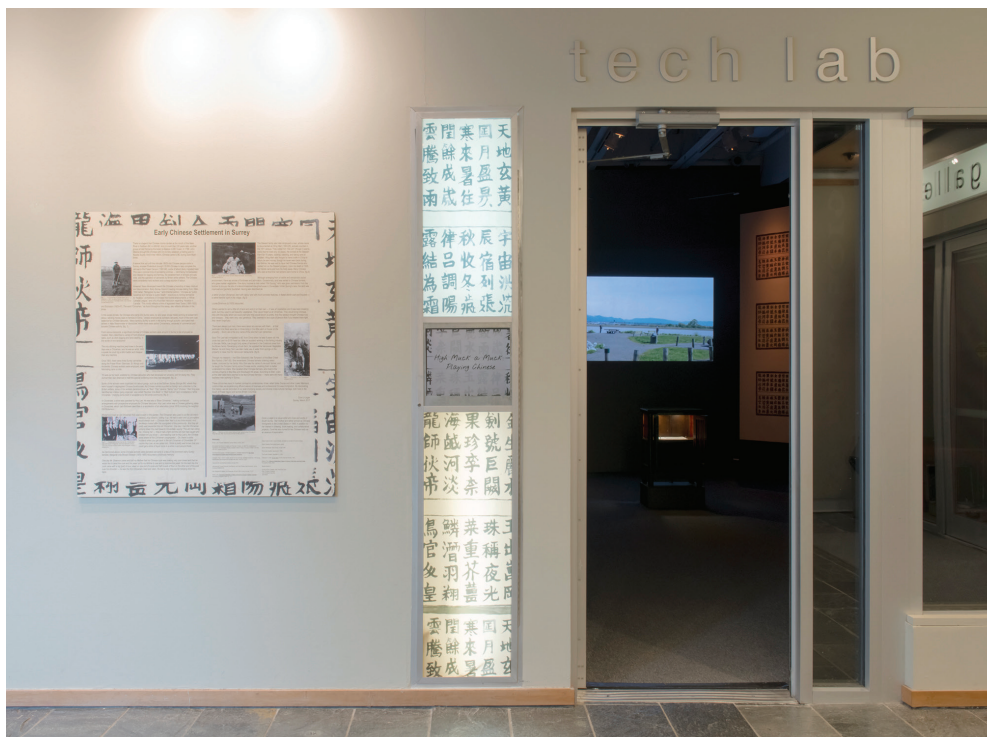
**Djwa, and community members**

**such as Cameron Mah and**

**Lawrence Mar**

Curator:

**Nicola Harwood**





This digitally and thematically complex work, in which artists collaborated with community members, took the form of an interactive TechLab installation. Playing Chinese (2016) explored the theme of historical and contemporary Chinese immigration to the West Coast of Canada and the tensions that exist within and between different narratives of this immigration. It also delved into what Fred Wah called “the complexities of mimesis at the vortex of diaspora and globalism.” In her artist statement, Nicola Harwood wrote that Playing Chinese reverses socio-cultural roles and “challenges the racist paradigm of an all-white Canada in which Asian immigrants enter but are never fully allowed to arrive.”

The public was invited to participate in the digital installation by playing a Chinese lottery and activating audio, video, and textual elements. TechLab visitors filled in their own family immigration history on a Chinese lottery card (“Pak Ah Pu”) and inserted it into a machine that then read their “fortunes” on a screen behind them. They were also taken on a digital tour of Chinatowns in Nelson, Victoria, Vancouver, and Richmond, where they encountered poems by Fred Wah, watercolour paintings of people and landscapes by Tomoyo Ihaya, music by Jin Zhang, performance videos by Bessie Wapp and Thomas Loh, and oral histories by a number of community members, providing a glimpse into Chinese immigrant life then and now.

**Top:**

Tomoyo Ihaya, Richmond Map, 2014, watercolour and ink.



Project:

**S.O.U.C.C.S.! Earth iZ OuR Pwr**  
**September 23–December 10, 2017**

Artists:

**Valérie d. Walker and**  
**Bobbi L Kozinuk**

Curators:

**Roxanne Charles and**  
**Jordan Strom**



This collaborative exhibition by Vancouver artists Bobbi Kozinuk and Valérie d. Walker employed a science fiction proposition to involve viewers in finding solutions to contemporary environmental problems. In their statement, the artists write that they are visitors from the future who have come back to Earth—“using trans-tectonic, earth-movement based power”—to discover why people of our present era have wilfully destroyed the planet. They described a present in which our oceans are choking on plastic waste, and a future in which all sea life is endangered or gone. They also posed questions about who bears responsibility for the natural environment, and encouraged viewers to tell stories and propose solutions for stopping the catastrophic damage and rebuilding the eco-system.

With S.O.U.C.C.S.! (2013–17), the SQolar USB Charging Culture Station, the artists offered TechLab visitors the opportunity to periodically recharge their mobile devices using solar energy in exchange for their stories. At other times, visitors were invited to play stories using touch-sensors while also getting a power boost. The artists suggested that visitors could use the electrical potential and power of their bodies to complete an assortment of circuits on their Time-Touch-Board/Eclavier de temps, while also considering how they might make positive changes in their relationship to the environment.

The exhibition comprised several visual, physical, and electronic elements in addition to the solar recharging panel. These included wafting, tie-dyed fabric hanging from the ceiling, on which were printed or projected images of floating plastic waste and its disastrous impact on seabirds and other sea life, but also offering news stories and photographs related to environmental innovations. Another element was a rack, also hanging from the ceiling, composed of criss-crossing wires and displaying yet more plastic waste while also emitting mechanical humming and groaning sounds. Also attached to this rack were keys, a symbol of the need to find the “key” to plastics reduction and elimination from the Earth’s oceans.

Kozinuk and Walker describe themselves as “Visibly Different TransMedia Artists.” Their TechLab work was part of the exhibition Ground Signals, which proposed alternatives to traditional Western landscape painting and photography in considering and depicting our relationship with the natural environment.

Project:

**Ben Bogart: Watching and Dreaming**

**April 14–June 10, 2018**

Artist:

**Ben Bogart**

Curator:

**Jordan Strom**



Still from [Watching \(2001 A Space Odyssey\)](#).  
Ben Bogart, 2018, single-channel video installation.

Ben Bogart is a media artist who works primarily with generative computational processes, often in the creation of images, “artifacts,” texts, and performances. Their TechLab installation consisted of a series of video projections and light boxes that invited viewers to consider the nature of artificial intelligence (AI), its representation in popular culture, and the possibilities such representation might pose for our understanding of and research into AI. At the same time, these works enlarged on ideas at the core of Bogart’s practice, examining the relationship between human beings—our brains and mental processes—and computational systems that, as they say, “we increasingly use to model and extend our intellectual capacities.”



Using as their source material three ground-breaking and subsequently highly influential science-fiction films, A Space Odyssey (1968), Blade Runner (1982) and TRON (1982), each of them with a distinct and individual focus on AI, Bogart designed complex software algorithms to break apart and reassemble their visual and aural components. In the Watching video projections and Precepts for Watching light boxes, their computational systems categorized and organized millions of fragments of each film according to similarities of size and colour. Whether moving or still, the resulting flickering and abstracted images are, Bogart explains, “just at the threshold of readability.” The dialogue, music, and sound effects of the videos also existed on the edge of intelligibility. These works seemed to challenge the natural tendency of TechLab visitors to search for narrative structure and formal coherence, pitching seemingly chaotic sequences of abstracted images and sound against our longing for the familiar and our desire for meaning. At the same time, Watching and Dreaming introduced us to the idea of how our cultural creations might be viewed through the lens of computation. Simply stated, Bogart shows us what a machine sees when it goes to the movies.

Watching and Dreaming was presented in the TechLab as part of the 2018 Capture Photography Festival.

Project:

**Indigenous Contemporary**

**Art Intensive**

**Summer 2018**

Artists:

**Alanna Edwards, Naomi Kennedy,**

**Avishka Lakwijaya, Atheana**

**Picha, and Kelsey Sparrow**

Curators:

**Roxanne Charles and**

**Alison Rajah**





During the summer of 2018, five emerging artists joined the Gallery staff team as part of the Indigenous Contemporary Art Intensive. Conceived by Gallery artist-educator Roxanne Charles and former Curator of Education and Engagement Alison Rajah, the Intensive took place in the TechLab. Through workshop sessions with mentoring artists and cultural workers and offsite visits, the artists responded to their time spent at the Gallery by creating artworks, including digital animations shown at UrbanScreen in September 2018 and April 2019 as well as a multimedia fibre and screen-based installation, Bearing Witness, facilitated by Roxanne Charles and Debbie Westergaard Tuepah and installed across from the TechLab. Through mentorship, offsite visits, and workshops with dozens of gallerists, museums specialists, and artists such as Drew Atkins, Debra Sparrow, and Peter Morin, the participants grew their voices as artists and as cultural workers, gaining valuable skills in museum art education and expanding their own art practices.

One of the recommendations from the Intensive led to the conceptualization of the Gallery's educational resource visiting with, detailing 27 artworks in the Gallery's permanent collection created by artists who are Indigenous. Mostly in words of the artists themselves with quotes and stories, the resource deepens understanding about land, community, language, and other relevant themes.

Funding for the Intensive was secured from BC Arts Council's Youth Engagement Program, Heritage Canada's Young Canada Works Summer Students and Building Careers in Heritage Programs, and Vancouver Foundation.

Project:

**Maggie Orth: Moving towards  
Stillness**

**September 22–December 16, 2018**

Artist:

**Maggie Orth**

Curator:

**Rhys Edwards**



Maggie Orth is a Seattle-based artist, writer, and technologist whose practice includes electronic textiles and interactive art. Her exhibition in the TechLab consisted of three related works that asked viewers to consider not only computer-driven textile practices but also ideas around utility, ephemerality, planned obsolescence, and our own fleeting existence. A subtext of the show was the historical origins of modern computers in the nineteenth century invention of the Jacquard loom, whose punch cards controlled weaving patterns.

Each of the woven works in Orth's show, 100 Electronic Art Years (2010), Coma Shock (2013), and Barcode Man (2007), employed hand-woven cotton and rayon yarns, conductive yarns infused with thermochromic inks, and custom electronics and software. Each was activated when a TechLab visitor pressed a button, sending a current through the conductive yarns woven into the textiles and causing the ink to heat up and change colour. This process revealed bright and previously unseen patterns within the weaving. Early in the life of the artwork, the weaving returned to its initial dark state when the yarns cooled; over time, however, the thermochromic ink no longer returned to that original condition but remained bright, permanently imbuing the weaving with the underlying patterns. The consequence of this process meant that each work would not be fully visible or "complete" until it was "dead," that is, no longer functional in the sense of being activated by viewers. As curator Rhys Edwards wrote, "In their ongoing decay, Orth's artworks present us with a contradiction. To interact with them is to participate in their destruction and make them unusable."

Through her colour-change textiles, Orth prompts us to consider the way obsolescence is built into many of the everyday products we acquire, stimulating an economy of over-consumption and massive waste. She also asks us to think, too, about the novelty factor in the marketing and consumption of new technologies. Most poignant here, however, is the way Orth's art causes us to reflect upon our own mortality. In Edwards' words, "Orth's art exists halfway between the current moment within which we live and eternity. Each textile travels from timeliness to timelessness."



Project:

**Triangle Trade**

**January 19–March 24, 2019**

Artists:

**Camille Turner, Jérôme Havre,  
and Cauleen Smith**

Curator:

**Jordan Strom**



Still from [Triangle Trade](#), Camille Turner, Jérôme Havre, and Cauleen Smith, 2017, single-channel video installation. [Triangle Trade](#) was commissioned by Gallery TPW with support from Partners in Arts.

Triangle Trade (2017) is a short collaborative film by three multidisciplinary artists, California-based Cauleen Smith and Toronto-based Camille Turner and Jérôme Havre. Originally commissioned by Toronto's Gallery TPW, the work is the result of a year-long cross-border conversation and employs aspects of each artist's practice—Turner's performance art, Smith's experimental filmmaking, and Havre's puppetry and interest in museum dioramas—as well as the individually articulated examination by each of the relationship between land and belonging. Each also brought their individual experiences of the African diaspora to the project: Turner was born in Jamaica and moved with her family to Toronto when she was a young girl; Havre was raised in France and immigrated to Canada as an adult; Smith was born in the United States and grew up in an agricultural town in Northern California. "From these three positions," Smith says, "we are able to offer insight into the experience of becoming Black."

The film features three puppet-avatars, each resembling and performing one of the collaborating artists and each set on an island, separate and distinct from the others. Turner's puppet dwells in an icy environment which she regards as "magical and ethereal"; Havre's puppet crawls ashore on an isolated tropical island; and Smith sets her puppet at the foot of a powerful and potentially destructive volcano. Although the characters are separate from each other, each possesses the possibility of growth and transformation. By the end of the film, Smith's volcano erupts, creating rocky outcroppings that bridge the divide between the three different islands. While introducing an idea of community, the film also poses the questions, what and where is home?

The film's title, Triangle Trade, is drawn from the triangular trans-Atlantic slave trade that existed in the eighteenth and nineteenth centuries. During this period, for instance, the British would export manufactured goods to West Africa and trade them for enslaved peoples who were then transported to the West Indies, where they were traded for sugar and other goods that were then shipped back to Britain. Curator Jordan Strom observed that while speaking to present-day racism, xenophobia, and anti-immigrant sentiments in the West, as well as to the African diaspora, the film "turns the original meaning of triangular trade on its head, presenting instead a form of three-way collaboration that points to new models of being and greater understanding of our collective past, present, and future."

Project:

**Fischli and Weiss:**

**The Way Things Go**

**April 13-June 16, 2019**

Artists:

**Peter Fischli and David Weiss**

Curator:

**Rhys Edwards**



Swiss artists Peter Fischli and David Weiss collaborated on multidisciplinary art projects from 1979 until Weiss's death in 2012. From photographs and videos to installations and sculptures, their work often employs banal objects and materials in absurd and witty ways, while also smudging the distinction between high art and low. Their most famous artwork is the 1987 film The Way Things Go. This 30-minute film records, in a seemingly continuous shot, a series of low-tech chain reactions, actually staged over the course of two years in an abandoned warehouse. Balloons expand and deflate, barrels roll, balls rotate on wires, chairs topple over, gases erupt from containers, sparks fly, and flammable liquids burst into flame.

The work's components—its “props” and “special effects”—are at once humble and mesmerizing, employing everyday objects such as garbage bags, step ladders, rubber tires, tin cans, kitchen knives, measuring cups, brooms, buckets, and baking pans. The soundtrack includes liquids gurgling as they are poured from one container to another, objects rolling or toppling over and clattering to the floor, and fuses sizzling as they ignite and burn. The Rube Goldberg-like nature of the contraptions and chain reactions shifts from the mechanical to the chemical to the pyrotechnical. As curator Rhys Edwards wrote, chemicals act as a medium between the different series of reactions: “trays full of bubbling foam slosh into vessels and spilled gasoline ignites a fire which causes a rope to break.” No effort is made to clean up stains, spills, fallen objects, or broken glass nor to contain possibly toxic smoke and fumes, the seemingly incidental mess being intentional and integral—chaos finely balanced with control. “The excitement and humour of the work comes from the tension between the abject nature of the environment presented to us and the joy with which Fischli and Weiss continually manage to liberate each object from its conventional function,” Edwards observed. He also notes that, through this film, Fischli and Weiss imbue mundane objects with life, alerting us to their “latent physical powers” and enabling us to project our human stories onto the ways they interact with each other.

Project:

**Cindy Mochizuki:**

**Autumn Strawberry**

**June 28–August 31, 2019**

Artist:

**Cindy Mochizuki**

Curator:

**Jordan Strom**

Cindy Mochizuki is an interdisciplinary artist whose creative practice includes multi-media installation, audio fiction, performance, animation, drawing, and community-engaged projects. She spent a summer residency in the TechLab working with the local Japanese-Canadian community while developing an animated film to be titled Autumn Strawberry. Both film and residency took their initial inspiration from her paternal grandparents' berry farm in the Walnut Grove area of Surrey prior to World War II, and their title from a hardy strawberry variety that fruits in cold weather and was developed by Bunjiro Sakon, an Issei (Japanese immigrant) farmer in Mission, BC. Autumn Strawberry examined and enlarged upon the histories of Japanese-Canadians who settled on the west coast of Canada. A particular focus was on those who established themselves here and contributed substantially to the social and economic fabric of their adopted homeland, then lost everything—homes, businesses, farms, fishing boats, and personal freedom—when they were incarcerated in the BC interior during the war.

Supplementing her archival research, Mochizuki often engages the public in telling previously lost or little-known stories. As well, she brings her imagination into her narratives. She is interested, she says, in the ways “art can play a role in telling history” and in “making visible what is not visible in history.” While resident in the TechLab, Mochizuki interviewed Japanese-Canadians with family roots in agricultural production—especially in berry farming—in Langley and North Surrey. She also engaged in conversations with other visitors to the TechLab, discussing her project and reviewing its progress with them.

On view throughout her residency were sets, drawings, scripts, and storyboards from past and present animated and multi-media projects. In addition to the community-engaged elements of her undertaking, Mochizuki also collaborated with composer Nancy Tam and choreographer Lisa Gelley Martin.



Project:

**Leila Sujir: Forest Breath**

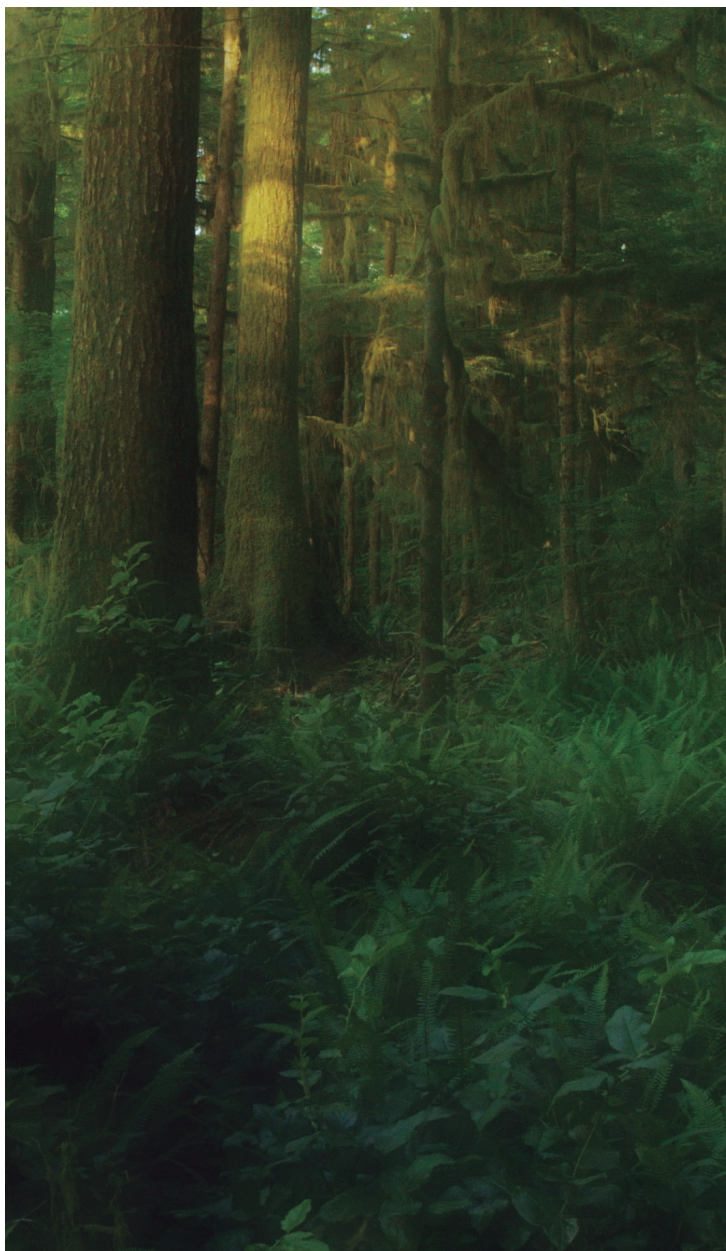
**September 21–December 15, 2019**

Artist:

**Leila Sujir**

Curator:

**Jordan Strom**



Still from [Forest Breath](#), Leila Sujir, 2018, stereoscopic 3D video and lightbox with stereo audio.



Leila Sujir's video installation depicted a series of specific moments amongst the old-growth forests around Port Renfrew on Vancouver Island. Sujir filmed primarily in South Walbran, near Emerald Pool, as well as the Red Creek Fir area, all in the traditional territories of the Pacheedaht people of Southern Vancouver Island. These forests have been under increasing threat of logging at a time when there has been a drastic reduction of old-growth (forests that have never previously been logged) in the province. Shot simultaneously on two stereoscopic cameras, the artist brought vivid imagery of the Old Growth landscape into the gallery through two simultaneous projections that form an optical polarized 3D image when viewed through anaglyph glasses.

Created around the time of the artist's mother's death, Forest Breath (2018) is about memory and family and healing: "These West Coast forests are where my mother took me as a young 24-year old, after an operation for cancer." The artist recounts, "I didn't die, to my surprise. The forest was where I found wonder and learned to be alive again."

Sujir's aunt Manorama Savur had also been an important influence on this artwork. Savur, a renowned sociologist who wrote about the extensive loss of bamboo forests in India, had talked with Sujir in depth about the cultural and environmental importance of forests in India—a country where the artist was born before moving to Canada as a young child. Sujir has been making technically innovative and thematically challenging works of 3D video since 2006, along with artworks with 3D elements since 1986. Forest Breath is part of a larger set of works filmed in forests on Southern Vancouver Island between 2016 and 2019.

Forest Breath was part of Garden in the Machine, a group exhibition focusing on contemporary representations of ecology in new media art.





Still from [freeLink](#), Judy Cheung, 2006, digital installation.





Installation view of Ben Bogart: Watching and Dreaming, 2018.



The excitement of new media art involves not only new aesthetics, but also new systems of behavior including connected networks, computation, and interactivity. New media artworks therefore present novel challenges for exhibition curators; challenges which Surrey Art Gallery, and its TechLab program, has been dealing with for many years. This essay therefore aims to situate the value of the Techlab within the wider international context of both making and exhibiting new media art.<sup>1</sup>

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## Digital Media as Contemporary Art and its Impact on Museum Practice (2021)

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by Beryl Graham

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To begin by briefly explaining what I mean by new media art, I have used a working definition of new media art as those works which, rather than simply being the digital version of analogue media such as photography, have behaviours which challenge curators. To summarize, in 1999 Steve Dietz identified three characteristics of net art: Connectivity, Computability, and Interactivity. As discussed in the book *Rethinking Curating*, each “behaviour” presents different challenges to curators, and can be related to different histories of curating. “Connectivity,” for example, might be familiar to curators of live art, or time-based media, or 1960s conceptual art, including mail art. With “computability,” the generative and algorithmic nature of computer software offers evolution over time. The third behaviour of “interactivity” has been much discussed in recent years, and is covered later in this chapter. These three behaviours form a useful way of understanding not simply the latest new medium (because these change rapidly), but the ways in which the behaviours might demand a rethink of the processes involved in exhibiting these works, especially as “the computer” can be both a means of art production and a means of distribution or storage.<sup>2</sup>

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<sup>1</sup> In 2004 I interviewed Surrey Art Gallery’s then curator Liane Davison, who was already thoughtfully integrating the TechLab with wider connections, by connecting audience development to artists in residence (published in Graham, 2004, and Graham and Cook, 2010, 235–236). Around the same time as TechLab’s birth, PhD researcher Sarah Cook and I were starting CRUMB, the online resource for curators of new media art. I am therefore very pleased to be able to celebrate TechLab’s 20th anniversary, by reflecting on some current international examples of practice, and to make some new connections for the future.

<sup>2</sup> See Beryl Graham and Sarah Cook, *Rethinking Curating: Art After New Media* (Cambridge: MIT Press, 2010).

## \_EXHIBITIONS, SPACE AND TIME\_

Marialaura Ghidini: ... Since we are all finding ourselves in 'new spaces,' new circumstances, how do you think improvisation could help?

Meenakshi Thirukode: I think improvisation is a kind of survival tactic. When I say survival tactic, it's related to the way I think about sustainability, of being able to maintain a certain kind of practice as cultural producers. For me, improvisation is always to be on your toes and be responsive, rather than having knee-jerk reactions in the spaces you want to create.

—

Thirukode and Ghidini, Walkin the Portal,<sup>11</sup>

“New Media” is no longer new-born, but curators and other cultural producers still often come under pressure to speed into knee-jerk reactions based upon panicky political decisions or a historical desire for art to hype “the shock of the new.” Operating the TechLab for over 20 years, as Surrey Art Gallery has done, seems to have been a sustainable way of maintaining a thoughtfully responsive approach, based upon knowledge of place and audiences.

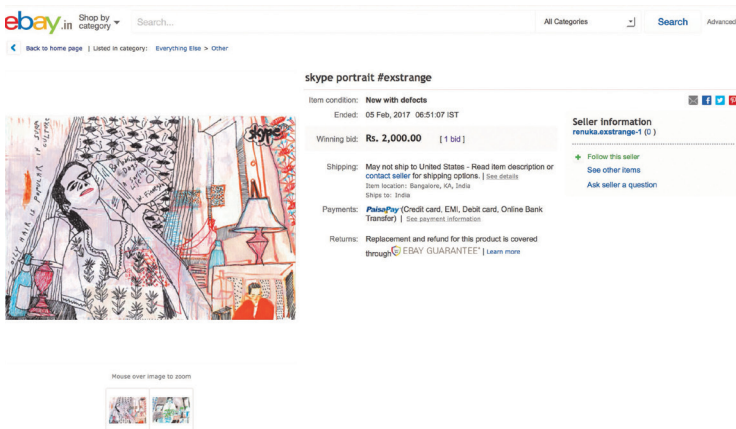
Surrey is not Manhattan, and hence has a very different relationship to art market systems, art journalism, public spaces, audiences, and participants. My own work is based in the North-East of England, often working with smaller regional art galleries. I can therefore testify that even on a small island, it makes a difference that not only the means of distribution but the means of production are centred in the South-East. Meenakshi Thirukode and Marialaura Ghidini, in the quote above, were working in Bangalore, India, which has a very specific relationship to digital production and outsourcing. Despite the affordances of new media to offer both a means of production and distribution, the art world still works in a highly capitalised and centralised ways, often globalised rather than internationalist. What kind of spaces, then, might curators want to create?

New media, of course, flows not only through the museum or gallery, but also around it, into public and social spaces, both online and offline. It is often these kinds of artworks, such as *Flow* (2012) by Owl Project and Ed Carter, which question most accurately the space and time possibilities of new media. *Flow* was a large floating wooden watermill moored on the river Tyne in Newcastle: the water mill powered the physical musical instruments, the flow data fed into

electronic music, and audience members could also interact with the instruments. The data about water flow could have been networked and sourced internationally, but the artists deliberately chose local data from the river Tyne, because of the site-specific nature of the artwork. The artwork could tour globally, but would need to respond to the specific data of those sites, rather than being associated with the potential for new media to offer a “globalised” average data.

New media artists and curators often work comfortably with both online and offline forms. For example, art group exonemo held a large retrospective show *UN-DEAD-LINK—Reconnecting with Internet Art* at Tokyo Photographic Art Museum in 2020, and for obvious reasons decided to show half of the works online and half in the physical gallery space. They also had 80 previous artworks available online on a timeline, and made an online 3D “gallery space” which did not simply simulate the physical exhibition space but was also a new artwork in itself.

Audiences are increasingly used to viewing on various international museum or commercial platforms, where the work might move between online and offline over time, or “migrate” as curator Marialaura Ghidini describes it.<sup>3</sup> Curators Marialaura Ghidini and Rebekah Modrak, for example, used eBay as a venue for art in the 2017 project *#exstrange*.<sup>4</sup> The curators deliberately used the decentralized structure of eBay, with its network of different national websites, to



Screen capture of *#exstrange* skype portrait project, Renuka Rajiv, 2017, web interface with digital painting

<sup>3</sup> From Marialaura Ghidini, “Curating Web-Based Art Exhibitions: Mapping Their Migration And Integration With Offline Formats Of Production” (unpub. PhD thesis: University of Sunderland, 2015).

<sup>4</sup> Miriam LaRosa, “In conversation with . . . #exstrange,” *Curating the Contemporary*, April 24, 2017, <https://curatingthecontemporary.org/2017/04/24/6109/>.



create their own curatorial system. They selected several artists and also invited eleven guest curators from different countries to select their own artworks for the online exhibition. The artworks could be purchased or simply viewed online. The “questions” fielded on eBay formed a way for individuals to respond to the artworks and to offer feedback. The artists also satirized new media systems, and the particular “truth to advertising” regulations of eBay in an ironic way. Renuka Rajiv, for instance, offered to make live hand-drawn portraits from Skype screens. She described her art as “new with defects” and warned that the work was “unsuitable” for “those who would like to buy a realistic representational drawing.” A buyer in Lexington, US, having had her consumer expectations managed, did go on to make a purchase of 2,000 rupees for a portrait. The documentation of the *#exstrange* exhibition reflects the curators’ consideration of the need to record the process after eBay live auctions were over, and also to honour predecessors, such as Mendi and Keith Obadike’s *Blackness for Sale* from 2001. A commercial online platform therefore became a particular ‘venue’ for showing art, with its own rules to be understood by artists and curators, described by Mexican curator Rene Cepeda as the “virtual site specific.”

Fortunately for curators, there is an improving body of critical documentation of past exhibitions involving these three behaviours, and everything in between, including *Software* and *Information* in the 1970s, and *Serious Games* in the 1990s.<sup>6</sup> More recently, curators at large institutions have vouched that new media art has encouraged them to curate exhibitions in new ways in order to match the new behaviours of the art. Considerations of time and space for new media art in museums are therefore not purely formal concerns, but instead relate strongly to the intent of each work, and the kinds of characteristics or behaviours that might occur in the work. To return to Steve Dietz’s three behaviours of connectivity, computability, and interactivity, it is perhaps the last that presents the most fundamental challenge to art organisations, in particular in rethinking the structure of institutions in relation to audiences. This sense of place and time for new media art has been captured by Techlab projects, which connect with the kind of venue which fits best to the artwork. The strategy of Surrey Art Gallery’s UrbanScreen program—which itself follows from the TechLab ethos—uses the outdoor space of a recreation center to project images at night, attracting a different kind of audience than an indoor, daytime, art venue audience.<sup>7</sup> When these projection artworks are interactive, the depth and duration of engagement are also very different.

## \_INTERACTION, PARTICIPATION, AND . . . \_

It allows the physical length of the view to become a chronological one – to be viewed at a speed determined by the user . . . The crank mechanism itself refers to not only its specific history in the moving panorama, but also a general history of the moving image: as a driver for cinema.

—

Ashok Sukumaran, Glow Positioning System

Although there is a current fascination with art as process, participation, and interaction in art, there tends to be a dangerously vague feeling on the part of funders and others that these are the kinds of nice things that art museums *should* be doing, rather than having a firm critical grasp of different varieties of participation. Art has, of course, been dealing with issues of immateriality, virtuality, mechanical reproduction, conceptualism, time, and audience participation for some time now, but the notable thing about new media art is that these factors have been inherent starting points for the work, from which further critical distinctions have been made. For each instance of a participatory system, there has been the question of *how* participatory, and *what kind* of system?<sup>8</sup>

Ashok Sukumaran makes artworks using invisible systems—those of electrical or computer networks. His *Glow Positioning System* (2005), for example, used the low-tech existing array of Christmas, Diwali and decorative lights at the busy Kabutar Khana intersection in Mumbai, India, and connected them into a 1,000-foot-long panorama. A hand-crank mounted on the pavement, and connected to electronics,

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<sup>5</sup> Rene Cepeda, “A Manual for the Display of Interactive New Media Art,” INMA Manual V. 1.0.1, 2020, <https://inmamanual.wordpress.com/>.

<sup>6</sup> See Beryl Graham, “Serious Games – case study,” in *New Media in the White Cube and Beyond: Curatorial Models for Digital Art*, ed. Christiane Paul (Berkeley: University of California Press, 2008), 191–206, and Beryl Graham “Exhibition Histories and New Media Behaviours,” *Journal of Curatorial Studies*, volume 2, issue 2 (2013): 242–262.

<sup>7</sup> See Rhys Edwards and Alison Rajah (eds.), *Art after Dark: 10 years of UrbanScreen* (Surrey: Surrey Art Gallery, 2019). Available at: [https://www.surrey.ca/sites/default/files/media/documents/ArtAfterDark\\_eBook.pdf](https://www.surrey.ca/sites/default/files/media/documents/ArtAfterDark_eBook.pdf)

<sup>8</sup> See Anna Dezeuze (ed.), *The ‘Do-it-Yourself’ Artwork: Participation from Fluxus to New Media* (Manchester: Manchester University Press, 2010), and Beryl Graham, “Open and closed systems: new media art in museums and galleries” in *Museum Media. International Handbook of Museum Studies Series Volume 3*, ed. Michelle Henning (Hoboken and Oxford: Wiley-Blackwell, 2015), 449–472.

provides a way for the audience to ‘scroll’ this landscape, turning the lights on and off in a wave that moves in the direction of the cranking. Even though the artwork reacts to the audience in a relatively simple way, there is the physical “promise of a haptic journey,” and the control of time and space, which makes an audience member an active “user.” Like many of Sukumaran’s street installations, there are no instructions given for using the work—the audience can, and does, figure out the cause and effect for themselves by drawing on their existing knowledge of technological systems. Neither literacy nor an art education are necessary to be an active user and reader of the artwork. Other artworks by Sukumaran have explored the economic control of electricity or other networks, and have played with disrupting the audience’s expectations of what happens when a switch is pressed. In these works by Sukumaran, the artist is highly aware of the exact positioning of the audience as user, as voyeur, as controller, or as participant, and the audience discovers for themselves their own position in “the system” through their physical and conceptual journey. The artwork is not an object, but a process.

Sometimes the ubiquitous nature of digital interaction, especially when in the context of globalized social media, means that new media artists often take on the role of revealing the critical layers of who is interacting with what. In the 2017 artwork *Let Them Eat Cake!* the art-research duo FRAUD (Audrey Samson and Francisco Gallardo) dealt with how Facebook curates their users’ news feed, with a view to producing “emotional contagion.” A cross-cultural layer cake was baked, with each colour representing the proportion of Facebook data categories used in the algorithm: Ad Topics, Facial Recognition Data, Friends, Followers, Likes, and Political Views. The artists’ novel choice of “food-led interaction” internalizes and illuminates the more abstract issues of datafication, political polarization, and social control through a “biopolitics of matter.”<sup>9</sup>

Another embodied means of interaction, and an exploration of levels of openness, is the 2011 project *Invisible Airs* by YoHa, with assistance from Stephen Fortune. It was based on the expenditure database of Bristol City Council, which in theory at least was open to the public, according to the rhetoric of “open government.” However, the data was extremely difficult to read and unlikely to reach any kind of public audience. The artists decided to make interactive objects respond to the data, including a “riding machine”—a bicycle seat that pneumatically lurched the user up and down in response to higher or lower expenditure levels. The objects were placed in public places and dialogue with

audience members was encouraged. The web page of the project is explicitly aimed at cataloguing resources that might be of use to others in investigating power, governance, and data, and presents plenty of documentation of audience use, including splendid photographs of the Lord Mayor of Bristol using the riding machine. The site also includes video of the pneumatic construction workshops and, in line with open-source ethics, the code of both the original expenditure database and the artists' software written for the works. The project clearly benefits from new media knowledge about audience, levels of interaction, and especially levels of openness.<sup>10</sup> "Open source" systems are useful to consider here: a term from software production, where many people contribute to developing software, the source code is available to all, and written in such a way that the structure (the recipe, if you like) is open to other programmers/users to copy, improve or adapt.

Artists who have worked with the inherently interactive behaviours of new media can offer particular understandings of both interaction between audience and artwork, and interaction between people that might be hosted by the artwork. New media artists have developed highly analytical approaches to connected or networked data systems. Because of the behaviours of new media, there are plenty of examples, therefore, where the audience is interacting or participating not only in making art, but also in curating it. It could be argued that new media afford everyone the chance to "curate" via tagging and liking. On the Walker Art Center's website, for example, users can select artworks from documentation of museum



Still from *Unceded Territories*,  
Lawrence Paul Yuxweluptun and  
Paisley Smith with music by  
A Tribe Called Red, 2018, VR  
video installation.

<sup>9</sup> FRAUD (Audrey Samson + Francisco Gallardo), "Let Them Eat cake!", in *C&C '17: Proceedings of the 2017 ACM SIGCHI Conference on Creativity and Cognition* (Association for Computing Machinery: New York, 2017), 428-429. Available from: <https://dl.acm.org/doi/10.1145/3059454.3059495>.

<sup>10</sup> See: <http://yoha.co.uk/invisible>.

collections, making their very own “collection” which can be saved for later additions and development. A higher level of the sharing of curatorial control in physical spaces was the exhibition *Source* (2014). Tate Collectives, the young people’s programme at Tate Britain in London, were invited to curate from the collection. They chose to cross departmental boundaries to select photography, painting, and new media, and to display it as a crammed “salon hang,” including new artworks from an open call, as a deliberate parallel with the mass of images used by social media.

Surrey Art Gallery, and the TechLab, is notable for having engaged with many levels of interaction and openness. Like the viewers of Ashok Sukumaran’s work, the active navigation of Lawrence Paul Yuxweluptun and Paisley Smith’s 2018 virtual reality work *Unceded Territories* makes for a highly immersive experience of agency, where the point of view and choices of the viewer are crucial to the content of the artwork. In the work, viewer-participants are prompted to throw paint-like pellets at a colourful natural space which gradually decays around them, until a monstrous creature devours them in revenge. Works like *Unceded Territories* are indebted to the TechLab’s history of experimentation and participatory experience. Having a production space such as the TechLab means that works can be commissioned and produced on-site, so that artists and curators can maintain a close eye on the intended types of interaction, and indeed types of viewer, right from the start of the process. Having a lab over a long time period means that knowledge about audiences and how they behave can be shared between artists, curators, technicians, and the viewers themselves. Artists can also be supported to “version” or update their artworks, after reflection and interactive feedback, or in the case of updated technologies. *Unceded Territories* has been shown in various contexts of audience, and has therefore been able to evolve, because of the more experimental approach of lab-prototyping.



Installation view of [CharBagh](#) at UrbanScreen, Faisal Anwar, 2018-19, interactive digital installation.

It is these connections between production, exhibition, and community work that enable deeper levels of participation. The 2019 artwork *CharBagh* by Faisal Anwar, for example, was produced by Surrey Art Gallery and exhibited in concert with the TechLab's 20th anniversary exhibition *Garden in the Machine*. A monumentally-scaled version of Anwar's work was also shown simultaneously at UrbanScreen. It enabled audiences at the UrbanScreen site to interact with the work using cellphones to add new content via social media in real-time. *CharBagh* features changing geometric garden patterns that respond to data generated on social media. In advance of the exhibitions, the artist conducted workshops with community groups in Surrey, where the participants took photographs of sites, plants, and wildlife in response to questions about the intersection of nature and culture posed by the artist. A full spectrum of interactive levels, from viewing through interaction and participation to collaborative production, was therefore enabled. This was very much in the spirit of Techlab's methods of residency, experimentation, and community participation, which have informed expanded methods of exhibition and distribution.

The ability to curate across different spaces and interactive contexts means that the whole city can be viewed as an embodied interactive space. Curators can be clear about how audiences can be immersed, reacted to, contributed to, or involved in making artwork within various social systems. Above all, the consistent interest in commissioning work, and being able to share the processes of making via the TechLab, means that the Gallery's different venues function as sites of both distribution and production.

#### \_CROSS-DISCIPLINARY, CROSS-SECTOR PRODUCTION\_

I am not a new media artist, nor a post-internet one . . . I . . . include technology in my work if it enhances and fits with my ideas.

—

Lu Yang in Cerini, 2018

In terms of crossing the disciplines of art and technology, young artists such as Lu Yang might well be puzzled about traditional separations of technological media from art. She uses any media necessary, from augmented reality to kites, for her artworks. Like the current cultural interest in participation, there is also an interest in cross-disciplinary projects. However, in both educational and cultural organisations, cross-disciplinarity is often easier said than done, because of the different systems of departments, budgets, and values. Surrey is a

relatively “planned” city, with its commercial and civic organizations in certain zones, but as is usual, different buildings are designated for different functions (such as shopping, libraries, and art). Because of the ubiquity of digital media systems, which can control systems from traffic lights through to consumer behaviour, there are interesting connections to be made between disciplines which might be assumed to be separate. For example, in a dialogue between library workers and new media art curators, it emerged that because of the skills needed to deal with open data, mass information and anti-censorship strategies, libraries might just be the perfect public connection point for new media art.<sup>11</sup>

Cross-sector collaborations between commercial new media enterprises, and new media art, are sometimes assumed to exist “naturally,” as part of the tendency of the media to work across both design and art disciplines, but the reality of such collaborations is complex. Curator and Sunderland University PhD alumna Suzy O’Hara has also worked on cross-sector collaborations between commercial, digital, and publicly-funded art areas, with a particular interest in systems of crediting, time, and funding which enable an equal “balance of power” between the sectors.<sup>12</sup> She commissioned a close pairing of artist/designer Dominic Wilcox and creative technologist James Rutherford to make *Binaudios*, a set of giant audio binoculars, for *Thinking Digital Arts* at Sage Gateshead, and has also worked with commercial manufacturers and makers who are PhD researchers. Since then, she has researched cross-sector issues more globally, working with Victoria Bradbury on a book concerning the “art hack.” As Mugundi K. M’Rithaa points out there, the “manufacturing base” of a country is inextricably linked to all kinds of systems of making, but does not prevent good low-tech ideas such as the passenger drone from developing. Artists often change systems further, and these hacked systems are joyfully different from bland “globalisation.”<sup>13</sup>



Installation view of [Binaudios](#), Dominic Wilcox and James Rutherford, 2014, interactive audio installation.

New media artists, because they are often dealing with complex economic systems, also seem to have a good grasp on how to choose their position within the art market and the creative economy. Tsila Hassine's *Shmoogle* from 2005, for example, functions both as art and as a potentially commercial piece of search engine software, with all the issues that this entails concerning intellectual property and hostility from some rather large competitors. The curator Ashley Lee Wong has mapped an interesting sliding scale of "artistic dispositions to the market," which includes strategies of resistance or innovation.<sup>14</sup>

If artists can change economic global systems, then curators can too. As the Victoria and Albert Museum Curator of Contemporary Product Design, Corinna Gardner, pointed out, the Design department is not medium-specific, and this has enabled them to collect cross-media objects and systems such as Snapchat Spectacles, or, via the *Rapid Response Collecting* project, a 3D printed gun and a Burkhini. They have a keen eye on curating the cultural context of material culture, and they are therefore able to act as "change-makers" rather than traditional curatorial "taste-makers."<sup>15</sup>

The Surrey Arts Centre, a hub which includes Surrey Art Gallery and its TechLab, along with two theatres and other multi-use spaces, is a mixed-function building. When the Techlab was first established in 1998, Surrey Art Gallery, and indeed its adjacent theatre spaces, showed very little new media art. Examining the history of the programs, it is clear that the TechLab was essential to the development of exhibiting new media art, not only to production. The artists in residence have a clear role in "advising the Gallery in its planning for art exhibitions and programs using digital media."<sup>16</sup> Having a dedicated curator, Jordan Strom, who is both director of the Techlab and Curator of Exhibitions and Collections for Surrey Art Gallery, has

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<sup>11</sup> State Library of Queensland (presentation, MAP 2006: OUT OF THE INTERNET, Brisbane, State Library of Queensland. December 3, 2006).

<sup>12</sup> From Suzanne O'Hara, Suzanne, "Collaborations between Arts and Commercial Digital Industry Sectors: A Curatorial Practice-led Investigation of Modes of Production" (unpub. PhD thesis: University of Sunderland, 2016).

<sup>13</sup> See: Suzy O'Hara and Victoria Bradbury, (eds.) *Art Hack Practice: Sites for Artistic Co-Production* (New York: Routledge, 2020).

<sup>14</sup> Ashley Lee Wong, "Artists In The Creative Economy: Inoperative Modes Of Resistance," *A Peer Reviewed Journal About*, volume 7, issue 1 (2018): 115-126.

<sup>15</sup> Beryl Graham, "Notes from course visit to V&A: Corinna Gardner Curator of Contemporary Product Design" *Curating Art after New Media Course* (Sunderland: University of Sunderland, 2018).

<sup>16</sup> See: <https://www.surrey.ca/arts-culture/surrey-art-gallery/digital-art/about-the-techlab>.



also helped to further integrate production and distribution within the wider arts scene in the region. For example, Cao Fei's artwork *Apocalypse Tomorrow*, developed via the TechLab, was one of three works presented in a Surrey Art Gallery exhibition that was itself part of *Yellow Signal: New Media in China*, a multi-venue exhibition project that took place throughout Metro Vancouver between March and September 2012. Having a gallery with such concern for how the organization connects to other sectors in a changing city, and with its history of production spaces as well as exhibition spaces, has shown the thoughtful development of the potential of new media.

New media can draw on participatory methods far wider than the traditional fine art centralised star system, and understandings of authorship far wider than singular copyright, to help with the substantial challenges of participatory art and also to rethink the role of curating itself.<sup>17</sup> The arts group Furtherfield in London, for example, were able to collaboratively curate the project *Do It With Others* (DIWO) in 2007, using a combination of online and offline decentralised tactics. Collaboration, they say, not only makes it easier to share expertise and hence cross disciplines, it is also more fun!

#### \_CONCLUSIONS—FOR THE FUTURE\_

The values are created by the people that we work with, you can't jump in with a template [...] you have to experience it to know what it is.

—

Marc Garrett of Furtherfield, "Critical Systems," 2015

This reconsideration of new media behaviours highlights just how many areas and people involved in museums and galleries might be involved in their rethinking, from marketers, gallery attendants, and education staff to curators, archivists, and conservators. There are an encouraging number of examples of institutions that are willing to take on these changes, and this network of linked issues might demand new systems. Changing systems is never easy, and the major challenge for both artists and for curators is to avoid imposing their new model system on their collaborators, or the participatory populace. As Marc Garrett, co-director of Furtherfield (the arts, technology, and social change organization) states in the quote above, if you choose to collaborate across disciplines as in *Do It With Others*, then the values of the collaborators, or participants, need to be taken into account.

Even within individual arts organisations, the behaviours of new media art encourage more crossover between roles and departments. A study of the mixed media exhibition 010101 at San Francisco Museum of Modern Art showed that there was much more communication and networking necessary between curators, guards, docents, technicians, marketing, and conservation, than with non-interactive exhibitions.<sup>18</sup> Collection and conservation, sometimes automatically assumed to be a problem for new media art, becomes even more crucial if interactive works are to be able to meet their future audiences, in line with the intent of the artist. However, even smaller arts organizations have been able to “reimage” older artworks. For example, the 2016 Vivid Projects exhibition *Reimaging Donald Rodney* was curated by Ian Sergeant, and produced by Yasmeen Baig-Clifford. The late Donald Rodney’s work explored cultural, physical, and social identity, and he used video, net art, and a laptop-controlled wheelchair in his complex practice. This last work was a challenge to show, but by using a network of experts, volunteers, reviews, and interviews, they were able to re-construct its software and hardware. The work incorporated some new elements while retaining the “interactional intent” of the artist, whereby it would approach gallery audiences in a sociable way. Similarly, Lindsay Taylor of the Harris Museum and Art Gallery, Preston, maps how a small regional gallery can punch way above its weight in collecting new media art, by enabling audience development, and the close involvement of curators, exhibition organizers, collection committees, artists, and technicians.<sup>19</sup>

Above all, the 20th anniversary of TechLab has shown the true potential of what a laboratory can do, when tightly integrated with artists and audiences, from commission to collection. The term “lab” is understood as many things in an art context; as artist and curator Brady Marks pointed out, this ranges from the faintly bizarre idea of the public staring at an artist-in-residence working in a “fishbowl,” to a commercial research and development model, and that there must be a

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<sup>17</sup> See Graham and Cook, 2010.

<sup>18</sup> Beryl Graham, “Curating new media art: SFMOMA and 010101,” [crumbweb.org](http://www.crumbweb.org). Available at: <http://www.crumbweb.org/getCRUMBReports.php?&sublink=2>.

<sup>19</sup> Lindsay Taylor, “From exhibition to collection: Harris Museum and Art Gallery,” *New Collecting: Exhibiting and Audiences after New Media Art*, ed. Beryl Graham (London: Ashgate), 111-134.

<sup>20</sup> See Brady Marks, “Introduction” (Sentient Circuitries: Digital Media Art Symposium, Surrey Art Gallery, Surrey, BC, November 16, 2019), available at <https://www.youtube.com/watch?v=IGqMBQCYRAU>, and Graham and Cook, 234-243.

better “third space” between these extremes.<sup>20</sup> Third spaces are often sought after, but they demand hard work to establish and to maintain in the longer term. The TechLab and Surrey Art Gallery, because it commissions, produces, workshops, educates, exhibits, and collects, is able to connect all the dots necessary. These connections are also a network between curators, artists, technicians, civic workers, and audiences, who have built up trust over time to work across different disciplines and sectors. By taking audiences seriously, and being well informed on the many levels of interaction and engagement afforded by new media in particular, this productive third space in Surrey is looking very healthy.

Working in a University, including running professional development courses for curators, I am very aware that people arrive at new media art from a very wide variety of backgrounds, ranging from the traditional art history approach, to photographers, sound artists, activists, technicians, and designers. All of this experience is highly useful (perhaps more useful than exclusively art history approaches) for forging new models of cross-disciplinary curating which does justice to new media artwork, whether in the context of the UK, Bahrain, India, or Canada.<sup>21</sup> So, the task for galleries, as for education, is a complex one, but with a willingness to critically rethink systems of exhibition in time and space, and to develop well-balanced cross-collaborations, there will be some long-term protection from the more short-term hype about Artificial Intelligence, big data, or the vaguely participatory. The nature of this new media art positively crackles with witty energy, and shows exciting hybrid vigour across the boundaries of art, technology, and media. If curators and educators can keep up with the art, then this promises well for being able to curate into the future.

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<sup>21</sup> See Beryl Graham, *Curating Art after New Media – Professional Development Course*, University of Sunderland, 2014. Available at <https://curatingprofessionalcourse.wordpress.com/>

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A black egg-shaped object hovers a couple feet off a polished concrete floor. The glistening rough-skinned ovum rests on its side on a white elongated box that sits a few meters off the gallery's white wall. The box has an image of a serene blue computer screen with a silhouetted company logo on both sides framed by a pristine white background. The box elevates and presents the amorphous form as if it were a plinth.



Ruth Beer, [Connection](#), 2016, polyurethane, cardboard.

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## Mediating Precarity (2021)

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by Jordan Strom

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Its shape and form is based on oil nodules that formed in salt water in Alaska's Prince Williams Sound when the Exxon Valdez tanker accidentally hit land in March of 1989 and released 40,883,000 litres of oil. It is the type of object that may form when any significant amount of crude oil meets cold saltwater in any portion of the world's ocean.<sup>1</sup> Made by artist Ruth Beer, *Connection* (2016) draws attention to the petroleum-infused nature of computer culture, and by extension art made by computers, including her own. This is the entangled situation that many artists who use electronic technologies find themselves in. The artwork upon the plinth is quite literally implicated in the destruction of the planet.

We are living in a time of what Amitav Ghosh has called “the great derangement”—a time where narratives become consigned to the science-fictional and the dystopic.<sup>2</sup> The Anthropocene marks the complete destabilization of ecosystems. And as Isabelle Stengers asserts, “we cannot manage our way out the coming catastrophe caused by the nightmare of predatory capitalism.”<sup>3</sup> Ghosh claims that we need to change the narrative: “the climate crisis is a crisis of the imagination.” It is art that can imagine a more environmentally balanced form of living. In particular he claims that fiction is best suited to imagine these futures. In what follows I present that it is rather visual art—and in particular digital eco art—that is ideally suited to critique and simultaneously create new alternative worlds.

Over the past half century, artists have created a vast array of artworks to challenge and raise awareness and paths forward in this crisis.<sup>4</sup> Many artists are creating vital works to reflexively address the

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<sup>1</sup> Beer refers to her exploration of the materiality of oil as an “inversion of the unruly.” If the rubber polyurethane object represents the landscape, and the electronic computer packaging collectively mediated landscape.

<sup>2</sup> Amitav Ghosh, *The Great Derangement: Climate Change and the Unthinkable* (University of Chicago Press, 2017).

<sup>3</sup> Stengers, Isabelle. In *Catastrophic Times: Resisting the Coming Barbarism* (Paris: Open Humanities Press, 2015).

<sup>4</sup> A number of the early texts to gather together these innovative and early adopters included Alan Sonfist, *Art in the Land: A Critical Anthology* (New York: Dutton, 1983), Barbara C. Matilsky, *Fragile Ecologies: Contemporary Artists Interpretations and Solutions* (Rizzoli, 1992) and Brian Wallis, *Land and Environmental Art* (Phaidon, 1998).

constitutive and contingent condition of media art and the industrial impact on the landscape. Meanwhile, art critics and historians have mapped out a field of practice that has sought to actively challenge the environmental crisis that we face. Some have referred to this as eco art, formerly known as ecological art or environmental art. It can offer a path forward in the battle for the protection and reclamation of ecologies around the world.

While some have argued that we need to dispose of concepts like “nature” and “landscape” and even “land,”<sup>5</sup> others, such as Mark Cheetham, have argued that the death of landscape was prematurely announced. Instead, landscape lives on but in a more sublimated and altered form. Eco art incorporates and, in best practices, critiques notions of landscape without dispensing with it all together. “More than most contemporary art practices,” argues Cheetham, “eco art also transcends conventional borders of inquiry. As many examples throughout this book show, it often incorporates scientific and technological evaluations of environmental concerns.”<sup>6</sup> At the same time eco art aligns with a geoaesthetics.<sup>7</sup> For Cheetham, “landscape, land art, and eco art mutually inform one another . . .”<sup>8</sup> And a key part of his project was to, in his works, “re-examine what I call the “hinges” between landscape and land art, between land art and eco art, and also between landscape and eco art, and eco art that is more involved with landscape than with land art.”<sup>9</sup>

It is a commonly held assertion that digital technology, by its very nature, is antithetical to the natural world. Certainly, digital culture and digital capitalism has a lot to answer for in the creation of the current environmental crisis. Digital technology is deeply embedded in economies and industries of mineral and energy extraction, and related mineral depletion and pollution of the environment. This place, where I live and work, has its own devastating history of ecocide and genocide rooted in an extraction economy. As the 2016 Canadian Centre for Architecture exhibition *It's All Happening So Fast* alluded to, the Canadian landscape has been deeply damaged by development of energy infrastructures; resource exploitation, nuclear contamination, water and air pollution, and industrial fishing and forestry operations.<sup>10</sup>

However, as Yvonne Volkart has written, “it is necessary to develop eco-aesthetic, transversal thought and action that recognizes our paradoxical and corrupted form of existence and opens up other levels instead of simply offering simple technical ‘solutions’ or dismissing the technological as something alien to our nature.”<sup>11</sup> For

Lucy Lippard, we need to think more about “land use” rather than “land,” arguing for a “biopolitical art” that can work across the “micro, macro, and global.”<sup>12</sup> For her, “bioregionalism offers strong tools for grassroots activism and visionary art.”<sup>13</sup> We must, argues Lippard, work toward a “political ecology”—in other words, a space at the intersection of art, nature and society.

Meanwhile, art historical discourses have created clear lines between otherwise deeply entwined forms of art about the environment. Cheetham argues that although “earthworks and land art developed at the same time and in the same cultural milieu as mid-twentieth century environmentalism in the United States and Europe,” much digital media artwork has developed in tandem with new twenty-first century environmentalism. And by extension a digital ecological art has been riven through with a 21st century environmentalism. While her book mostly features landscape photography and instances of analysis, Lippard acknowledges that “advancing” technologies offer:

. . . new ways to collage or juxtapose vastly differing images and expose subtly connected issues. Intimate in content, but not in form, such inventive techno-ecological tactics raise a new cloud of questions for works embracing both local/global connections and disjunctures. The internet—that amorphous and ominous mass in cyberspace—facilitates a multicentered community, even as social context and interaction remains specific.<sup>14</sup>

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<sup>5</sup> For Timothy Morton use of the word “nature” should be abandoned because outworn ideas of the natural—as separate from and mere resources for humanity—impeded the adoption of “ecological thought.” Cheetham, 22.

<sup>6</sup> Cheetham, Mark A. Landscape into Eco Art: Articulations of Nature Since the 60s (University Park, PA: Pennsylvania State University Press, 2018), 3.

<sup>7</sup> For Cheetham geoaesthetics “refers to the many speculations on the earth and the human relationship to nature found in the western philosophical tradition, science and technology studies (STS), and cognate fields, as these intersect with art practices.” He cites Felix Guattari’s Three Ecologies as an early example of “a precient geoeasthetic analysis.”

<sup>8</sup> *Ibid.*, 8.

<sup>9</sup> *Ibid.*, 7.

<sup>10</sup> It’s All Happening So Fast: A Counter History of the Modern Canadian Landscape ran from November 16, 2016 to April 9, 2017. The exhibition looked at a number of “case studies from the last five decades of human intervention in the Canadian Landscape.”

<sup>11</sup> Yvonne Volkart et al. “Ecodata-Ecomedia-Eco-Aesthetics...” 113.

<sup>12</sup> Lucy R Lippard, Undermining: A Wild Ride through Land Use Politics, and Art in the Changing West (New York: The New Press, 2014), 4.

<sup>13</sup> *Ibid.*, 18

<sup>14</sup> *Ibid.*, 187-188.



In what follows I will touch on some recent digital art theory and ecological theory to consider the relationships and overlaps between the two bodies of ideas. How have thinkers over the past few decades have been examining the parallels—and, in some cases—deeply interconnected relationships between the natural and digital worlds? In order to find some answers, I will examine several digital media artworks that were part of larger exhibitions that I worked on as curator within the TechLab between 2014 and 2019. I have set out to think through a series of works—only a few examined here—that were realized within the Gallery’s TechLab program.<sup>15</sup> These are not web-based artworks, but art meant for embodied experience in the space of the gallery. I write this in the second year of the Covid-19 pandemic, a time that has pushed many to consider what role humans have had in creating the conditions for the emergence of this virus—including, according to some, the effects that humans have had on biodiversity.

## \_DIGITAL AND ECOLOGICAL\_

What are the parallels between the digital world and the natural world? What are the relationships between—and limits at the edges of—the world of computational art and the natural environment, the digital and the biological, and nature and culture? Both spheres—the digital and the natural—are marked by processes of mutation, permutation, and adaptation. Digital culture, like an ecosystem, is generative and entropic. As Jussi Parikka argues, nature and media are “not distinct ontological regimes ... but both are to be seen in terms of processuality and becoming.”<sup>16</sup> As with ecosystems, digital systems rely on connectivity, networked growth, and rhizomatic communication beneath surface appearances. At the same time the digital is subject to processes of decay, disintegration, and the invariable threat of destruction.

Recognizing both the recent and current crises, artists have made work that responds to these shared, and sometimes parallel, conditions. If the larger field of practice has gained increased currency as eco art, we may then call this growing area of practice “digital eco art.” Ilya Sheren, for one, has described an “environmentally motivated art that uses digital media to recast the human in terms of objects and landscapes, taking into account global inequities and postcolonial resonances.”<sup>17</sup> These are artworks that situate the environment not as something outside of the human, but rather deeply entwined. The “bio-technosphere” is built into the work. These art practices fall into what Rosi Braidotti calls the “geo-centred turn,”

in which “We need to visualize the subject as a transversal entity encompassing the human, our genetic neighbours the animals, the earth as a whole, and to do so within an understandable language.”<sup>18</sup> Digital art, in various recent incarnations, is the concrete imaginary of what Donna Haraway refers to as sym-poetic systems. These systems, according to Haraway, can work to dissolve the hard boundaries between the human and the non-human. Through its inherent qualities of variability, modularity, and transcoding articulated by Lev Manovich, it finds parallels in interlaced natural habitats. Through digital processes, art can assist the viewer in thinking transversally across ecosystems and the mechanosphere, or the multiplicity of machines and technical systems that surround the human.<sup>19</sup>

From the web to the cloud, the digital environment has been created within the metaphorical prism of the natural environment. Scholars Beryl Graham and Sarah Cook have stated that new media “concerns systems, processes, relationships, [and] behaviours rather than object.”<sup>20</sup> As Parikka has pointed out, media is “less a matter of mediation and communication between humans,” than “a milieu of engagement, or relationality for the objects, vectors, agencies, and processes that enter into its sphere.”<sup>21</sup> Moreover, if so much digital media is now time-based media, so too, is nature itself a time-based media. The natural world is infused with its own technologies. Adapting from Haraway’s concept of natureculture, Parikka argues that what we need is to think instead in terms of medianatures, “a concept that crystallizes the double bind of media and nature as constituting spheres.”<sup>22</sup>

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<sup>15</sup> The digital media artworks discussed in this essay were included in the TechLab 20th anniversary group exhibition *Garden in the Machine* in 2019, with the exception of *Heaven’s Breath*, a work that was exhibited as part of TechLab programming in 2009.

<sup>16</sup> Jussi Parikka, “Media Ecologies and Imaginary Media: Transversal Expansions, Contractions and Foldings.” *Fibre Culture* 17. 2011. <http://seventeen.fibreculturejournal.org/fcl-116-media-ecologies-and-imaginary-media-transversal-expansions-contractions-and-foldings/>. 36.

<sup>17</sup> Ila Nicole Sheren, *Portable Borders: Performance Art and Politics on the U.S. Frontera Since 1984* (Auston: University of Texas Press, 2015). Quoted in Cheetham, 21.

<sup>18</sup> Rosi Braidotti, *The Posthuman* (New York: Polity, 2013). Quoted in Cheetham, 22.

<sup>19</sup> Donna J. Haraway, *Staying with the Troubles: Making Kin in the Chthulucene* (Durham: Duke University Press, 2016). For more on the “mechanosphere” see Felix Guattari, *Three Ecologies*, London: Athlone Press. 1989.

<sup>20</sup> Graham and Cook, *Rethinking Curating: Art after New Media*. MIT 2010, 13.

<sup>21</sup> Parikka, 36.

<sup>22</sup> Parikka, *A Geology of Media*, Minneapolis: University of Minnesota Press, 2015. 14.

As Matthew Fuller has argued, “much of the contemporary understanding of ecology relies on information, and information is also that which, through a certain set of lenses, is produced in and by ecological entities.”<sup>23</sup> Both exhibit generative compositional systems. As forest ecologist Suzanne W. Simard has shown, trees and fungi form partnerships known as mycorrhizas, underground filaments which form networks among root systems. Forests are like “decentralized networks.”<sup>24</sup> Likewise, if we are aware of the underlying inter-threading of the digital with the natural world—and certain forms of art can make us aware of this—then we as viewers and participants in these experiences might be able to move beyond our often default anthropocentric conceptions of the world.

The intermingling of culture and nature is critically enmeshed in Helma Sawatzky’s *Data Mulch* series (2019). In each work, the artist composites over 60 digital top-down photographs of the contents of a compost pile in a dumpster on Granville Island. *Data Mulch* considers the parallels between editing, digital collage and organic waste heap composting.



Helma Sawatzky’s *Data Mulch IV (apples)* (2019), *Data Mulch V (baguettes)* (2019), *Data Mulch VI (tomatoes)* (2019), *Data Mulch VII (oranges)* (2019), archival ink-jet prints on aluminum di-bond.

In looking carefully at compost bins, the artist became interested in “the conflict of visual delight” captured in these overflowing receptacles: the beauty on the one hand, and the grotesque decay on the other.<sup>25</sup> If composting is about disintegration, decay, and breakdown, the same processes may be said to apply to digital media too. Instead of trying to create a seamless image, Sawatzky lets “the gaps happen.”<sup>26</sup> She refers to her editing process as mulching. The viewer can see duplication of images because they don’t align; each image decays, much like the organic materials in the bin. *Data Mulch* recalls Haraway’s identification of the importance of “material-semiotic composting”—“humus rather than human.” Through her photographs—situated in a portrait format at

human scale—*Data Mulch* invites thought about food systems, the body, and relations between the organic and the inorganic.

And what of the act of composting? It is an ever-evolving composition mostly consigned to darkness. The artist became interested in the invisibility of the act and how one might make it visible. “I realized,” says Sawatzky, “that we are throwing away so much food (full bags of cucumbers, whole baguettes, etc) even while we actively try to recycle other materials.” She became interested in “the way we feel good” when we recycle something. But what does it mean? She likens her images to still life painting. Within the “Dutch tradition of still life you reflect on your own mortality,” she says, “but with [*Data Mulch*] you are asked to reflect on the mortality of the Earth.”<sup>27</sup>

### \_INSIDE THE IMAGE\_

Whether it be the space of the forest, the garden, the clearing, or a regulated park space, artists can extend their creative and computational antennae to push the standard uses of available technologies, and to create multi-layered works that highlight the limits of the digital and natural worlds. Artists use the sensorial aspects of new media to enhance the physicality of experience, as is the case with the three artworks that I will examine. There are two dominant types of ecological immersion that I am interested in examining: the first being catastrophic immersion; the second could be called, *pace* Haraway, a sympoetic immersion.

In *Unceded Territories* (2018), Lawrence Paul Yuxweluptun and Paisley Smith use VR technology to place the viewer in an animated environment swirling on the brink of collapse triggered by the Transmountain pipeline between Alberta and British Columbia.<sup>28</sup> *Unceded Territories* is a work that demands the viewer’s full attention and participation. It was Smith, a virtual reality artist currently

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<sup>23</sup> Matthew Fuller, “Figuring Ecologies,” *Eco-visionaries: Art, Architecture and New Media After the Anthropocene*. Pedro Gadanho Ed. (Berlin: Hatje Cantz, 2018), 133.

<sup>24</sup> Simard, S., Perry, D., Jones, M. et al. “Net transfer of carbon between ectomycorrhizal tree species in the field.” *Nature* 388, 579–582 (1997). Suzanne Simard <https://doi.org/10.1038/41557>.

<sup>25</sup> Jabr, Farris. “The Social Life of Forests,” *New York Times*, December 2, 2020. <https://www.nytimes.com/interactive/2020/12/02/magazine/tree-communication-mycorrhiza.html>. Accessed December 2, 2020.

<sup>26</sup> Helma Sawatzky, email conversation with the author.

<sup>27</sup> Sawatzky, email conversation with the author.

<sup>28</sup> *Unceded Territories* can be seen within a growing movement of Indigenous Virtual Reality art by the likes of Skawennati and Loretta Todd among others in Canada.

splitting her time between Vancouver and Los Angeles, who reached out to Yuxweluptun, a Cowichan (Hul'q'umi'num Coast Salish) and Okanagan (Syilx) artist based in Vancouver, when she was studying the history of VR art and came across an early VR work by the veteran painter.

It was 1992 when Yuxweluptun was invited by the Banff Centre, Alberta to create a new artwork in the emerging field of virtual reality. At the time Banff had a very rare super-computer that was powerful enough to generate a rudimentary form of VR imagery. *Inherent Rights/Vision Rights* was intended as a virtual reality experience that invited audiences into a Pacific Northwest longhouse to witness the spirit world. In the making of this artwork, Yuxweluptun referred to the virtual reality “helmut” as the “white man’s mask” that would one day be displayed in museums.<sup>29</sup>



Installation view of *Unceded Territories*, Lawrence Paul Yuxweluptun and Paisley Smith with music by A Tribe Called Red, 2018, VR video installation.

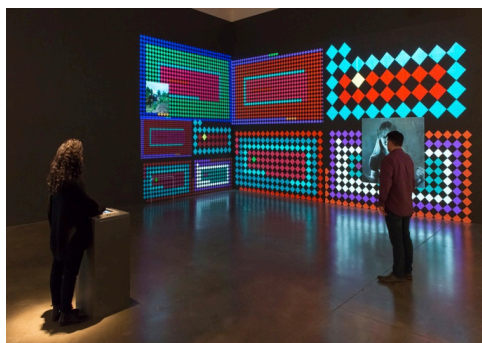
If the newer work *Unceded Territories* invites the viewer to engage in an Indigenous spirit world, it also forces the viewer to recognize their role in one of the most urgent issues of our time: the global climate crisis. The artists situate the viewer as an embodiment of the Super Predator. As the viewer-predator throws paint into the void, the world becomes visible; however, the more one creates the world the more the world begins to transform. Yuxweluptun has created an extensive series of paintings of Super Predators over the past decade and half, including group portraits of oil executives and world leaders at a G7 summit. In the case of *Unceded Territories*, each participant inhabits this troubling figure. Being situated as such, we are invited to consider our own contribution to climate change.

During the course of *Unceded Territories* one witnesses various spirit creatures, including the spirit bear, who is an embodiment of Yuxweluptun. One also confronts Colonial Snake, a figure who fights

back against the Super Predator. All the while A Tribe Called Red's *Anthem for Change* provides the driving "powwow-step" soundtrack towards greater Indigenous rights to land, resources, and sovereignty. The combined effect is the devastating and ultimately recuperative experience of a world overwhelmed by petroculturalism.

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In Faisal Anwar's *CharBagh* (2018-19) the artist creates a large-scale interactive projection where audiences use social media platforms to respond to sets of questions related to the environment. In the second iteration of this project in Surrey, Anwar led walks with a local ecologist and different community groups, including a seniors club, a gardening club, and an art collective, to learn and reflect on the ecology of the local North Surrey landscape. The images that were collected were incorporated into the geometric pattern of Anwar's projection. The composition was based on the traditional *charbagh* design, a quadrilateral (four-part) layout found in classical Persian/Indo-Persian and Islamic-style gardens, *char* meaning "four" and *bagh* meaning "garden." Charbagh has been a historically powerful method for the organization and domestication of landscape.



Installation view of *CharBagh*, Faisal Anwar, 2018-19, interactive digital installation.

Anwar's *CharBagh* considers the social construction of nature and the effects of climate change on the South of Fraser environment. In the summer of 2019, Anwar worked with Surrey residents through workshops and walking tours to have them produce photographs in response to a number of questions, each one affiliated with a hashtag: *What are the images that symbolize your relationship to nature?* (#charbaghnature). *What are the images that stand for your relationship to sustainability?* (#charbaghviaible). *What are the images that capture the current moment of climatechange?*

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<sup>29</sup> Lawrence Paul Yuxweluptun and Paisley Smith artists' statement.

(#charbaghclimatechange). *What are the images that represent better sustainable practices?* (#charbaghperform). Each participant responded to these questions in relation to local landscape, flora and fauna. The photographs, posted on Instagram, became visibly integrated into the artwork over the course of the exhibition.

Anwar's software uses algorithms to translate the meta-tags connected to crowd-sourced images into patterns associated with Islamic geometry patterns. The result is an ever-evolving, dynamic, aerial view of a digital *charbagh* that grows from incoming streams of data generated via Instagram. Audiences can passively explore the *charbagh* projections, or actively interact with the garden in real-time using their cellphones or other portable smart electronic devices. *CharBagh* recalls Gene Youngblood's call for an integrated environmental/ecological art:

Ecology is defined as the totality or pattern of relations between organisms and the environment. Thus the act of creation for the new artist is not so much the invention of new objects as the revelation of previously unrecognized relationships between existing phenomena, both physical and metaphysical. So we find that ecology is art in the most fundamental and pragmatic sense, expanding our apprehension of reality."<sup>30</sup>

*CharBagh's* reciprocal and co-habitational orientation picks up on the notion of biomedial formulated by Eugene Thacker. Biomedial claims that there has been a fundamental recontextualization of the biological and the technological. "The biological 'informs' the digital, just as the digital 'corporealizes' the biological," as Thacker has described it. Matthew Fuller further claims that "Media are contractions of forces and through forces bodies are born. Rather than just being solids, such bodies are processes and defined by their internal and external milieus in which they resonate."<sup>31</sup> So despite *CharBagh's* algorithmic structure, "in the case of these techno-cultural practices, it is more a question of participation and emotional involvement than of obtaining information."<sup>32</sup>

## \_REPARATIVE IMMERSION\_

Another way that biomedial and ecomedia informs the digital art experience is through a "virtual reality of another kind: the perception of a reality that has always already existed virtually. Ecomedia thus

function in real life and symbolically as instruments for increasing attention with respect to non-human protagonists.”<sup>33</sup> Leila Sujir’s *Forest Breath* (2018) alters existing commercial video camera and video projector technology to create stereoscopic 3D videos of old growth environments that, when transposed as light boxes with immersive sound, generate deeply affective experiences in the gallery.



Installation view of *Forest Breath*, Leila Sujir, 2018, stereoscopic 3D video, lightbox with stereo audio.

Sujir’s video depicts a series of specific moments amongst the old-growth forests around Port Renfrew on Vancouver Island. Sujir filmed primarily in South Walbran, near Emerald Pool, as well as the Red Creek Fir area, all in the traditional territories of the Pacheedaht people of Southern Vancouver Island. These forests have been under increasing threat of logging at a time when there has been a drastic reduction of old-growth (forests that have never previously been logged) in the province. Shot simultaneously on two stereoscopic cameras, the artist brings vivid imagery of the Old Growth landscape into the gallery through two simultaneous projections that form an optical polarized 3D image when viewed through anaglyph glasses.

Created around the time of the artist’s mother’s passing, *Forest Breath* is about memory and family and healing: “These west coast forests are where my mother took me as a young 24-year old, after an operation for cancer.” The artist recounts, “I didn’t die, to my surprise. The forest was where I found wonder and learned to be alive again.”<sup>34</sup> Sujir’s aunt Manorama Savur had also been an important influence on this artwork. Savur, a renowned sociologist who wrote about the extensive loss of bamboo forests in India, had talked with Sujir in depth about the cultural and environmental importance of forests in India—a

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<sup>30</sup> Gene Youngblood, *Expanded Cinema* (New York: E.P.Dutton, 1970), 346.

<sup>31</sup> Fuller, 2005.

<sup>32</sup> Yvonne Volkart et al. “Ecodata-Ecomedia-Eco-Aesthetics...”, *Eco-visionaries: Art, Architecture and New Media After the Anthropocene*. Pedro Gadanho Ed. (Berlin: Hatje Cantz, 2018), 116.



country where the artist was born before moving to Canada as a young child. Sujir has been making technically innovative and thematically challenging works of 3D video since 2006, along with artworks with 3D elements since 1986. *Forest Breath* is part of a larger set of works filmed in forests on Southern Vancouver Island between 2016 and the present.

## \_REDEMPTIVE FUTURES\_

Lastly, in this section, I examine the utopian potential of new media art that probes ecology in new ways. For several artworks here, the increasingly interconnected world of computer technology and nature points to hopeful futures: spaces of equilibrium, self-knowledge, and healing.

*Heaven's Breath* (2009) is one such form of ecomedia. Created by Chris Welsby, Brady Marks, and Sheharazaad Cooper, *Heaven's Breath* is a weather-driven new media installation based on the dance of Shiva. Photographs of Sheharazaad Cooper in different dance poses flicker on the screen depending on the shift in wind direction and wind speed. The artwork is inspired by an eleventh century figurine depicting the Hindu God, Shiva, performing the dance of creation and destruction. According to the Hindu faith, Shiva's dance brought the universe into existence, not unlike the Big Bang of Western scientific cosmology.

*Heaven's Breath* combines Oddisi dance with interactive technology and real time weather data. The animation of images and accompanying sound effects is driven by the power of the wind, which is in turn driven by the rotation of the earth. In this way, the artwork seeks to connect Shiva's dance, via the earth's orbit, to the gravitational forces of the solar system and the far reaches of the universe. Drawing on the cosmologies of East and West, and the knowledge of the ancient and modern world, the installation uses digital technology to make connections between science, religion and art. As with Welsby's broader film practice, this work explores consciousness and gives up directorial control to immediate shifts in wind.

As Yvonne Volkart *et al.* have described it, ecomedia is a form of practice that "gives rise to hybrid conjunctions, between technologies for recording and sending media and the material world and environment (atmosphere, bodies of water, soil, people). Various surveillance technologies as well as data collected by means of various measuring techniques are supposed to facilitate an 'articulation' of hitherto unknown worlds and environments in the form of artifactual media arrangements."<sup>35</sup> *Heaven's Breath* alters existing technologies to reinstate control, and



Still from [Heaven's Breath](#),  
Chris Welsby, Brady  
Marks, and Sheharazaad  
Cooper, 2009, generative  
video installation.

facilitate an “articulation” with the broader world.

At the heart of Robert Youds’ sculptural environment *For Everyone a Fountain* (2017) is the work-table: a flat metal sheet resting upon two sawhorse legs. For Youds, the work desk, lit by an everyday desk lamp, forms a space of “imaginative will . . . a temporary autonomous zone.”<sup>36</sup> Youds multiplies this building block into a honeycomb of desk-like forms, suggesting the shape of a room or open building. The space of the interior (the office desk) collides with the space of the exterior (the garden).

As with many of Youds’ previous works, the elements of the installation are everyday objects purchased from hardware and office supply stores. The coloured lights are an algorithmic translation of digital photographs of Butchart Gardens in Victoria, BC. In part, the artist sees this artwork as a form of photography (or frozen light); “I am re-rereleasing with photons,” Youds states. Each of the four seasons at the Gardens is reflected in a different colour palette of light.

*For Everyone a Fountain* is inspired by the early architectural works of Canadian architect Moshe Safdie, such as his famous Habitat building featured at Expo 67 in Montreal—a building that adapted nature and culture to each other. Echoing the photographs transformed into coloured light, the audible tones emitted from Youds’ environment are from recordings he made in a Hong Kong subway station, where the sound of train passengers passing through turnstiles generated a collaborative and open-ended melody.

Youds has described this particular work as defying the bifurcation that befalls much of contemporary art. It neither succumbs exclusively to “Turing Land” or “Duchamp Land,” says Youds, of the tendency of new media and post-conceptual art to look certain ways. The

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<sup>33</sup> Ibid. 116.

<sup>34</sup> Leila Sujir, artist’s statement for [Forest Breath](#).

<sup>35</sup> Yvonne Volkart et al. 116.

<sup>36</sup> Robert Youds artist statement.



Installation view of  
*For Everyone a Fountain*,  
Robert Youds, 2017,  
list of materials.

installation also has a strong geoaesthetic. So much so that it recalls Gene Youngblood’s prophetic statement on what was then a forecast of the future use of crystals in new media technology: “crystals and circuits consist of logically structured atomic rays.”<sup>37</sup> Rather than present a “devasted landscape” offering “fodder for photographic advocacy,” as has been a dominant tendency in ecological art, described by Lippard, Youds’ approach is to situate the viewer within a space of ecological reclamation.<sup>38</sup> *For Everyone a Fountain* situates the viewer within a crystalline utopic environment—an architectonic form infused with the organic—in anticipation of a more stable, balanced and less-extractive future.

While many artists today create eco-art by means of large quantities of data, dataaesthetics, as Stephen Wright has pointed out, “is not merely about ordering and reordering data; it is equally about disorganizing it and drawing attention to the sheer “pain’ of having subjective experience objectified into data form.”<sup>40</sup>

The paradoxes of enumerative power are a way of inducing perception to shed its habitual loads, to see the shimmer of alternative realities in the formation of life. expanding our apprehension of reality.”<sup>39</sup>

Through digital art, artists can and do harness technology to critique its impact, while simultaneously opening up new forms of experience—and mobilize new imaginaries—that inspire new ways of thinking and perhaps even action at this vulnerable tipping point in human-environment relations. Just as many American avant-garde filmmakers had done in the mid to late 20th century, many media artists today create “gardens” “within the machine of cinema and “of contemporary society.”<sup>41</sup> Taken together these are translations. In Fuller’s sense, these artworks can be novel forms of embeddedness, or forms of re-worlding, that make visible, and experiential, possible futures.

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<sup>37</sup> Gene Youngblood, Expanded Cinema (New York: Dutton, 1970), 26. Quoted in Cheetham, 185.

<sup>38</sup> For more on Lucy R Lippard's thoughts on art responding to ecological crisis see her Undermining: A Wild Ride through Land Use Politics, and Art in the Changing West (New York: The New Press, 2014).

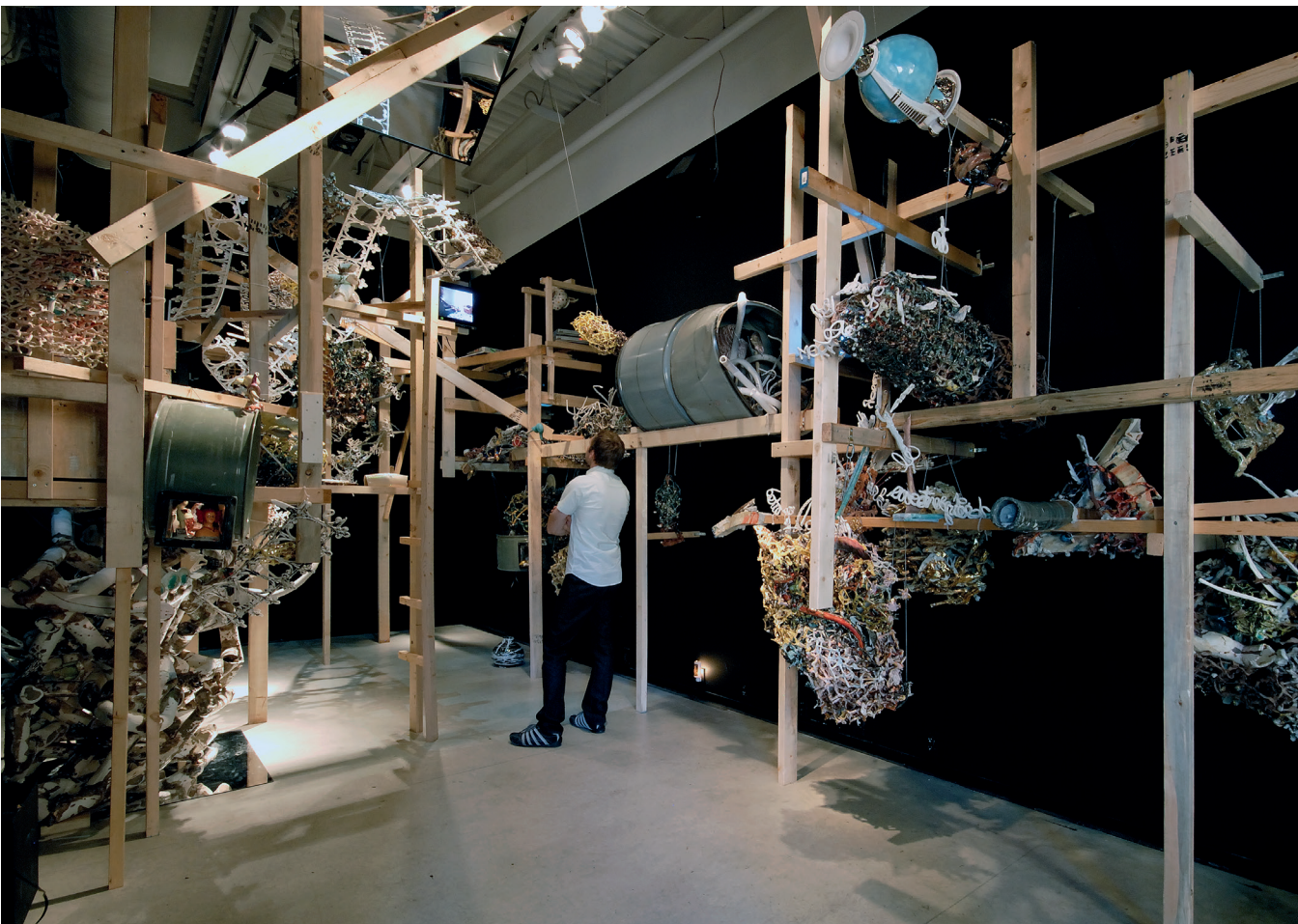
<sup>39</sup> Fuller, 134.

<sup>40</sup> Claims Stephen Wright, "How to Do Things with Data," Dataesthetics. Zagreb: Gallery Nova, 2007, 12.

<sup>41</sup> See Scott MacDonald, The Garden in the Machine: A Field Guide to Independent Films about Place, Berkeley: University of California Press, 2001. MacDonald's book title inverts the title of Leo Marx's 1964 book The Machine in the Garden: Technology and the Pastoral Ideal in America.



Still from Rehearsal, Yam Lau, 2008, computer-generated animation and digital video.

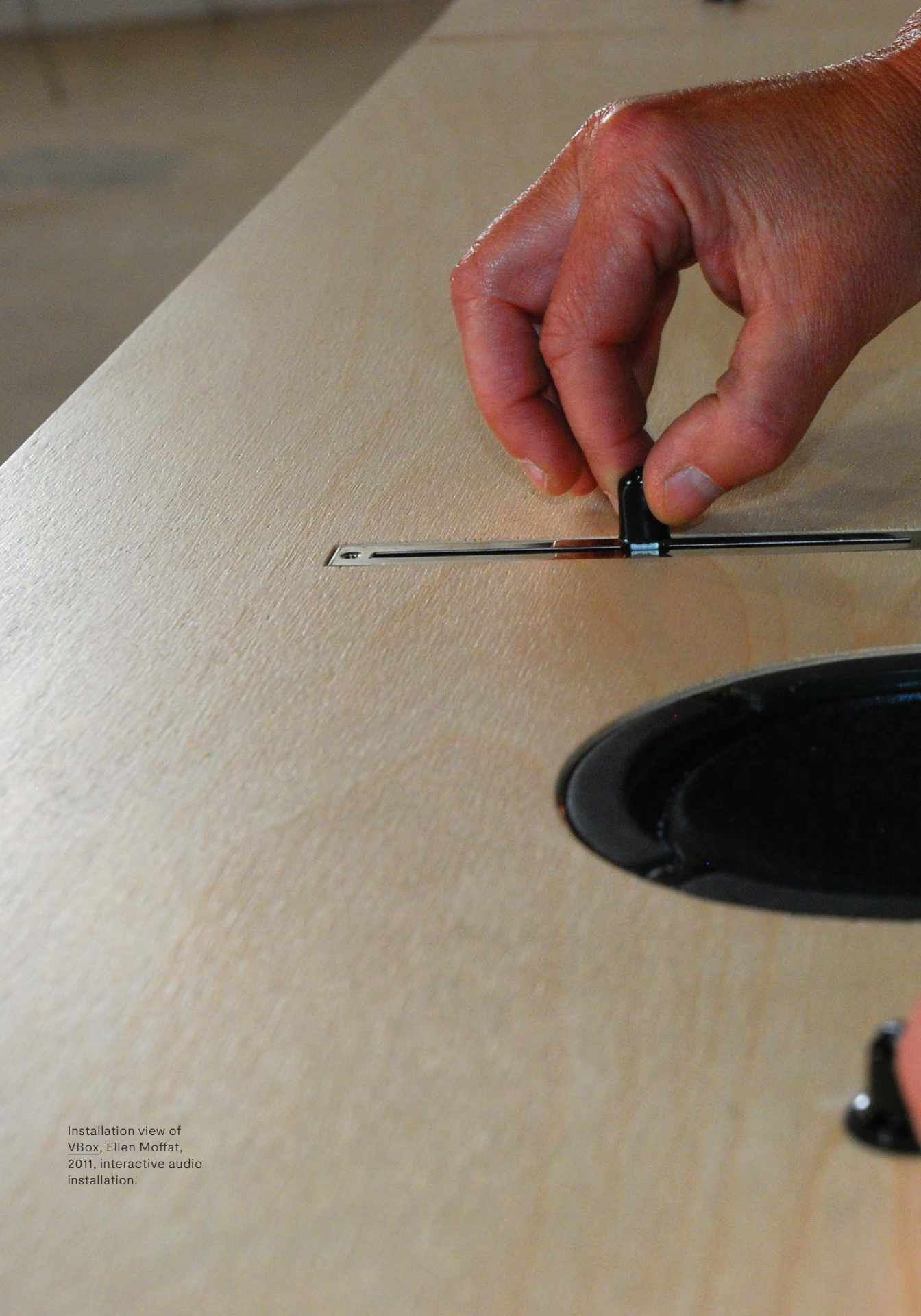


Installation view of Roaming Tales, Linda Sormin, 2007, multimedia installation.

**BIOGRAPH**

**IES**





Installation view of  
VBox, Ellen Moffat,  
2011, interactive audio  
installation.



The goal of **Arnaik Video Productions** (originally the Women's Video Workshop of Igloodik) is to value the culture and voices of Inuit women and to open discussions with Canadians of all origins. Since its beginnings in 1991, Arnaik Video Productions has traced a trajectory revealing the originality of its producers, the context of their work and lives, and their strong desire to express cultural values unique in Canada. Their first feature film, [Before Tomorrow](#), won Best Canadian First Feature at the Toronto International Film Festival in 2008 and was selected for the International Competition at the Sundance Film Festival.

**Laiwan** is an interdisciplinary artist, writer, and curator based in Vancouver. She is known for her multimedia work rooted in poetics and philosophy and has been investigating colonialism with aim toward a decoloniality since the late 1980s, including its relation to bodily erasure and the digital. Since 2000, her work has explored embodiment through performativity, improvisation, and digitality to reveal somatic ways of knowing and to engage presence. Recent public commissions enable her to focus on issues of urban development including questions about the built cityscape of Vancouver. She teaches in the MFA in Interdisciplinary Arts Program at Goddard College, USA.

**Maimoona Ahmed** took part in the [REMIXX](#) project as a student intern and youth digital media artist in residence. At the time, she was a student at Simon Fraser University's School of Interactive Arts + Technology. Her interest in digital media includes graphic design and the creation of short videos. In 2007, she graduated from Simon Fraser University with a BA in business administration.

**Michael Alstad** is an artist and independent curator working in installation and digital media with a focus on architectural and public space. His work encompasses a diverse range of media including video, installation, photography, networked art, locative media, and research-based practice. His web, video, installation, and photo-based works have been included in many international media arts festivals, on-line exhibitions, galleries, and public sites. Alstad is a founding member of the Canadian artist collective Year Zero One where he has curated and produced numerous projects in the past decade, including the award-winning locative history apps [TXTilecity](#) & [Queerstory](#).

**Jim Andrews** has been publishing his site [vispo.com](#) since 1996. It is at the centre of his work. He has a degree in English from University of Victoria, and also studied math and computer science there. Andrews is a media poet, and his work is a synthesis of several arts and media with online programming.

**Julie Andreyev** is an internationally recognized artist, activist, researcher, and faculty at Emily Carr University of Art + Design. Her artwork [Animal Lover](#), made with collaborative others, explores more-than-human ways of knowing to develop kinships with lifeforms and ecologies. Her artwork and research have

been published in journals, magazines, and books, and are supported by the Canada Council for the Arts and the Social Sciences and Humanities Research Council of Canada. Andreyev enjoys walking with her canine collaborators, Tom and Sugi, paying attention to the liveliness of the local animals, trees, and plants, and Earth forces.

**Kate Armstrong** is a Vancouver-based artist and curator who focuses on the intersection between art and technology. She has produced exhibitions, events, and publications on art and technology internationally. Armstrong has written for P.S.1/MoMa, [Blackflash](#), [Fillip](#), [SubTerrain](#), the Kootenay School of Writing, and recently contributed to [For Machine Use Only: Contemplations on algorithmic epistemology](#) (&&c/o The New Centre for Research and Practice, 2016). Armstrong is the author of [Crisis & Repetition: Essays on Art and Culture](#) (Michigan State University Press, 2002) and edited [Ten Different Things](#) (2018), [Art and Disruption](#) (2015), and [Electric Speed](#) (2013).

The **MASS ARRIVAL** artist's collective was responsible for staging the Mass Arrival project in Toronto in August 2013, which consisted of a public intervention in protest of Canada's anti-immigration policies, as well as associated gallery programming at Whippersnapper Gallery. The Mass Arrival team consisted of Farrah-Marie Miranda, Graciela Flores, Tings Chak, Vino Shanmuganathan, Nadia Saad, Jose Anzoategui, and Tobias Vargas.

**Myfanwy Ashmore** is Canadian media artist working in sculpture and new media technologies. Her work has been exhibited in art exhibitions and media festivals across the world. She has taught at York University, Ryerson University and led workshops at Paved Art Media Art Centre and the International Symposium on Electronic Art. She has been the recipient of grants from the Toronto Arts Council, the Ontario Arts Council, and the Canada Council for the Arts. In 2003, she was nominated and short-listed for the K.M. Hunter Award through the Ontario Arts Council, and in 2014 she was one of eight finalists for the Glenfiddich Artist Residency Prize. Ashmore holds an MFA from York University.

**Scott Billings** is a visual artist and designer based in Vancouver. His sculptures and video installations have been described as existing somewhere between cinema and automata. Centering on issues of animality, mobility, and spectatorship, Billings' work examines the mimetic relationship between the physical apparatus and the virtual motion it delivers. He holds an MFA from the University of British Columbia, a BFA from Emily Carr University, and a BASc in Mechanical Engineering from the University of Waterloo. He teaches at the University of British Columbia and Emily Carr University of Art + Design as a sessional instructor.

**Ben Bogart** is a non-binary interdisciplinary artist working for over two decades with generative computational processes and has been inspired by

knowledge in the natural sciences in the service of an epistemological inquiry. Ben has produced processes, artifacts, texts, images, and performances that have been presented at galleries, art festivals, and academic conferences internationally. Notable exhibitions include solo shows at the Canadian Embassy at Transmediale in 2017 and the TechLab at the Surrey Art Gallery in 2018. They have participated in international art residencies and their research and practice have been funded by federal art and research councils.

**Sylvia Grace Borda** received her MFA from the University of British Columbia and her BFA from Emily Carr University of Art + Design (ECUAD). She is internationally known for her pioneering photographic and video work, and for her writing. Recent awards include the Lumen Prize (2016) for web arts, an “EU Frontiers in Retreat Arts” Fellowship (2014–2017), and a residency with the City of Richmond Public Art Program (2018–19). She has been featured and reviewed in Photomonitor (UK), photographies, and CBC Arts Canada. Borda has held senior lecturing roles at the University of Salford–Manchester, Queen’s University Belfast, and ECUAD.

**Diana Burgoyne** is a Vancouver-based electronics artist whose sound works, performances and installations explore the relationship between society, technology, and the wider environment. She has participated in exhibitions, arts festivals, and residencies across North America and Europe. Burgoyne holds an MFA from the University of California, Los Angeles, and is currently teaching a course titled “Creative Electronics” at Emily Carr University of Art + Design.

Canadian artist **Janet Cardiff** lives and works in British Columbia with her partner and collaborator George Bures Miller. The artists are internationally recognized for their immersive multimedia sound installations and their audio/video walks. They have recently shown at the Museum of Contemporary Art in Monterrey, Mexico (2019); Oude Kerk, Amsterdam (2018); 21st Century Museum, Kanazawa, Japan (2017); Fondation Louis Vuitton, Paris (2017); and ARoS Aarhus Art Museum, Denmark (2015). In 2011 they received Germany’s Käthe Kollwitz Prize, and in 2001, represented Canada at the 49th Venice Biennale, for which they received the Premio Speciale and the Benesse Prize.

**David Chen** is an animation, composing, and motion graphics artist based in Vancouver. At the time of his internship as a youth media artist in residence, he was a student at Emily Carr Institute of Art + Design (now Emily Carr University of Art + Design), and his interests beyond animation include hip-hop culture, especially its dance and graffiti elements. He graduated with a BA in media arts in 2006.

**Judy Cheung** is a Vancouver-based new media artist whose works have employed video, film, text, sound, interactive environments, and teleconferencing. Her

creative preoccupations include interactivity and the nature of community, and her practice has involved experimenting with and investigating perceptual reality, especially in the realm of social and urban movements. Cheung’s installations are often interactive, created in a form that propels visitors on a journey. She has exhibited her art across Canada and in the United States, Europe, and Asia, and is also active as a teacher, curator and artist in residence. Cheung received her BFA from the University of Calgary and her MFA from Pratt Institute, New York.

**Dana Claxton** is a Vancouver-based, internationally exhibiting artist. Her work in film, video, photography, video installation, and performance art has been shown in the United States, Australia, France, and Canada. Her practice investigates Indigenous beauty, the body, the socio-political and the spiritual. Claxton has received numerous awards, most recently the Governor General’s Award in Visual and Media Arts (2020) and the Scotiabank Photography Award (2020). She is Head of the Department of Art History, Visual Art and Theory at the University of British Columbia. Claxton is a member of the Wood Mountain Lakota First Nations located in Saskatchewan.

**Scheherazad Cooper** is an accomplished performer, choreographer, researcher, and arts administrator. Her international dance career includes a range of interdisciplinary collaborations and solo productions, as well as devising and dance dramaturgy; drawing from nearly thirty years of experience in Odissi classical dance, as well as a background in theatre. Cooper is committed to community engagement and has served as an expert consultant, community programmer, and policy advisor for local arts organizations. She received her doctorate in Sociology and Performance from Goldsmiths, University of London, and regularly teaches in higher education, most recently for Simon Fraser University’s School for the Contemporary Arts.

**Patrick Cruz** is a Filipino–Canadian artist based in Quezon City, Philippines, and Vancouver, BC as an uninvited guest on the land of the Coast Salish peoples—Skwxwú7mesh (Squamish), Stó:lō and Səlilwəta/Səlilwitulh (Tsleil-Waututh) and xwməθkwəyəm (Musqueam) Nations. Cruz studied Painting at the University of the Philippines and received his Bachelor of Fine Arts from Emily Carr University of Art + Design, a certificate in clownology, and a Master of Fine Arts at the University of Guelph. His intuitive inquiry is informed by his interest in cultural hybridity, the project of decolonization, and the paradoxical effects of globalization. Most recently, Cruz’s work has taken form in playful configurations manifesting in various activities such as cooking, curating, trading, and freestyle rapping.

**Liane Davison** served as the Curator of Surrey Art Gallery from 1990–2008, and as its Director until 2018. During her tenure, she established multiple programs to support the production and presentation

of digital art, including the TechLab in 1999, the UrbanScreen venue in 2010, and the Gallery's digital audio exhibition program in 2008. She has curated over 100 exhibitions on contemporary art practice, from digital media through to lawn ornaments. Her writing has been published in over 30 catalogues, and her work supporting digital art has been recognized internationally.

**Veenoo Dewan** is a multimedia artist, journalist, and filmmaker with a strong interest in documenting and exploring immigrant experience in the West, and in studying cross-cultural societies. Born in London, of South Asian heritage, he has worked for the BBC and Channel 4 and as a freelancer and producer, and has exhibited his photographic, installation, and video art in the United Kingdom. Dewan moved to Canada in 2002, formed a progressive independent TV and film company, and became active in the Vancouver arts scene. He has been a board member of the Video In Arts Collective and has served in an advisory capacity for the CBC.

**Tagny Duff** is a Montreal-based media artist whose works include video, performance, net art, bioart, social sculpture, and installation. As well, she is a writer, curator, and educator. Her creative and research focus include visual culture, viral media, post-studio art practice, and the relationship between art, technology, and science. She holds a BFA from Emily Carr University of Art + Design, and an MFA and PhD from Concordia University. Currently, she is an assistant professor at Concordia.

**Phinder Dulai** is the author of three poetry collections: dream / arteries (Talonbooks, 2014), Basmati Brown (Nightwood Editions, 2000), and Ragas from the Periphery (Arsenal Pulp Press, 1995). His work has also been published in Canadian Literature, Offerings, Cue Books Anthology, Ankur, Matrix, Memewar Magazine, Rungh, The Capilano Review, Canadian Ethnic Studies, Toronto South Asian Review, subTerrain, and West Coast LINE. A consulting editor and member of the Talonbooks' Poetry Board, Phinder Dulai is also a co-founder of the interdisciplinary contemporary arts group South of Fraser Inter-Arts Collective (SOFIA/c). He currently serves as Poetry Editor for Canadian Literature Journal.

**Aleksandra Dulic** is a media artist, theorist, and filmmaker working at the intersections of interactive multimedia installation and live performance. She is also a researcher in cross-cultural media performance, interactive animation, and computational poetics. She has received a number of awards for her short animated films. Her artistic work across a wide range of media is widely presented in exhibitions, festivals, and television broadcasts across Europe, Asia, and North America. She teaches at the University of British Columbia where she also directs the Centre for Culture and Technology—an interdisciplinary arts-research centre.

**Alanna Irene Edwards** is an artist of Mi'gmaq and settler descent. Her work focuses on how humour acts as a vehicle for connection and empathy, and responds to how Indigenous people are looked at and consumed through pop culture, politics, and art. She has a Bachelor of Arts in Political Science and Women's Studies from Simon Fraser University, a diploma in Fine Arts from Langara College, and a Bachelor of Fine Arts with distinction from Kwantlen Polytechnic University.

**Rhys Edwards** is a critic, artist, and curator. He has written for White Hot Magazine, Canadian Art, C Magazine, and The Capilano Review. In 2015, he co-founded the Agent C Gallery with artist Debbie Tuepah in the Newton region of Surrey. As an Assistant Curator at the Surrey Art Gallery, he has developed several exhibitions, and contributed texts and design elements to many others. He also co-authored the City of Surrey's 2015 Surrey Operations and Civic Infrastructure Art Plan with artist Alan Storey, and has published several essays about the City of Surrey's Public Art collection.

**Maya Ersan** is a multimedia artist who creates immersive environments that use shadow as a non-linear story-telling tool. Working under the moniker Mere Phantoms, she specializes in interactive installations that combine intricate paper cutouts, drawings, and projections where audiences are actively involved in the creation of an improvised experience. She is interested in how memory is constructed, and how it can be erased and rewritten. Ideas of visceral and collective memory, passed down through generations, are central to her work. Born and raised in Istanbul, Turkey, Ersan holds a BFA from the Emily Carr University of Art + Design and is based in Montreal, Canada.

**Cao Fei** was born in Guangzhou, China, in 1978. She earned a BFA from Guangzhou Academy of Fine Arts in Guangzhou in 2001. Using a combination of personal narrative, fantasy forms, and dramatic inventions, Cao Fei has been highlighting the new economic order, and its effect on the personal lives of those negotiating China's rapidly changing social systems. Cao Fei's work has appeared in solo exhibitions around the world, including at MOMA PS1, the Serpentine Gallery, and the Tate Modern. She lives and works in Beijing.

**Stephen Foster** is an electronic media artist and researcher of mixed Haida and European heritage whose work deals with issues of Indigenous representation in popular culture through personal narrative. Foster's multi-channel video and interactive video installations, photography, and single channel video works have been presented in galleries and film and media festivals across Canada as well as in New Zealand, Sweden, Germany, and the United States. Currently, Foster is the Dean, Faculty of Art at the Ontario College of Art and Design University (OCADU) in Toronto.

**Martin Gotfrid** is an interdisciplinary composer, multi-instrumentalist, and sound designer living in Vancouver whose work often involves both improvisation and collaborations with artists in other media. He was on the faculty at the School for the Contemporary Arts at Simon Fraser University from 1981 to 2016.

**Beryl Graham** is Professor Emeritus of New Media Art at the University of Sunderland, and is co-founder of the CRUMB resource for curators of new media art. She curated the international exhibition Serious Games for the Laing and Barbican art galleries. Her books include Digital Media Art (Heinemann, 2003), Rethinking Curating: Art After New Media (MIT Press, 2010, with Sarah Cook), and New Collecting: Exhibiting and Audiences (Ashgate, 2014 ed.). She has presented papers at conferences including Navigating Intelligence (Banff), Decoding the Digital (Victoria and Albert Museum), and Cultural Value and the Digital (Tate Modern).

**Susan Harman** is a Sunshine Coast-based artist working in the field of creative art photography. She uses the tools of photography and painting to digitally express philosophy, meaning, and emotion. Harman has a Fine Arts Degree from Emily Carr University of Art + Design and has recently retired from over 20 years of teaching university level visual design courses. Her art has been in local exhibitions and her short films have been distributed internationally.

**Nicola Harwood** is a literary, theatrical, and interdisciplinary artist. Her plays, performance, and installation projects have been produced in various cities in Canada, Europe, and the US. Recent projects include Summoning, No Words (2017), an interactive sound installation built out of the female voice and High Muck-a-Muck: Playing Chinese (2014) an artist / programmer collaboration which won the 2015 UK New Media Writing Prize. Her newest collaboration is Mamook Lapeep (Let's Chat), a collection of decolonizing AI trading bots. She is a co-founder and former Executive Director of the artist-run Oxygen Art Centre in Nelson, BC, and has facilitated many projects with youth and communities.

**Jérôme Havre's** multidisciplinary art practice focuses on issues of identity, community, and territory, investigating the political and sociological processes of contemporary life as they relate to nationalism in France and Canada. He uses a variety of tools and methods to make tangible the conditions of identity within situations of social transformation. Havre completed his studies at l'École Nationale Supérieure des Beaux-Arts (Paris). Since 2001, he has exhibited in Europe, Africa, and North America. Recent shows include La fabrique de l'image, espace d'art contemporain 14°N 61°W, Martinique; Land Marks, Art Gallery of Peterborough, Ontario; and Reiteration, Art Gallery of Ontario, Toronto. He is currently based in Toronto.

**Gordon Hicks** is an artist-engineer who engages machines, systems thinking, and poetry in a bid to see our world more clearly. His ongoing collaborations with Germaine Koh have produced a number of works including There/Here (2009) and Errant Rain Cloud (2020) (Minoru Centre, Richmond).

**Suez Holland** is a visual effects animator, projections designer, award-winning sound designer, and animation mentor. Owner of Electrabelle Visual Effects, she has been providing visuals for concerts, performances, and live events for over 16 years. She studied digital video effects at the Vancouver Film School, animation at Emily Carr Institute of Art + Design, and graphic design and cartooning at the Academy of Fine Arts in Liege, Belgium.

**Dipna Horra** is of Indian ancestry, born in Nairobi and based in Ottawa. Her multimedia work intersects architecture and cultural studies. Her practice and research investigates storytelling and hybrids. She has participated in exhibitions and conferences worldwide, including the Subtle Technologies Festival in Toronto, the Open Sound program at Surrey Art Gallery, La Presencia del Sonido at Botin Foundation, Spain, and the Deep Wireless Festival, Toronto. These projects have been supported by the Canada Council for the Arts, the Ontario Arts Council, and the City of Ottawa, Cultural Funding. She was recently published in Other Places, edited by Deanna Bowen.

**Taryn Hubbard's** writing has been included in journals such as Canadian Literature, Room, The Capilano Review, Canadian Woman Studies, CV2, filling Station, carte blanche, Poetry is Dead, and many others. She currently lives in Maple Ridge with her family, having lived in Surrey for many years. Her first book, Desire Path, debuted from Talonbooks in fall 2020.

**Tomoyo Ihaya** was born in Tsu-City, Mie, Japan and is based in Vancouver, Canada. Her mixed-media works have been featured in solo and two-person shows in South Korea, Taiwan, Thailand, Japan, Mexico, India, Canada, and the United States. She has also participated in artist residencies in many of these places and has been awarded numerous grants from the Canada Council and the British Columbia Arts Council. Her work is held in public and private collections nationally and internationally. Ihaya holds a BA from Rikkyo University, Tokyo, and an MFA from the University of Alberta, Edmonton.

Electronic composer and visual artist **Ryoji Ikeda** focuses on the essential characteristics of sound itself and that of visuals as light by means of both mathematical precision and mathematical aesthetics. Ikeda has gained a reputation as one of few international artists working consistently across both visual and sonic media. He orchestrates sound, visuals, materials, physical phenomena, and mathematical notions into immersive live performances and installations. Alongside pure musical activity, Ikeda

has been working on long-term projects through live performances, installations, books, and CDs. He has performed and exhibited worldwide.

**Jay Bundy Johnson** is a Vancouver-based sculptor and media artist. He has participated in gallery shows both public and private. He is the recipient of numerous grants and awards, and his work can be found in collections throughout Canada and the US. He has played drums with Alt-Country trailblazers The Blue Shadows and underground folk heroes Herald Nix and Mac Pontiac. His latest recordings were co-produced with Mississippian Robert Connelly Farr. Johnson continues to devote himself to a teaching career at the Shadbolt Centre for the Arts where, over the years, he has encouraged hundreds of students in their artistry.

**Ian Johnston** is an artist based in Nelson, BC. He studied architecture at Algonquin College and Carleton University in Ottawa. He also spent five years working at the Bauhaus Academy in post-Berlin Wall Dessau, Germany. Johnston's primary interest lies in the cycle of goods, and through site-specific installations and sculpture he investigates how things we consume populate our daily lives, define relationships we have with each other, and ultimately define social structures. His practice is an extensive reflection on consumerism and the ensuing waste production. Johnston's work has been shown nationally.

Visual and media artist **Daniel Jolliffe** (1964–2021) traversed many disciplines and interests including sculpture, installation, sound, public intervention, performance, interactive art, video, and open-source culture. The goal of his artistic practice was to challenge and query how embodied conscious experience is changed by the intervention of technology. His artwork has been shown across Canada and internationally, and been covered by Wired News, the Dow Jones News Wire, Rhizome and the Australian Broadcasting Corporation, among others. He held a BA in Philosophy from the University of Victoria and an MFA in Art and Technology from the Ohio State University.

**Naomi Kennedy** is an artist with a drawing, painting, and woodcraft practice. She is a member of the Stellat'en First Nation, and has been active on the Fraser Region Aboriginal Friendship Centre (FRAFCA) teen council, attended youth leadership training through Aboriginal Youth Strengthen the Circle and IndigenEYEZ, and was a workshop leader for the KAIROS Blanket Experience. She was a Youth Master of Ceremonies for the Surrey International Children's Festival, and also performed backup vocals on stage with Arcade Fire at the Juno Awards.

**Elizabeth Kidd** is a curator and former community arts programmer at the Roundhouse Community Centre, Vancouver. She was Chief Curator at the Art Gallery of Alberta and held curatorial positions in Banff, Ottawa, St. John's, and Toronto. She has a BA from McGill University, an MA in Near Eastern Art and

Archaeology from the University of Toronto, an MA from the Department of Graduate Liberal Studies at Simon Fraser University, and a diploma in art history from L'École du Louvre, Paris. For 13 years she has been teaching an online course, Building Community Relationships, with the University of Victoria.

**Germaine Koh** is a visual artist and curator based in Vancouver, in the ancestral territories of the Musqueam, Squamish, and Tsleil-Waututh First Nations. Her work adapts familiar situations, everyday actions and common spaces to encourage connections between people, technology, and natural systems. Her ongoing projects include Home Made Home, an initiative to build and advocate for alternative forms of housing, and League, a participatory project using play as a form of creative practice. From 2018 to 2020 she was the City of Vancouver's first Engineering Artist in Residence, and in 2021 she is the Koerner Artist in Residence at the University of British Columbia.

**Bobbi L. Kozinuk** is a Vancouver-based media artist, curator, and technician. Former Media Director at Western Front, she has also worked with the boards of the Independent Media Arts Alliance (Montreal) and Co-op Radio, grunt Gallery, and Video In (Vancouver). She has produced workshops on low-powered FM transmission across Canada. Kozinuk is published in Radio Rethink (produced by the Banff Centre for the Arts) and Echo Locations (audio art CD produced by Co-op Radio). She is currently the InterMedia studio technician at the Emily Carr University of Art + Design, and has exhibited media installation works both nationally and internationally.

**Avishka Lakwijaya** graduated from the University of Victoria with a major in History and a minor in Business. He started his journey with Surrey Art Gallery as a volunteer in 2015. He went on to assist with summer camps, the docent program, and Family Sundays. In 2018, as part of the Indigenous Contemporary Art Intensive, he created an artwork titled Change Through Stills. This artwork exemplified his interest in portrait painting and his interests in exploring the themes of identity, change, and growth. Since 2020, he has been assisting the Gallery's initiative to improve accessibility on YouTube and social media.

**Laura Lamb's** work in photography, video, assemblage, and drawing is informed by puppetry and creates brief, evocative, and humorous open-ended narratives. Recurring themes are utopia, disaster, and survival. Recently Lamb has moved her practice out of the studio and onto the street with the Arts Working Group of Extinction Rebellion Vancouver. Lamb's solo exhibitions include Grunt, Vancouver (2013); Kwantlen Art Gallery, Surrey (2003); University College Gallery, Kamloops (2002); Access, Vancouver (1996); and Floating Gallery, Winnipeg (1993). She was a KIAC Artist in Residence, Dawson City, Yukon (2015). She has an MFA from the University of Victoria.

**Nimi Langer** is a fine artist and a commercial video maker. His experimental documentaries have been exhibited in Europe and Canada. In 2003, together with a group of new media artists, Langer founded the Disasteroids, an artist collective committed to promoting an experimental approach to collaborative artmaking. He was also a partner in City Talks Inc., and worked as the director of its documentary-style walking tours in historic areas of Vancouver. Langer studied law and theatre at the Hebrew University in Israel, and film in Tel Aviv and Vancouver.

**Dr. Caroline Seck Langill** is a writer and curator who works at the intersection of art and science. Her interests in non-canonical art histories, gender studies, and Indigenous epistemologies inform her writing and exhibition-making. With Lizzie Muller, she has been researching questions of liveliness in art and artifacts. This ongoing collaboration resulted in the exhibition *Lively Objects: Enchantment and Disruption* (2015) at the Museum of Vancouver, and a forthcoming edited text from Routledge. Presently, Caroline is a Full Professor at OCAD (Ontario College of Art and Design) University in Toronto, where she holds the position of Vice-President, Academic and Provost.

**Toni Latour** is an East Vancouver queer femme settler artist and single mother, living on the occupied territories of the Musqueam, Tsleil-Waututh, and Squamish Nations. She works in photography, installation, text-based practices, drawing, and public art. Latour received her BFA from the University of Windsor in 1998 and her MFA from the University of Western Ontario in 2000. Her work has included social commentary, public art, and large-scale installation work that concerns itself with representation within the queer and trans communities in Coast Salish Territory (Vancouver). Latour is both a visual artist and educator at the University of the Fraser Valley, situated on Sto:lo Territory, in Abbotsford, British Columbia.

Born in British Hong Kong, **Yam Lau's** creative work explores new expressions and qualities of space, time, and image. His mediums include animation, video, photography, and installation. Other aspects of his practice, such as using a donkey as a project space in Beijing, China, are designed to solicit community participation. The recipient of numerous awards from the Canada, Ontario, and Toronto Arts Councils, Lau has exhibited widely across Canada and China. He also publishes regularly on art and design. He is a professor at York University and is represented by Christie Contemporary in Toronto.

**Andrew Yong Hoon Lee** works in moving image, sound, drawing and sculpture, and examines sensory perceptions through the use of language, experience, and space. Materially, Lee uses the lexicon of sound as it relates to other fields of knowledge. Through harmony and the dissonance of intertextual and intermedia strategies Lee investigates the social, the political, and the poetic in his work. Recent presentations of his work include *Achtung Cinema* Paris, France (2019), *Kinoskop*

*International Analog Film Festival*, Belgrade, Serbia (2019), *Ann Arbor Film Festival*, Michigan (2020), and *Radio Alhara*, Bethlehem (2021).

**Fiona Lemon** was the youth project coordinator on *REMIXX*. She studied international and community development at the University of British Columbia and was a youth program coordinator at the Immigrant Services Society of British Columbia.

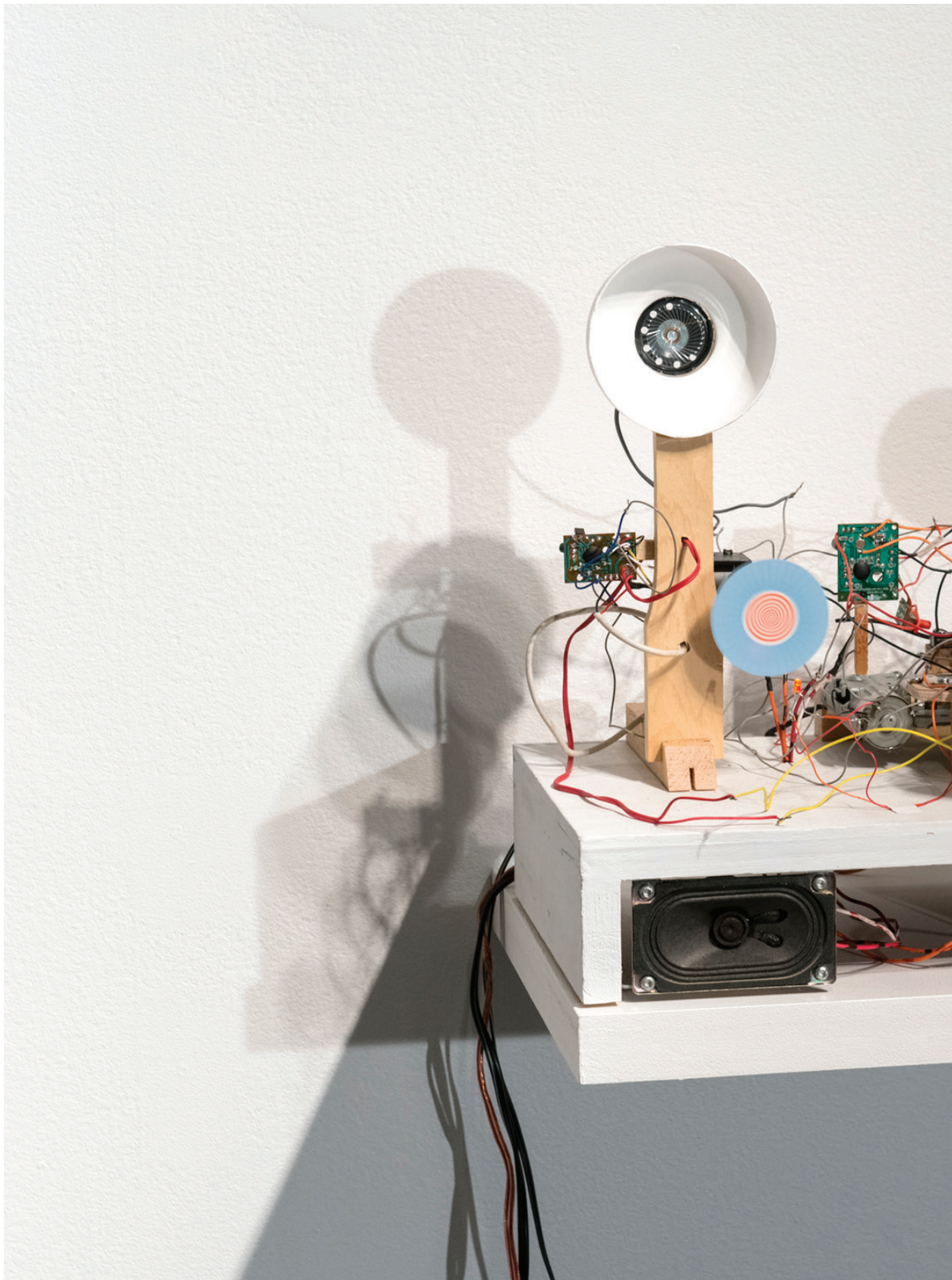
**M. Simon Levin** is an artist, writer, and lecturer. He creates site-based systems that explore the aesthetics of engagement, using a variety of designed forms and tools that address our many publics. Recent projects include a user-generated "sousveillance" system and a global contributive new media platform, both showcased for Vancouver's 2010 Cultural Olympiad. He has been artist in residence for Emily Carr University of Art + Design (ECUAD), the Vancouver Parks Board, Surrey Art Gallery, the Vancouver Art Gallery (Public Programs), and at the International Art Space, Kelleberrin, Australia. He has taught with Vermont College, the University of British Columbia, and ECUAD.

**Timothy Long** has over thirty years of curatorial experience at the MacKenzie Art Gallery where he is Head Curator and Adjunct Professor at the University of Regina. Saskatchewan's productive ceramics scene has driven several of his investigations, including *Regina Clay: Worlds in the Making*, and retrospectives of Marilyn Levine, Jack Sures, David Thauberger, and Victor Cicansky. Other projects, including *Atom Egoan: Steenbeckett* (with Christine Ramsay and Elizabeth Matheson) and the *MAGDANCE* series of exhibition/dance residencies with *New Dance Horizons*, are the result of his interest in interdisciplinary dialogues between art, sound, ceramics, film, and contemporary dance.

**Stephanie Loveless** is a sound and media artist whose research centers on listening and vocal embodiment. Her recent projects include a mobile web-app for geo-located listening, and sound works that channel the voices of plants, animals, and musical divas. *Loveless'* sound, video, and performance work has been presented widely in festivals, galleries, museums, and artist-run centers in North America, South America, Europe, and the Middle East. She currently lives and works in upstate New York where she is a Lecturer at Rensselaer Polytechnic Institute in the Department of Arts, and Director of the Center for Deep Listening at Rensselaer.

**Eve Luckring** makes art at the intersection of language, image, and sound. For the past several years, she has been translating traditional Japanese poetic forms into the visual realm to negotiate the contested binaries of nature/culture, subject/object, and self/world. Her work questions the assumptions—and experiments with the boundaries—that define place, body, and habit. Luckring's videos and installations have been exhibited internationally in traditional







Installation view of Being still (life) shows us who we are, Jay Bundy Johnson, 2016, multimedia installation.

art venues as well as in public spaces. Site-specific projects have addressed the social mechanisms at play in places such as porn shops, institutional community rooms, elevators, public parks, and nightclubs.

**Paulo Majano** is an artist based in Surrey, BC. Born in El Salvador, he holds an MFA from the University of British Columbia and is an augmented reality developer. Majano makes use of photography, 3D computer graphics, and 3D scanning to document the specific aspects of real-world locations. For the past decade, he has presented installations and projects where the virtual and the physical can be experienced simultaneously in an expanded definition of authentic experience. Majano is an instructor of Photography and Digital Media at Kwantlen Polytechnic University.

**Brady Marks** is an “audio-active emitter” in the fields of new media and new music. Based in Vancouver, she manipulates light and sound using computer software and electronics. She uses computer code as her medium, she says, “the way others use words, paint or notes in music to communicate ideas, pose questions, observe, and interpret their environment.” Exhibiting her work nationally and internationally, she often works collaboratively and is a founding member of the Vancouver-based art collective, Intermission. Marks holds an MSc in interactive art from Simon Fraser University, where she often teaches sonic and visual arts.

**Alex McLeod** is a new media visual artist from Toronto. McLeod’s images recall the wide-open vistas of romantic landscape painting, and strange otherworldly dystopias. He uses film as a point of comparison, such as the representation of space, captured in films such as *Kagemusha* and *Hidden Fortress*, then contrasted with the hypothesized future depicted in films like *Blade Runner*. In light of concerns surrounding rising populations, urban over-development, and climate change, McLeod’s simulations could be considered a cautionary tale about ecological responsibility. He is represented by Division Gallery in Toronto and Montreal.

**Cindy Mochizuki** creates multi-media installation, audio fiction, performance, animation, drawings, and community-engaged projects. She has exhibited, performed, and screened her work in Canada, the US, Australia, and Japan. Recent exhibitions include the Vancouver Art Gallery, Burrard Arts Foundation, Richmond Art Gallery, Frye Art Museum, and Yonago City Museum. In 2015, she received the Vancouver’s Mayor’s Arts Award in New Media and Film and in 2020, she received the Jack and Doris Shadbolt Foundation for the Visual Arts VIVA Award.

**Ellen Moffat** is a sound installation artist whose work explores sound, space, and listening as relations of materials, sensation, and bodies using electroacoustic methods and experimental processes for sound generation. Listening connects the subject to the world and to others in a shared space of fluctuating signal with transformative potential for communication

and new social relations. Her work has been presented throughout Canada and in international exhibitions. She is currently completing a studio-based PhD in sound at Western University. Her research into sound art is a proposal for a feminine sonic.

**Bryan Mulvihill**, a.k.a. “Trolley Bus,” is a multidisciplinary artist who has been active in the Vancouver art scene for over 30 years. As a photographer, videographer, calligrapher, and interactive performance artist, he is best known for staging tea parties, a practice he characterizes, in the words of Joseph Beuys, as “social sculpture.” He studied fine arts at the University of British Columbia and has since dedicated himself to the study of the art and philosophy of the tea ceremony, ink-brush painting, and Chinese porcelain, influenced by Buddhism and other Eastern philosophies.

Trained formally in Indian Classical Music from the age of seven, **Tarun Nayar** became involved in Vancouver’s underground electronic music scene in his early 20s, which led to the formation of Canadian band Delhi 2 Dublin in 2006. He has since led the band to Glastonbury (UK), Hardly Strictly Bluegrass (US), Woodford (AUS), and almost 2000 other club and festival gigs around the world. Nayar is passionate about creating opportunities in the arts for people of colour. He is Executive Director of 5X Festival, a member of numerous boards, and co-founder of Surrey-based record label Snakes x Ladders.

**Kenneth Newby** is a composer and media artist whose creative practice explores the use of computation to enable the creation of music, media performances, installations, and experiences rich in aural, visual, and cultural nuances. His work is based on the continued evolution of computer-assisted composition systems for music and animation. The musical outcomes of this work can be heard on the three volumes of his *Emergence Trilogy*. Newby resides at Frog Hollow on Mayne Island, BC where he is director of the Flicker Art Collaboratory (formerly Flicker Art Media).

Based in Langley, Canada, **Suzanne Northcott** is an interdisciplinary artist. Always a painter, she has moved through video, installation, and photography. She has collaborated with poets, biologists, and artists in other disciplines. Recently, environmental and feminist concerns drew her to textile and hand stitching. Themes of swarm behaviour, migration, and the relationship of the one to the many compel her. Influences include Gerhard Richter and Barnett Newman. Her work is held in private and public collections in Canada and worldwide.

**Robin Oppenheimer** is a Seattle-based media arts historian, curator, educator, and scholar who has worked in the field since 1980. She was Executive Director of media arts centers in Atlanta (IMAGE Film/Video 1984–89) and Seattle (911 Media Arts 1989–95). Earning a PhD in Interactive Arts and Technology at

Simon Fraser University in 2011, she was a Lecturer at the University of Washington Bothell (2008–2015) and adjunct faculty at Cornish College of the Arts (2014–16). More recent projects include working for Google’s Artist and Machine Intelligence group (<https://ami.withgoogle.com/>). Her areas of research include media arts histories, participatory media, and media activism.

**Maggie Orth** is an artist, writer, and technologist who creates electronic textiles and interactive art. She is the founder of International Fashion Machines, Inc., and was named a USA Target Fellow in 2007. She holds a PhD in Media Arts and Sciences from the Massachusetts Institute of Technology, a Masters of Science from MIT’s Center for Advanced Visual Studies, and a BFA from Rhode Island School of Design. Her artworks and designs have been exhibited globally, and have appeared in *TIME Magazine*, *WIRED*, and *The Boston Globe*, among others. She lives and works in Seattle, Washington.

**Carmen Papalia** uses organizing strategies and improvisation to address his access to public space, the art institution, and visual culture. His work, which takes forms ranging from collaborative performance to public intervention, is a response to the barriers and biases of the medical model of disability. As a convener, he establishes welcoming spaces where those from historically marginalized groups can realize their desires for participation. Papalia is a 2019 and 2020 Sobey Art Award recipient. His work has been featured at the Solomon R. Guggenheim Museum, the Tate Liverpool, the Banff Centre for Arts and Creativity, and Gallery Gachet, among others.

**Nancy Paterson** (1957–2018) was a Toronto-based electronic media artist known for what she called “cyber-feminist techno-art.” Working in the areas of interactive installations, net-based projects, and digital video, she gained critical recognition nationally and internationally. Her primary interest was the intersection of gender, feminism, and technology, and her strategies included contrasting “women’s technology” of the 1950s with women’s issues of the late 20th century. Paterson completed her PhD in communications at York University in Toronto, and was an Associate Professor at the Ontario College of Art & Design.

**Leonard J. Paul** (MSc) is a professional composer and media artist who was one of the mentoring artists and the technical architect of the REMIXX project. Based in Vancouver and trained in computer science and electro-acoustic music, he has gained international recognition for his score for the award-winning documentary film *The Corporation*. He has also been a composer, coder, and sound designer for video games for over 25 years. He is the founder and head instructor of the School of Video Game Audio.

**Archer Pechawis** is a performance artist, new media artist, filmmaker, writer, curator, and educator. He holds a particular interest in the intersection of

Plains Cree culture and digital technology, often merging “traditional objects” such as hand drums with “forward-engineered” devices such as Macbooks. His work has been exhibited across Canada and featured in publications such as *Fuse* and *Canadian Theatre Review*. He works extensively with native youth, teaching performance and digital media. Of Cree and European ancestry, he is a member of Mistawasis First Nation, Saskatchewan, and currently resides in Vancouver.

**Atheana Picha** is a multidisciplinary Salish artist from the Kwantlen and Tsartlip First Nations, and is based in Richmond, BC. Picha studied Fine Art at Langara College, with a high interest in ceramics, intaglio printmaking, and wood carving. She is currently doing two mentorships, one with Musqueam weaver Debra Sparrow, and with Squamish artist Aaron Nelson-Moody learning silver engraving and wood carving. Her work is heavily inspired by “classical” Salish design language, and often incorporates references to old Salish pieces. Picha is a two-time recipient of the YVR Art Foundation scholarship and has done murals throughout the greater Vancouver area.

**Andrew Power** is a Vancouver-based video artist who has exhibited his works across Canada and in Europe and the United States. In addition to video, he has worked in radio, installation, and landscape architecture; he has produced performance works for other artists; and he has organized panel discussions and curated media-based exhibitions.

**Lady Ra** is a world-beat DJ and co-founder of the Beats Without Borders collective. Her original training was with community radio in Guelph, Ontario, where she discovered her passion for world music. Since then, she has travelled extensively through Asia, Africa, Europe, and Latin America, where she has conducted research and collected music. She is also a support worker with people facing multiple challenges such as drug addiction, poverty, childhood abuse, and mental illness.

**Alison Rajah** was appointed Surrey Art Gallery’s Director in 2019. Rajah has been a member of the Gallery’s staff since 2009 and has contributed to all areas of its operations, including as Curator of Education and Engagement. Her curatorial leadership with digital art exhibitions and programs at UrbanScreen, and in the Gallery’s Indigenous contemporary art education programming, has been recognized nationally. She studied in the Critical and Curatorial Studies graduate program at the University of British Columbia, is completing a graduate degree in Museum Education at UBC, and has taught in UBC’s Faculty of Arts Humanities 101 program since 2008.

**Niranjan Rajah** is an assistant professor at the School of Interactive Arts + Technology, Simon Fraser University. He is the convenor of Vancouver’s annual New Forms Festival Conference, a member of the board of directors of the Vancouver International

Centre for Contemporary Asian Art (Centre A), and a member of the advisory board for the Banff New Media Institute (BNMI). Rajah holds a BSc in economics from Queen Mary College, University of London, a postgraduate diploma in law from the University of Westminster, and an MA in fine arts from Goldsmiths College, University of London.

**Celine Rich** has facilitated more than 15 community art and public art projects in Greater Vancouver and Seattle, and has lectured on these undertakings as examples of collaborative art projects. Her first initiative, while still a student at the Emily Carr Institute of Art + Design (now the Emily Carr University of Art + Design), was Kinetic Banners for the Mount Pleasant Business Improvement Association. Rich completed her MA in design for the environment at the Chelsea College of Art and Design in London, England, in 1999. Her research there focused on community art practice and art for social change.

**Jocelyn Robert** is a Quebec City-based writer, composer, and audio artist. He composes interactive computer pieces, talks and writes about new media, and has exhibited his work across Canada and in the United States, Europe, and Mexico. He is committed to a collaborative practice and has worked with a number of installation and performance artists. In 1983, Robert founded Avatar, an artist-run centre in Quebec City that functions as a laboratory for the creation, production, and dissemination of sound and electronic art. Originally trained in pharmacy, then architecture, he teaches visual arts at Laval University in Quebec.

**Ruth Scheuing** is a textile artist, educator, and writer based in Vancouver. Through three decades of artmaking, she has explored weaving as both a metaphor and a strategy for unravelling patriarchal histories. Scheuing has exhibited her art across Canada, and internationally and has published widely, including books, reviews, and essays. Born in Switzerland and educated at the Nova Scotia College of Art & Design, and the Banff School for the Arts, she taught in the Textiles Arts Program of Capilano University and currently maintains a studio with a Jacquard loom in Vancouver.

**Thecla Schiphorst** has an Interdisciplinary MA in Dance and Computing Science from Simon Fraser University (1993), and a PhD (2008) from the School of Computing at the University of Plymouth. Her background in dance and computing form the basis for her research in embodied interaction, focusing on movement knowledge representation, tangible and wearable technologies, media and digital art, and the aesthetics of interaction. She applies body-based somatic models as articulated in systems such as Laban Movement Analysis to technology design processes within an HCI context. Her research goal is to expand the practical application of embodied theory within technology design.

Curiosity and confusion motivate **Ikbal Singh's** work. Why do traditions exist in the form they do? Why do people accept the power that words hold? Is cultural assimilation reactionary or forced, and are we aware of it? While examining behaviour involving notions of acceptability and expectations, social and cultural belief systems, and experiences of being "othered," Singh explores ways of communicating with the intentional and unsuspecting public. With a sense of regard, she furthers her experience as an artist by experimenting with many mediums. Singh completed her BFA at Emily Carr University in Vancouver in 2007.

**Cauleen Smith** is an interdisciplinary artist whose work reflects on the everyday possibilities of the imagination. Operating in multiple materials and arenas, Smith roots her work within the discourse of mid 20th century experimental film. She has had solo shows for her films and installations at The Kitchen (New York), Museum of Contemporary Art Chicago, and Threewalls (Chicago). Smith holds a BA in Creative Arts from San Francisco State University and an MFA from the University of California, Los Angeles School of Theater Film and Television. Smith is currently a faculty member at the California Institute of Art.

**Linda Sormin** is a Canadian sculptor and installation artist based in New York City. Her work embodies improvisation and uncertainty, fragility, precarity, and change. She has a BA in English Literature, and studied ceramics at Andrews University, Sheridan College, and Alfred University. Sormin is represented by Patricia Sweetow Gallery in San Francisco. Her recent large-scale work, Fierce Passengers, was installed at Carleton University Art Gallery (Ottawa, Canada) in 2018. Other recent exhibitions were held at Kunstgarasjen (Bergen, Norway), Wuchangshuo Memorial Hall (Shanghai, China), and Jogja National Museum (Yogyakarta, Indonesia). She is Associate Professor of Studio Art at New York University.

**Kelsey Sparrow** is a Coast Salish and Anishnaabe multimedia artist based out of Vancouver, BC. They work in ceramics, printmaking, woodcarving, drawing, beading, and weaving. Their work often responds to their experiences as an Indigenous person through family histories, land and localities, grief, humour, and the gaze on Indigenous people in pop culture. They hold a Diploma of Fine Arts from Langara College and started their Bachelor of Fine Arts at Emily Carr University. They have been awarded the YVR Art Foundation Emerging Artist scholarship in 2017 and the MISSHA and Northwest Coast Ceramics Foundation Award in 2019.

**Christine Stewart** is a West Coast media artist whose work has shown at many North American, European, and Asian festivals. Her process-oriented, lens-based practice tends towards playful engagement of complex subjects. Current projects and research reflect her interests in evolving narrative structures in emergent technological forms, social justice, ecosophy, and the relational dynamics of sustainability.

She is past staff/board at VIVO Media Arts, currently serves on the Board of Directors for the Access to Media Education Society (AMES) and is an Associate Professor in Film + Screen Arts at Emily Carr University of Art + Design.

**Reva Stone** is concerned with an examination of the mediation between our bodies and the technologies that are altering how we interact with the world. She has worked with electronic technologies, interactive installations, net art, robotics, and responsive three-dimensional environments. Stone's work has been exhibited nationally and internationally and has been honoured with numerous awards and grants. Based in Winnipeg, she has also been active as a curator, writer, educator, and mentor to young and emerging artists through MAWA (Mentoring Artists for Women's Art).

**Jordan Strom** is Curator of Exhibitions and Collections at Surrey Art Gallery and a PhD student in Interdisciplinary Studies at Simon Fraser University. In addition to the over 45 exhibitions that he has organized in Surrey since 2009, Strom has also curated exhibitions for the Vancouver Art Gallery, Kamloops Art Gallery, Presentation House Gallery, and Republic Gallery, among others. From 2004 to 2008, Strom was co-editor of *Fillip* magazine, an international journal of art writing.

**Leila Sujir** is an artist and associate professor at Concordia University in the Intermedia (Video, Performance, Electronic Arts) area, where she is also Chair of the Studio Arts Department. Over the last 35 years, Sujir has built a body of video installation artworks using a mix of fiction, fantasy, and documentary with visual and audio collage techniques. She explores questions around migration, immigration, nation, and culture. Her works have been shown in galleries and festivals over the world.

**Donna Szoke** creates expanded animation, media art, video, installations, drawing, and prints. Her works explore immanence, embodied perception, and the fluidity of lived experience. In her creative process, she excavates invisibility, encounter, haptic perception, and non-visual knowledge in moving images. Her work has been exhibited in Canada, USA, France, Germany, Turkey, Hungary, Croatia, Korea, Cuba, and the UAE. She has received awards including from the SSHRC, Canada Council for the Arts, BC and Ontario Arts Council. She received her MFA in Interdisciplinary Arts from SFU in 2007.

**Brendan Lee Satish Tang** is a visual artist known for his sculptural ceramic work. He received an MFA from Southern Illinois University Edwardsville, a BFA from the Nova Scotia College of Art and Design, and is the recipient of numerous awards both nationally and internationally. Tang's work explores issues of identity and the hybridization of material and non-material culture while simultaneously expressing a love of both futuristic technologies and ancient traditions. Although he is primarily known for his

ceramic work, Tang continues to produce and exhibit work in a wide variety of mixed and multiple mediums.

**KD Thornton** is a Canadian artist who works with technologies, whether mechanical, electronic, or biological. Generally, her work addresses social issues, often using techniques of humour and subversion. Her sculptural and installation works have been exhibited nationally and internationally, and her interactive projects have appeared online since 1994. She holds an Honours BFA from the University of Manitoba and an MFA in Art and Technology from the School of the Art Institute of Chicago.

**Jer Thorp** is an artist, writer, and teacher living in New York City. A former geneticist, his digital art practice explores the many-folded boundaries between science and art. Thorp is one of the world's foremost data artists and is a leading voice for the ethical use of big data. His award-winning work has been shown around the world and the web. He is best known for designing the algorithm to place the nearly 3,000 names on the 9/11 Memorial in Manhattan. Thorp is an adjunct professor in New York University's Interactive Telecommunications Program.

**Henry Tsang** is an artist and occasional curator whose explores the spatial politics of history, language, community, food, and cultural translation in relationship to place. His artworks take the form of gallery exhibitions, pop-up street food offerings, 360° video walking tours, curated dinners, and ephemeral and permanent public art. Projects include *Tansy Point*, a video installation of the site of the unratified 1851 treaty signings by the Chinook peoples and the US government, and *360 Riot Walk*, a 360° video walking tour of the 1907 Anti-Asian Riots in Vancouver, Canada. Tsang teaches at Emily Carr University of Art + Design.

**Camille Turner** is an explorer of race, space, home, and belonging. Born in Jamaica and based in Toronto and LA, she combines Afrofuturism and historical research in her interventions, installations, and public engagements. Turner is the founder of Outerregion, an Afrofuturist performance group. She is a graduate of Ontario College of Art and Design and a PhD candidate in York University's Faculty of Environmental Studies.

**Jeremy Owen Turner** is an interdisciplinary artist, theorist, music (meta)composer, and writer. He has been an online performance artist since 1996 and he exhibits, curates, performs, and collaborates internationally. Turner co-produced the first virtual documentary shot entirely in-world (*AVATARA*, 2003), co-founded one of the first entirely virtual avatar musical groups (*The Gates*, 2002), and also co-founded one of the first avatar performance-art groups (*Second Front*, 2006). Turner earned his Doctorate in Interactive Arts and Technology from Simon Fraser University with an emphasis on Cognitive Science and Artificial Intelligence. His current focus is Artificial

General Intelligence, Quantum Computing, and Artificial Meta-Creation.

**Carlos Vela-Martinez** is a multidisciplinary artist whose curiosity about character, story, and the illusory has led him to be active as a sculptor, singer, actor, and writer. He recently performed in a short film he co-wrote and produced. He has consulted for other new-media artists, travelling to New York, Montreal, Toronto, and London to complete installations. Of Canadian and Mexican heritage, Vela-Martinez studied at Emily Carr University of Art + Design and the University of Western Ontario. He is currently incorporating 3D modelling and 3D printing into his sculptural process.

**Fred Wah** lives in Vancouver and in the West Kootenays. Recent books include Sentenced to Light, his collaborations with visual artists, and is a door, a series of poems about hybridity. High Muck a Muck: Playing Chinese, An Interactive Poem, is available online at [highmuckamuck.ca](http://highmuckamuck.ca). Scree: The Collected Earlier Poems, 1962-1991 (2015) was followed by a collaboration with Rita Wong, beholden: a poem as long as the river (2018). A series of improvisations, Music at the Heart of Thinking, was published in 2020.

**Valérie d. Walker** is a force of nature, transmedia creator, educator, Indigo Griot, curator, BIPOC Femme Afro-Futurist time traveler. She holds Ikebana (Japanese flower arranging) and Chado (tea ceremony) degrees with Urasenke-Kyoto and lifetimes of Indigo knowledge. Walker landed on Gaia in Honolulu, and has travelled the planet in space and time. Her artworks explore enviro-positive natural dyeing and printing, sensorially immersive fibre-based installations, solar-powered circuits, story-telling, Black Panther-esque activism, and guerillaGrrl radio. Walker was welcomed to the unceded lands of the Skwxwú7mesh (Squamish), Stó:lō and Səlilwəta/Selilwitulh (Tsleil-Waututh) and xwməθkwəyəm (Musqueam) Nations by Chief Marilyn Gabriel.

**jil p.weaving**, BFA, MA, is an artist, cultural strategist, and mother. She is grateful to live on the unceded lands of the xwməθkwəyəm and Səlilwəta/Selilwitulh. Her work is issue-oriented, and tends to narrative. She exhibits and presents nationally and internationally. As a strategist she led Vancouver Park Board's eco arts, community art, artist fieldhouse residencies, intercultural, and Indigenous relationships. She has also worked with Canada Council, Vancouver Foundation and BC Arts Council. weaving has been a member of The Association for Noncommercial Culture, Monster Central, The Arts & Health Project Advisory, and EartHand Gleaners.

Swiss artists **Peter Fischli** and **David Weiss** (1946–2012) collaborated for 33 years. Referred to as "the merry pranksters of contemporary art" by the New York Times, their work elevates the ordinary and is celebrated for its imaginative breakdown of the distinction between high and low art. Fischli and Weiss have created work across multiple media, including sculptures made from polystyrene and unvarnished

clay, and videos and photographs of playful stories and scenarios that have been exhibited worldwide.

**Chris Welsby** is a British and Canadian experimental filmmaker, digital media and installation artist, and writer. In the 1970s he was a member of the London Film-Makers' Co-op (now LUX film distributors), and co-founder of the Digital Media Studio at the Slade School of Fine Arts. He is considered one of the pioneers of expanded cinema and moving image installation, and was one of the first artists to exhibit film installations at the Tate and Hayward galleries in London. Since the mid-90s he has been making weather-driven digital media installations, and most recently completed a series of video projects in Mexico.

**Paul Williams** is from Langley, BC. After graduating from Emily Carr University of Art + Design, he was invited to play with what was considered "new online technology" in the 1990s at Surrey Art Gallery by former Curator Liane Davison, as part of her new idea for a digital art program. After leaving Vancouver to work on Adobe Flash projects in Montreal, he ended up in Toronto publishing a Canadian focused art magazine called Hive in the early 2000s. Williams currently tattoos in Florence, Italy, and is working with virtual reality within the Oculus VR headset to make 360° experiences.

**Carla J. Wolf** is a video and new media artist based in Vancouver. Her work has been exhibited in Canada, Europe, the United States, and cyberspace. Her creative interests lie in where the mechanical begins to make meaning, how viewership evolves in relation to new media, and how gender and sexuality are read through these media. Associated with Whistling Girl Media, she also has 15 years experience working with production media and software. Currently, Wolf teaches in the Communications Studies Program, Capilano University in North Vancouver.

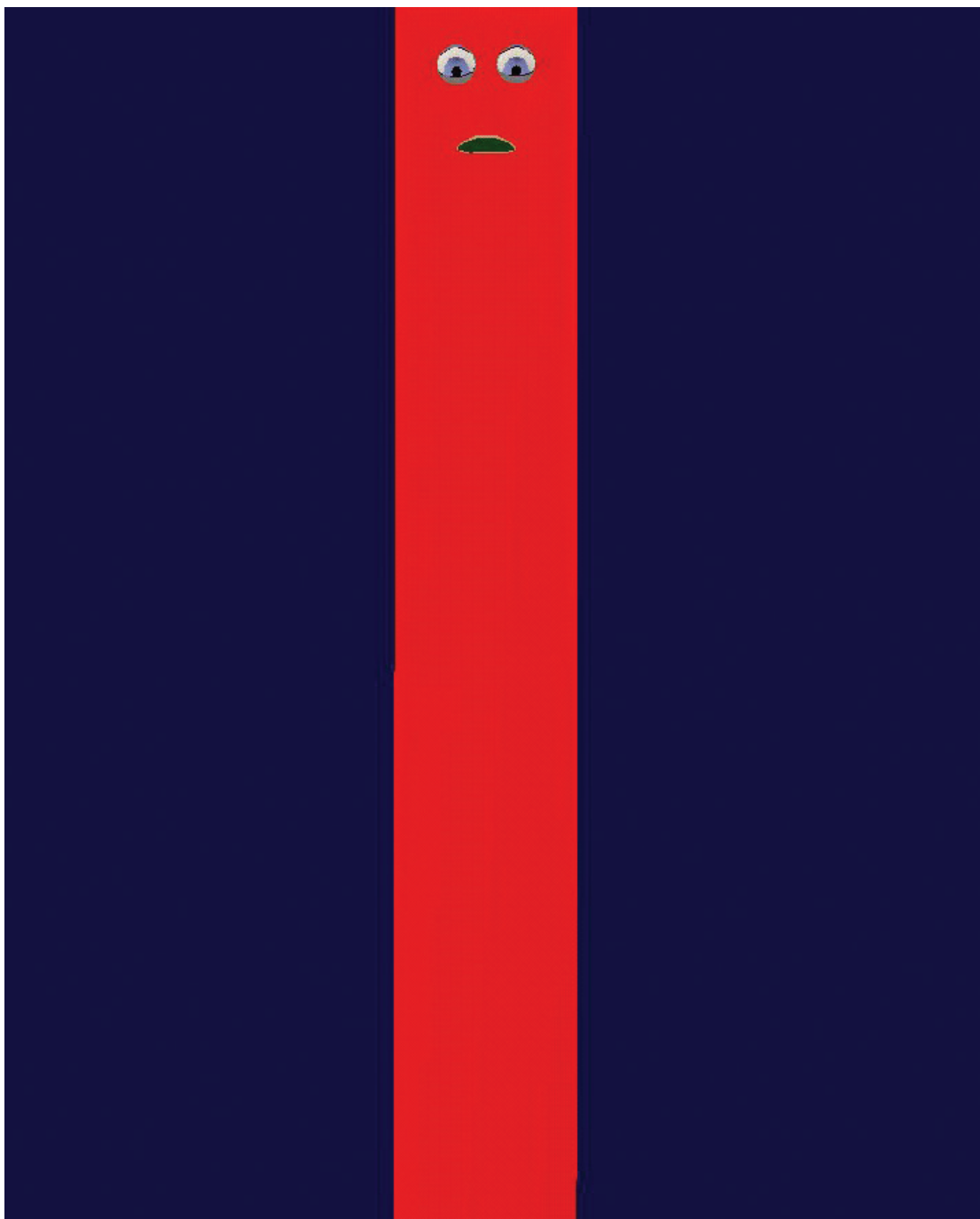
**Ming Wong** was born in 1971 in Singapore. He currently lives and works in Berlin. Originally trained in traditional Chinese painting, Wong made a name for himself as a playwright in the Singapore theatre scene before obtaining his Masters in fine art media at the Slade School of Art in London. He recently presented solo exhibitions at MKgalerie in Berlin and Rotterdam, and Gallery 4A in Sydney; his works have also been in many other locations, such as the Jakarta Biennale, Images Festival in Toronto, Art Forum Berlin, Preview Berlin, and the ZKM Center for Art & Media in Karlsruhe.

**John Wynne** is an award-winning Canadian artist whose diverse practice includes large-scale installations, delicate sculptural works, flying radios, photographs that you can hear, and composed documentaries that traverse the borders of documentation and abstraction. His work originates with a focus on sound, but often has a strong visual impact, whether through his sculptural sensibilities (Installation for 300 speakers, Pianola and vacuum cleaner), through to his collaboration with

photographers (his work with speakers of endangered Indigenous languages and organ transplant patients), or through visual deprivation ([Wireframe](#)). He is Emeritus Professor of Sound Art at the University of the Arts London.

**Jin Zhang** was born in Beijing, China, and came to Canada in 1990. As a composer, he actively promotes the combination of Eastern and Western musical expressions. He has received commissioning grants from the Canada Council for the Arts and has composed for many ensembles, TV productions, CD recordings, and the theatre. Zhang has composed and/or conducted for the Canadian Music Centre, the Vancouver Philharmonic Orchestra, the New Westminster Symphony Orchestra, and the Vancouver Youth Symphony Orchestra. His work has been recognized internationally, including at the Cannes Art Film Festival, the International Independent Music Awards, and the Western Canadian Music Awards.





Still from Voice of Fire, Jeremy Owen Turner, 2006, interactive digital installation.

TechLab: Experiments in media art, 1999–2019

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Cover & Book Design by Isabelle Swiderski, Seven25 Design & Typography Inc.

Printed in Canada by Mitchell Press

© Surrey Art Gallery Publication Date: June 2022

All images by SITE Photography, Sharon Doucette, Brian Giebelhaus, Beryl Graham,  
Surrey Art Gallery staff, or provided courtesy of the artist.

Library and Archives Canada Cataloguing in Publication

Title: TechLab: Experiments in media art, 1999–2019.

Names: Laurence, Robin, 1950– author. | Surrey Art Gallery (B.C.), publisher.

Description: A survey of exhibitions held over a twenty year period at the TechLab.

| Text by Robin Laurence, Robin Oppenheimer, Kate Armstrong, Caroline Seck Langill,  
Beryl Graham, Jordan Strom, Alison Rajah.

Identifiers: Canadiana (print) 20210171189 | Canadiana (ebook) 20210179856 |

**ISBN 9781926573625 (hardcover) | ISBN 9781926573632 (PDF)**

Subjects: LCSH: New media art—Canada—Exhibitions. | LCSH: Computer art—Canada—Exhibitions.  
LCSH: Art, Canadian—20th century—Exhibitions. | LCSH: Artist-in-residence programs—  
British Columbia—  
Surrey—Exhibitions. | LCSH: Surrey Art Gallery (B.C.)—Exhibitions. |  
LCGFT: Exhibition catalogs.  
Classification: LCC NX456.5.N49 T43 2021 | DDC 709.71/0904—dc23

Surrey Art Gallery is situated on the unceded traditional lands of the Salish Peoples, including the ḡičəḡ (Katzie), ḡʷɑ:ḡłəḡ (Kwantlen), and Semiahma (Semiahmoo) nations.



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Still from *Glocal: Your World in Motion*,  
Sylvia Grace Borda, M. Simon Levin,  
Jer Thorp, 2008, interactive digital  
installation.





