SIGGRAPH 2014
ART GALLERY
ACTING IN TRANSLATION

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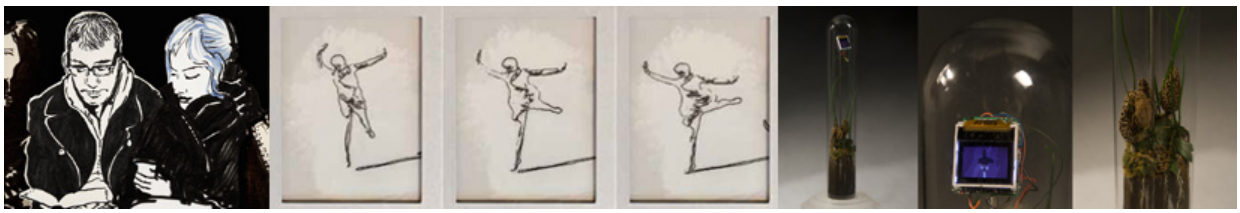
art gallery chair: Basak Senova
jury: Amit Zoran, Basak Senova, Cezanne Charles, Kate Armstrong, Mona Kasra, Mushon Zer-Aviv
artists: Paul L. Stout, Rachele Riley, Yunsil Heo, Hyunwoo Bang, Joseph Farbrook, Yoichi Ochiai, Yunsil Heo, Hyunwoo Bang, Inmi Lee, Kyle McDonald, Zohar Kfir, Sam Blanchard, Kirk Cameron, Robert Redfern, Sergio Bernales, Bo Li, Michelle Will, Hung-Ching Chang, Kelsey Farenholtz, Brandon Deaguero, Timmy Meyer, John Mooring, Ali Butt, Speculatorum Oculi, Erik Brunvand, Alon Chitayat, Jeff Ong, Emilio Vavarella, Fito Segrera, Burak Arikan, Ed Konowal/GraphicsNet
art gallery sub-committee: Kate Armstrong, Sue Gollifer, Mushon Zer-Aviv
technical director: Jim Clark/Freeman
network: DB Burnett/GraphicsNet
art gallery wall design: Mushon Zer-Aviv
venue: Vancouver Convention Center
coordinates: Vancouver, 2014

Translation, as a term and as a tool, generates plenty of potential fields for art production in disconnected trajectories. These fields have the capability to cover and merge with other fields of knowledge. Translation indicates a detached and forward movement from the source. It is a freeing act, which paradoxically contains a burden of responsibility for the source. Therefore, this movement has fine borderlines, yet it could designate "more" than the source. Translation may also refer to global and local societal developments such as resistance movements, alternative economies, information leaks, migration flows, and mobility that are processed by the works in the Art Gallery.

Works in the Art Gallery has several common approaches and angles. Some of them position the viewer as the witnesses of what the work is criticizes and/or processes; whereas some of them encourages the viewer to be the part of their content through interactive approaches. Some works inhabit experiences with different media and formats, wome phile sroduces inquiries about technological developments and their political, ideological, cultural, and economic implications.

Points of View (2013-2014) by Zohar Kfir is an ongoing interactive database-driven web documentary that represents a collaboration between the artist and B'Tselem's *Camera Distribution Project* (The Israeli Information Center for Human Rights in the Occupied Territories www.btselem.org). The work enables viewers to navigate through a variety of scenes, locations and timelines in the West Bank and Gaza from multiple points of view. *Points of View* is a perfect example of translating traditional cinematic techniques with interactivity, layering visuals, compressing and expanding time, and fracturing narrative. The project conveys both the day-to-day lives of Palestinians and documents some of the human rights violations that occur in the region. *Subway Stories* (2013) by Alon Chitayat is another work about personal stories and how they are merged with daydreaming and imagination. The work also inhabits a strong criticism of control mechanisms and isolation, experienced on daily basis: the 'conductor's box' enables the viewer/user to control the projection and its focus point. While one handle is controlling the train's speed, the other handle sets the camera zoom. The thoughts and sounds of the passenger in focus are heard according to the movements and decisions of the viewer/user.



Paul Stout's *Apparition* (2014) is an installation that is composed of many contrasting materials such as glass, plastic, electronic components and wire, brass, steel, LCD screens, preserved plant and animal matters. The work eliminates the interaction factor by positioning the viewer as 'the witness' of its continuous course. *Apparition* has an articulated content by observing and exposing a set of natural processes envisioned as elaborate machines. Ecological catastrophes are also the subject of Rachele Riley's *The Evolution of Silence* (2013). The work is a web-based archive, visualizing the scale of damage brought about by nuclear testing at the Nevada Test Site. By navigating through this archive based on a non-linear map, the viewer experiences this restricted desert landscape as a personal voyage.

Yunsil Heo's *Levitate* (2013) is a kinetic sculpture, directly related with one-to-one translation. The sculpture is composed of levitated ping pong balls in acrylic tubes that are activated by interacting with audiences. Whereas, his other work *The Modern Video Processor* (2013) is about the political and ideological language of the technology through 80's style wooden video effecter modules. This interactive, loud, and amusing work not only questions our limits to control the technology today, but it also underlines the gender-based inclinations of the power nodes that control, filter, and disseminate technology. Likewise, Emilio Vavarella with his work *TRANSICONMORPHOSIS* (2013) questions the transformation of our perception along with new forms of communication technologies. A simple chat with emoticons is the nucleus of the translation, depicted in this work: With a series of electrodes connected to the face of a viewer/user, the emoticon received through the chat is translated into electrical impulses. Through the electrodes, the viewer's/user's facial features are forced to mimic the expression of each emoticon. The work also subtly detects the control mechanisms beneath the daily life technologies. On the other hand, *Speculatorum Oculi (The Eyes of Spies)*(2014) by Erik Brunvand presents an exaggerated reaction to the current surveillance activities. Huge surveillance cameras, monitoring an architectural model with no action along with the ones monitoring the monitored site by randomly switching the views clearly depict the ironic situation that we all accept to live in. The work runs with black humor orbiting around the policies and the conditions of surveillance, data collection, and privacy.

Ed Konowal's *SteamGauge* connects the temporal with the spatial by its physicality: a steam pressure gauge from the early 20th century conceals the technology behind it. The blend of hardwares as the gauge, the computer (Raspberry Pi) and the microcontroller (Arduino Micro) operate through SNMP, Python and Arduino softwares. The industrial aesthetics as the backdrop of Internet usage statistics, conceptually creates jumps from one sequence of time to another. On the other hand, Internet usage statistics as a data are simply translated into the precision accuracy of mechanical movements. *SteamGauge* also links make links between the components of SIGGRAPH. It oscillates between the Art Gallery and GraphicsNet.

Inmee Lee's *Mother* (2013) as a series of generative sculptures, demonstrates a layered translation with multiple steps: based on a research, the work presents a series of translations from the verbal and aural language to a body language through hand gestures, then, another translation by processing such a data to 3D forms with a prototyping machine. The end result, which appears as minimal and abstract sculptures, clearly shows an independent new life span and existence of strong forms by concealing their references. *Lineographs* (2014) by Joseph Farbrook is also based on gesture and motion. This poetic work mimics the process of ink drawing with a series of electronic displays. In the same of thought, *SeeMore* (2014) by Sam Blanchard is a kinetic sculpture based on process of parallel computational thinking. The work processes the act of translation on multiple layers by translating and correlating movements with the parallel algorithms of an animatronic 256-node Raspberry Pi computer cluster. Whereas, *Looking Glass Time* (2013) by Yoichi Ochiai is an experimental animation, which is 'not' based on any recording media, appears as a critical and cynical approach to the dependency of the current time-based applications and controlled lives.

With the accumulation of these outstanding works, eventually, the main focus of the SIGGRAPH 2014 Art Gallery revolves around the readings, responses and perceptions of 'the act of translation' as a productive tool based on criticality.

ATTENDEES & ART WORKS

Apparition
Paul L. Stout The University of Utah

Apparition is a series of six artworks about natural processes envisioned as elaborate machines. These constructed devices were meant to build natural systems using technological metaphors, a didactic display of industry and natural history. The project focused on exploring ideas of nature as machine and machine as simulation of nature. The formation of our cultural perceptions in the west in the last several centuries has been the product of a growing adoration of and reliance on science and technology. From the mechanical clock to the steam engine to the silicon chip, our culture has employed its dominant technologies as the fundamental, if not transcendental, laws of nature, laws that are, in a word, mechanistic. This perception has limitations, which become apparent when we attempt to reproduce portions of nature, particularly in cultural production of the hyper-real. The Apparition artworks translate unseen and intangible events and actions into a quantified counting, which is displayed on a mechanical counter in the base of the sculptures. These sculptures use a combination of analog and digital electronic components; all are built around a programmed microcontroller connected to either a mechanical or video system. The low-level technology used is meant to reflect the simple organisms depicted in the upper dioramas of the sculptures.

The Evolution of Silence
Rachele Riley

The Evolution of Silence addresses the scale of damage brought about by 41 years of nuclear testing at the Nevada Test Site. The Web-based archive presents a non-linear map and interpretation of the area's destruction, and an opportunity to explore this restricted desert landscape. The project translates the official government data of nuclear testing into artistic, reflective experience and presents an imaging of a landscape symbolic of war's aftermath and silence. In mapping the location of the 828 individual detonations that occurred in Yucca Flat alone, Riley focuses on the 'before and after' states of transformation and on the visual traces and fragments that remain.
www.racheleriley.com
www.evolution-of-silence.net

Levitate
Yunsil Heo/Everyware and Hyunwoo Bang/Everyware

Levitate is a kinetic sculpture composed of levitated ping-pong balls in acrylic tubes that interact with audiences. Lord Kelvin, widely known for determining the correct value of absolute zero temperature, firmly believed that heavier-than-air flying machines were impossible. Neil Armstrong got into a steel can, flew through space, stood on the surface of the moon, and stared at the earth. Levitate is a humorous new media interpretation of gravity, the last scientific fetter of humankind. Dozens of serenely levitating balls suddenly float up and dance as your mind resonates with them. How can you tell if it was the electro-mechanic phenomenon created by electric circuit boards or if it was just the effect of your psychokinesis? An art gallery is not a science museum. Maybe it was not the psychokinesis that levitated the balls, and the whole thing was not a supernatural phenomenon at all. But how can you be so sure that the thought, "Your mind can levitate the balls," is a belief less true than Lord Kelvin's belief that heavier-than-air flying machines are impossible?

Lineographs
Joseph Farbrook, Worcester Polytechnic Institute

Translating the essence of artistic gesture and motion, the Lineograph series is created on electronic ink displays (similar to the original Kindle screen), emitting no light, mimicking the aesthetic of ink drawing, except with movement. Lineographs translates the essence and aesthetic of pen-and-ink drawing as well as the gestural movement of human body and mind. The lineographs represent both the frozen potential of static imagery and the empathetic attraction of moving pictures, switching from one to the other with only a touch.

Looking Glass
Yoichi Ochiai The University of Tokyo

If recording devices had not been invented, duplication of objects would have been required to produce movies. Social media is an artificial timeline that reflects the real world. This work aims to represent social media activities and their timelines with physical clock animation, without any recording media. Nowadays, our daily lives are translated into social media activities and social media timelines. Social media records are posted online with our recording devices (smart phone, camera, recorder). Without these recording devices, duplication and variation of the same object would be required in order to produce movie frames. Animation is a recomposition of "time," and I compose animation with multiple episcopes and clocks. We live in the objective material world with subjective perceptions of time. Nowadays, these subjective times are combined and translated in various ways (e.g., social media). This work aims to critique these situations using clock animation without recording media.

Modern Video Processor
Yunsil Heo/Everyware and Hyunwoo Bang/Everyware

The Modern Video Processor is a skeuomorphic metaphor to reminisce about the simple days when talking to machines just meant plugging cables, switching buttons, and rotating dials. Machines do not understand human language. Even tiny animals have the wits to guess our intentions by the tones of our voice. But machines simply can't. If you want to command something to them, you need multiple steps of translation until your words are finally converted to a series of "ons" and "offs." To speed up these translations, programmers have invented numerous gadgets. But their working principles exceed our common sense. So we, the artists, don't understand how these translations work and get lost in translation. We need metaphors, not interpreters or compilers. By patching wooden video effector modules like the 1980s audio synthesizer, you can cascade through a series of video effects in real time, creating limitless combinatory output videos on the brown tube TV sets. The way it functions is simply a metaphor and has nothing to do with what's inside the circuit boards of these tiny video translators. But your instinct will guide you through what happens on the TV screens while you play with them.

Mother
Inmi Lee, Kutztown University and Kyle McDonald, ITP/New York University

Mother is a series of generative sculptures that explore synesthetic connections between language and form by analyzing hand gestures that represent the participants' interpretations of unfamiliar spoken words. The gestures of the participants were captured in 3D using a Kinect, interpreted with open Frameworks, and printed with a rapid prototyping machine. Mother studies sound symbolism and explores synesthetic connections between language and shapes. It translates audible and intelligent communication into a visual and tangible form through the use of computation and 3D printing. Verbal descriptions of a set of unknown sounds, as well as the hand gestures used by participants to describe the sounds, are captured using XBox Kinect, extruded over time with a custom-built software made with openFrameWorks, and finally printed into sculptures. In contrast to the unrecorded spoken language, which is ephemeral, language that is printed three-dimensionally becomes embodied in a physical form. In this work, the human translator is replaced by a computer. The concept of translation is thus stretched, expanded, and re-contextualized, providing a flexible way to see and experience language through a work of art.

Points of View
Zohar Kfir, Independent New Media Artist

Points of View is an interactive web documentary based on video footage shot by Palestinians working with B'Tselem's Camera Distribution Project. It offers an intimate and situated look at life under the Israeli occupation. This project brings these materials to the international public in a manner that is respectful of their content yet innovative enough to provoke a more nuanced form of engagement than conventional documentary; it is an artistic exploration of a complex political issue that raises questions of community engagement, social awareness, and the social and phenomenological shaping of narrative. Points of View is an expanded exploration of non-linear narrative design, depicting documentary-based materials. The work aims to increase exposure to B'tslem's important and unique project through the creation of a map-based, database-driven interactive documentary that both situates the footage in its location of origin and creates new narrative threads of meaning from the stories that emerge. Viewers can browse the clips randomly, or follow pre-determined video trails that are connected via events and tags. The video trails offer viewers a way to learn more about particular events or areas, but also allow them to make their own connections—creating non-linear narratives that resist the fixed conclusions that can be provoked by linear documentary filmmaking—and experience life in the West Bank and Gaza from multiple points of view.

SeeMore
Sam Blanchard, Virginia Polytechnic Institute and State University
Kirk Cameron, Virginia Polytechnic Institute and State University
Robert Redfern, Virginia Polytechnic Institute and State University
Sergio Bernales, Virginia Polytechnic Institute and State University
Bo Li, Virginia Polytechnic Institute and State University
Michelle Will, Virginia Polytechnic Institute and State University
Hung-Ching Chang, Virginia Polytechnic Institute and State University
Kelsey Farenholtz, Virginia Polytechnic Institute and State University
Brandon Deaguero, Virginia Polytechnic Institute and State University
Timmy Meyer, Virginia Polytechnic Institute and State University
John Mooring, Virginia Polytechnic Institute and State University
Ali Butt, Virginia Polytechnic Institute and State University
Tamar Petersen, Virginia Polytechnic Institute and State University

SeeMore is a kinetic sculpture that showcases the inherent beauty of parallel algorithms through the correlating movements of an animatronic 256-node Raspberry Pi computer cluster. SeeMore is the collaborative brainchild of an artist and a computer scientist, both driven to educate viewers as to the importance of parallel computational thinking. Inspired by the wildly successful Raspberry Pi (RPi)—a small, fully functional computer designed at the extremely low cost of 35 USD, RPis are cheap enough for a young person to reasonably obtain and, more importantly, to tinker with. A single RPi might be very useful to an individual—the world runs on parallel systems without which Google, Facebook, Twitter, and Amazon could not provide their services; local and global weather forecasting would be less accurate; air travel would be less reliable; and essential medicines might go undiscovered. The resulting work showcases the elegance and significance of parallel computation to viewers while simultaneously educating and inspiring parallel computational thinking. This project translates data movement through a living sculpture that physically represents computation as it propagates and evolves across the surface of the form.

Speculatorum Oculi
Erik Brunvand, University of Utah

Speculatorum Oculi (The Eyes of Spies) comments on current surveillance activities of governments and corporations through an installation that includes an architectural model surveilled with looming video cameras providing live feeds to a set of video monitors. These monitors show views of the model and of other video cameras placed around the installed site. Quis custodiet ipsos custodes? Attributed to the Roman poet Juvenal in the 2nd century, this question is as relevant today as ever. Who guards the guards themselves? Who watches the watchmen? In this

installation, a model of an urban environment is intruded upon with a set of menacing, looming cameras. The resulting surveillance is shown on a set of high-resolution CRT security monitors. Other monitors show feeds from other cameras around the installation. Speculatorum Oculi are the eyes of spies, the ways of seeing of the watchmen, the guards as spectators. These impersonal, omnipresent eyes translate our daily existence into data. These data are archived and catalogued, tucked away into vast arrays of bits in data warehouses. In this piece the viewer is presented with an omniscient view of this data collection, but also becomes part of the unfolding drama on the security monitors.

Subway Stories
Alon Chitayat Animishmish Studio/ITP and Jeff Ong ITP, New York University

Subway Stories is an interactive storytelling installation first presented at New York University. The experience begins with a projection of an animated subway car. The train is filled with passengers—illustrations of real-life commuters drawn on subway rides across New York City. A physical "conductor's box" gives users control of where the projection is focused. One handle controls the train's speed, and the other handle controls the camera zoom. The audience hears the thoughts and sounds of the passenger in focus. Zooming into specific characters triggers their "stories"—audio narrations recorded to capture the inner lives of each passenger. Over five million people ride the subway in New York City every day. Crammed shoulder to shoulder, face to face, and every position in between, subway rides are seemingly "interactive experiences." Like a horizontal elevator, passengers anxiously wait for their stop, acutely aware of their temporary neighbors. Subway Stories looks to reconcile this isolation through the power of storytelling. Interactive technology provides the tools for translation. Combining physical controls with audio/visual feedback creates an immersive, alternative subway environment that audiences can enter and exit at any point. The project bypasses the socially unacceptable act of voyeurism (i.e., staring at/eavesdropping on a stranger) in public space. This subversion allows the audience to explore the inner lives of these passengers without consequence or hesitation.

TRANSICONMORPHOSIS
Emilio Vavarella, Independent Artist and Fito Segrera, Independent Artist

TRANSICONMORPHOSIS, the result of a theoretical reflection on the development of new forms of technological communication and their effects on human beings as well as their political impact, comprises a conventional chat service hosted in a computer interfaced with a series of electrodes connected to the face of the artist. The emoticon received through the chat translates into electrical impulses that force the artist's facial features to mimic the expression of each emoticon. The TRANSICONMORPHOSIS system translates emoticons to facial expressions. An interactive artwork, it proposes an ambiguous and experimental communication system for the near future, foreseen in part by Nobel Prize winner Elias Canetti in the 1980s, when he wrote: "We know that the influence of a man on another is what determines incessant and fluctuating metamorphosis that occurs in gesture and facial expressions; when these are strictly prohibited, every metamorphosis becomes difficult and, in the end, impossible." If, in the future, face-to-face communication becomes less widely used and written communication becomes crystallized in a series of immutable forms, humans will lose the empathic abilities that today are, in part, reproduced by emoticons. If humanity fails to invent new metamorphoses, devices such as TRANSICONMORPHOSIS will be diffused worldwide.

The Internet SteamGauge
Designed by: Ed Konowal
Presented by: GraphicsNet
Special thanks to: David Spoelstra, Justin Stimatze, and David Sabean

Internet usage is typically measured in Mb/s (Megabits per second) and displayed as a graph on a monitor or smartphone. This project takes the same data and translated it to a real world gauge. A steam pressure gauge from the early 20th century. Data is collected by polling an Internet router, in this case the router for the Vancouver Convention Center. The data is converted to a 0-200 scale to match the steps on the pressure gauge. Next the data is sent to a microcontroller which moves a servo to the appropriate position. The servo is connected to the needle of the pressure gauge. The Internet SteamGauge is an early 20th century steam pressure gauge. It has been modified with a servo and electronics to measure the Internet usage (bandwidth) of the Vancouver Convention Center.

SIGGRAPH Art Gallery Connections Map (1994-2014)
Burak Arikan and SIGGRAPH Art Gallery

From 1994 to 2014 SIGGRAPH Art Gallery jury members, participants, and their institutional affiliations will be mapped into a network diagram. Through a self-organizing software map, the names will naturally find their position through connecting forces, revealing the central actors, indirect links, and organic clusters within the history of SIGGRAPH Art Gallery. The interactive map will be created using the Graph Commons online mapping platform *graphcommons.com* presented online as well on the site using a large touch screen system.

ART GALLERY TALKS
Moderated by Basak Senova, SIGGRAPH Art Gallery Chair 2014

Art Gallery Talk SESSION 1
Tuesday, 12 August, 2.00pm -3:30 pm

Art Gallery Panel: On SIGGRAPH Art Gallery
Sue Gollifer, University of Brighton, Director ISEA International, SIGGRAPH Art Gallery Chair 2014, **Mona Kasra**, SIGGRAPH Conference Chair 2016, University of Texas - Dallas, SIGGRAPH Art Gallery Chair 2011, **Burak Arikan** founder of Graph Commons and **Basak Senova**, Koc University and SIGGRAPH Art Gallery Chair 2014

Art Gallery Talk SESSION 2
Wednesday, 13 August, 10.45-12.15 pm

Points of View
Zohar Kfir

Subway Stories
Alon Chitayat Animishmish Studio/ITP and **Jeff Ong** ITP, New York University

The Evolution of Silence
Rachele Riley

Art Gallery Talk SESSION 3
Wednesday. 13 August, 2:00pm -3:30pm

Can digital art have the same emotional impact and historical significance as masterworks in painting, drawing, and sculpture?
Joseph Farbrook, Worcester Polytechnic Institute

Mother
Inmi Lee, Kutztown University

Art Gallery Talk SESSION 4
Thursday, 14 August, 10.45-12.15

On Everyware
Hyunwoo Bang
Yunsil Heo
Everyware

Technological Error, Power and Metamorphosis
Emilio Vavarella

From Virtual to Reality
Ed Konowal/GraphicsNet