DataViz: Information as Art
Works by Alice Aycock, Ingo Günther, Helen & Newton Harrison, Brian House, Nathalie Miebach, Iñigo Manglano-Ovalle, MIT SENSEable City Lab, Paula Scher, 43d: Junichi Oguro & Motohiro Sunouchi, Fernanda Viégas & Martin Wattenberg

Organized by David Familian, Beall Center Artistic Director
EXHIBITION:  
DataViz: Information as Art

DATES:  

LOCATION:  
The Beall Center for Art + Technology, UC Irvine

EVENTS:  
ARTIST RECEPTION: Thursday, October 4, 6pm-9pm
FAMILY DAY: Saturday, November 3, 11am-4pm

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HOURS:  
Tuesdays & Wednesdays, 12 – 5pm
Thursday - Saturday, 12 – 8pm
Closed Sundays & Mondays, Nov 22-24, Dec 19-Jan 1

Tours by Beall Interns are available free of charge during business hours. Private group tours available by appointment: contact the Beall Center at (949)824-6206.

Special thanks to The Beall Family Foundation and the Claire Trevor School of the Arts.

The Beall Center received its initial support from the Rockwell Corporation in honor of retired chairman Don Beall and his wife, Joan, the core idea being to merge their lifelong passions - business, engineering and the arts - in one place. Today major support is generously provided by the Beall Family Foundation.
DataViz: Information as Art explores a wide range of practices that data artists and designers are currently using in their works including interactive dynamic images, sculptures and installations. DataViz goes beyond the simple notion of data visualizations, which tend to be represented by digital graphs or the representation of concepts in science. Through the confluence of science, technology and artistic practice, the works in this exhibition explore the deeper meanings of data revealing its beauty through several mediums. One aspect of the exhibition explores how the computational power of the computer has expanded the ability to display and continually update data as it changes in real time. By animating the shifts in data over time, instead of giving a static snapshot of a data set, we find more meaning in that data through the expansion of both the function and the reception of information. Other aspects seen in the exhibition are sculptural representations of data where sculptors use data to guide the shape of their work resulting in expanded viewer interpretations and meanings. While throughout contemporary art many artists have explored the aesthetics and conceptual underpinnings of scientific data, the works included in this exhibition show how digital technologies have created new, dynamic and spatial manifestations of data. Far exceeding the realm of simple animated graphics, these works are elegant forms of visualization that help us to contemplate the aesthetics and meaning of the ever-increasing data we encounter in our daily lives.
About the Artist:

Alice Aycock was born in Harrisburg, PA. She received a B.A. from Douglass College and an M.A. from Hunter College. She was represented by the John Weber Gallery in New York City from 1976 through 2001 and has exhibited in major museums and galleries nationally as well as Europe and Japan. Her works can be found in the collections of the Museum of Modern Art, NY, the Whitney Museum of American Art, Brooklyn Museum, the Louis Vuitton Foundation, LA County Museum, and the National Gallery. She exhibited at the Venice Biennale, Documenta VI and VIII in Kassel, Germany and the Whitney Biennial. She has had two major retrospectives. The first surveyed her work between 1972 and 1983, organized by the Wurttembergischer Kunstverein in Stuttgart, and the other retrospective entitled “Complex Visions” was organized by the Storm King Art Center in Mountainville, NY.

http://www.aaycock.com/default.html
The Wavy Enneper is a three dimensional visualization of an abstract mathematical concept derived from equations by Alfred Enneper. As such it is a rational attempt to visualize a theory. The form itself appears to reveal an underlying organic structure analogous to that of a flower, an insect, or some undersea creature. It has a strong iconic presence and it is interesting precisely because it is a three dimensional realization of a form that exists as a mathematical theory. In the landscape it gives the impression of something that has arrived as an extra-terrestrial -- a kind of galactic flower or spaceship that alights on the surface of the earth. It has a strong formal architectural presence but is generic and non-specific.

Notes: In mathematics, in the fields of differential geometry and algebraic geometry, the Enneper surface is a self-intersecting surface that can be described parametrically by:

\[
\begin{align*}
x &= u(1 - u^2/3 + v^2)/3, \\
y &= -v(1 - v^2/3 + u^2)/3, \\
z &= (u^2 - v^2)/3.
\end{align*}
\]

It was introduced by Alfred Enneper 1864 in connection with minimal surface theory.
About the Artist:

**Ingo Günther**, born in 1957, grew up in the city of Dortmund, Germany. In the 70s, travels took him to Northern Africa, North and Central America and Asia. He studied Ethnology and Cultural Anthropology at Frankfurt University (1977) before he switched to the Kunstakademie Düsseldorf in 1978, where he studied with Schwegler, Uecker and Paik (M.A. 1983). In the same year, he received a stipend from the Kunstakademie Düsseldorf for a residency at P.S.1 in New York. He received a DAAD grant the following year and a Kunstfonds grant in 1987.

Günther's early sculptural works with video led him towards more journalistic oriented projects which he pursued in TV, print, and the art field. Based in New York, he played a crucial role in the evaluation and interpretation of satellite data gathered from political and military crisis zones; the results were distributed internationally through print media and TV news. The goal was to make military and ecological information that was up to this point inaccessible, known to the public in order to have a direct impact on political processes. On an artistic level, the work with satellite data led to Günther's contribution to documenta 8 (1987), the installation K4 (C31) (Command Control Communication and Intelligence). In the same year, Günther received accreditation as a correspondent at the United Nations in NY.

In his capacity as artist, correspondent and author, he worked extensively with Japanese TV (NHK), covering topics that ranged from media studies to military technology. Since 1989, Günther uses globes as a medium for his artistic and journalistic interests. In 1989, 9 months before the reunification of Germany, he founded the first independent TV station in Eastern Europe Channel X, Leipzig in order to contribute to the establishment of a free media landscape.

Acrylic sphere, lights, gyro-meridian, 1989-2012:

11-4: Statistical Challenges, 1989/2012

Certain company's yearly gross income is equivalent or larger than the GDP of a given country, or group of countries combined. Fifty-one of the top 100 economies are corporations not countries.

346-2: Tectonic Plate Movement, 2011
The world's tectonic plates are outlined by white cuts in the globe's surface. Arrows indicate the direction in which each plate moved, the arrow's length being the actual distance in millimeters that it moved in 2009. Some plates moved up to 120 mm's, just under 5 inches.

364: Ice Drift Stations, 2012
Since the first such expedition in 1893, ships were built to survive being frozen in arctic drift ice to study conditions of the Arctic Ocean. Six ice drift missions are detailed once in scale and one more time enlarged, transforming the Northern Hemisphere into the Arctic Circle. The Tara Expedition is the most recent; in 2009 it ended a two year drift studying climate change in the Arctic.

365-3: Wine Consumption vs. Production, 2012
Total consumption (circles) and production (triangles) of the world's wine is shown by geographic region. World-wide, red wine and white wine consumption is assumed to be equal as suggested by US consumption data.
About the Artists:

Among the leading pioneers of the eco-art movement, the collaborative team of Newton and Helen Mayer Harrison (often referred to simply as “the Harrisons”) have worked for almost forty years with biologists, ecologists, architects, urban planners and other artists to initiate collaborative dialogues to uncover ideas and solutions which support biodiversity and community development.

The Harrison’s concept of art embraces a breathtaking range of disciplines. They are historians, diplomats, ecologists, investigators, emissaries and art activists. Their work involves proposing solutions and involves not only public discussion, but extensive mapping and documentation of these proposals in an art context. Past projects have focused on watershed restoration, urban renewal, agriculture and forestry issues among others. The Harrisons’ visionary projects have often led to changes in governmental policy and have expanded dialogue around previously unexplored issues leading to practical implementations throughout the United States and Europe.

http://theharrisonstudio.net/
Research indicates on the Tibetan Plateau
the paleoecological research
that their melting borders will dry up
in order to locate forest
Profoundly affecting
And Savanah ecosystems
The Salween, MeKong, Huang-Ho
Which existed in Eemian Interglacial period
Brahmaputra, Yangtze, Ganges
When temperatures were
And Indus River systems
Similar to those predicted in the near future
That traverse inner Mongolia,
to search to locate local similar
China, Tibet, Autonomous-zone India
ecosystems that Exist in our now
Burma, Laos, Cambodia, South Vietnam,
And to begin designing and in part
Bangladesh, Kashmir and Pakistan
Creating the process to Assist the
A Force Majeure has come into being
Migration of a palette of species
In the form of global warming
Able to replace or restate
That will work to the disadvantage
Those now coming under Extreme stress
Of 1/16th of the earth’s population
Therby Generating new forest
Or about 1.2 billion people
And grassland
Who live in the 7 drain Basins
which will in good part replace
That comprise over
The slow water releasing
2.4 million square miles
Properties of glaciers
and snowmelt by in part creating
a 2 million square kilometer sponge
Thus we make an unlikely proposal
About the Artist:

**Brian House** is a bricoleur whose work traverses alternative geographies, experimental music, and a critical data practice. By constructing embodied, participatory systems, he seeks to negotiate between algorithms and the serendipity of everyday life.

Brian's previous work on personal data at the New York Times Research and Development Lab was recognized by *TIME Magazine* in their "50 Best Inventions of 2011" issue. He also led technology at the award-winning design studio Local Projects, taught in the Design and Technology program at Parsons and at Columbia's Graduate School of Architecture, and was an artist-in-residence at Eyebeam Art & Technology Center.

Brian is a co-creator of *Yellow Arrow*, a pioneering work in social locative media that involved stickers, mobile phones, and participants in 467 cities around the world, and was included in MoMA's exhibition *Design and the Elastic Mind* and featured in *Wired, PRAXIS, Metropolis*, and *The New York Times*. With collaborator Sue Huang he was awarded a Rhizome commission and has exhibited at The Beall Center in Irvine, Kulturhust in Stockholm, Los Angeles Contemporary Exhibitions, and MOCA (LA), where they completed a series of residency projects including a reenactment of Diego Maradona's "Hand of God" goal from the 1986 World Cup and a remote control car race through the permanent collection.

Brian holds an MSc in Innovative Design from Chalmers University in Göteborg, Sweden, and studied computer science and religion for his undergraduate degree at Columbia University. He is currently pursuing a PhD in computer music and multimedia at Brown University and splits his time between Providence and New York. He comes from Denver.

[http://brianhouse.net/](http://brianhouse.net/)
Quotidian Record, 2012

Quotidian Record is a limited edition vinyl recording that features a continuous year of Brian House’s location-tracking data. Each place the artist visited, from home to work, from a friend's apartment to a foreign city, is mapped to a harmonic relationship. 1 day is 1 rotation ... 365 days is ~11 minutes.

As the record turns, the markings on the platter indicate the rotational cycle through 24 hours and the key changes that occur when he traveled to cities in which he did not live. The sound suggests that our habitual patterns have inherent musical qualities, and that daily rhythms might form an emergent portrait of an individual.

Concept, data performance, programming, and audio Brian House
Design and production Greg Mihalko
Vinyl production Ted Riederer / Never Records
Mastering Nik Levinsky
Data gathered via OpenPaths
Supported by Eyebeam Art & and Technology Center
Thanks to the New York Times Research and Development Lab
Artist Statement:

(Nathalie Miebach) My work focuses on the intersection of art and science and the visual articulation of scientific observations. Using the methodologies and processes of both disciplines, I translate scientific data related to astronomy, ecology and meteorology woven sculptures. My method of translation is principally that of weaving – in particular basket weaving – as it provides me with a simple yet highly effective grid through which to interpret data in three-dimensional space. By staying true to the numbers, these woven pieces tread an uneasy divide between functioning both as sculptures in space as well as instruments that could be used in the actual environment from which the data originates.

Central to this work is my desire to explore the role visual aesthetics play in the translation and understanding of science information. By utilizing artistic processes and everyday materials, I am questioning and expanding boundaries through which science data has been traditionally visually translated (ex: graphs, diagrams), while at the same time provoking expectations of what kind of visual vocabulary is considered to be in the domain of ‘science’ or ‘art’.

For my most recent project called “Recording and Translating Climate Change”, I gather weather observations from specific ecosystems using very simple data-collecting devices. The numbers are then compared to historical / global meteorological trends, before being translated into sculpture. By examining the complex behavioral interactions of living/non-living systems between weather and an environment, I hope to gain a better understanding of complexity of systems and behaviors that make up weather and climate change. Lately, I have also started to translate the data into musical scores, which are then interpreted through sculptures as well as through collaborations with musicians. My aim is twofold: to convey a nuance or level of emotionality surrounding my research that thus far has been absent from my visual work and to reveal patterns in the data musicians might identify which I have failed to see.

http://nathaliemiebach.com/
She’s Coming On, She’s Coming On Strong
Cardboard, wood, data, 2011
Using weather data from off-shore buoys all along the Eastern Seaboard, this musical score tracks the paths of both Hurricane Grace and the Halloween Storm at the end of October 1991. Together, these storm systems merged energies to create a storm; meteorologists call “the Perfect Storm”. Of significance are the unusual paths the Halloween Storm took. Starting as a low pressure system of Nova Scotia, it looped around towards the west and southwest, brushed by Hurricane Grace and reentered New England Waters.

This score also tracks the sinking of the Andrea Gail, a Gloucester based fishing vessel. It sank near Sable Island, a small island off of Nova Scotia with the infamous reputation as being “The Graveyard of the Atlantic”.

The last radio contact from the Andrea Gail came 6pm on October 28th from Captain Frank W. "Billy" Tyne Jr.: “She's comin' on, boys, and she's comin' on strong”.

The Ghostly Crew of the Andrea Gail
Reed, wood, data, 2011

Hypothetical models of extremes gain freakishness to them when they actually play themselves out in nature. In October 1991, an event that meteorologists still refer to as “The Perfect Storm” entered the Gulf of Maine. A low-pressure system hovering over Nova Scotia, an energy system coming from the Great Lakes, and a dying Hurricane near Bermuda called Grace formed together to create an enormous storm called the “Halloween Storm” that eventually developed into another Hurricane.

This 3D musical score follows the sinking of the fishing vessel called the “Andrea Gail” which sank during the 1991 Halloween Storm, also known as the “Perfect Storm”. The blue (Hurricane Grace) and natural (Halloween Storm) bands act like time lines on
which data from weather stations in St.John's, Gloucester, Sable Island, and off-shore buoys of the specific storm systems are translated.

*Musical Buoy In Search Towards A New Shore*
Wood, data, reed reed, 2009

3D Musical Score “Navigating a New Night” – translating urban weather data collected in Boston, MA, during fall 2008, tracking the weather changes during the passing of my father-in-law. Dedicated to Melvin Maddocks.

*Navigating Into A New Night*
Ink, data – Book containing several musical scores based on weather data, 2009

Meteorological instruments never get the flue, never have a bad day and never fall in love. Humans do, and it affects the way we read and remember weather. This score is about the passing of my father-in-law. Starting with the moment we heard about his death to his funeral, the score is build up by weather data. Juxtaposed are black, vertical lines that represent tempo and what time actually felt like during this period of emotional upheaval.

*Navigating Into A New Night*
2 min mp3, Elaine Rombola, piano

*The Ghostly Crew of the Andrea Gail – Score*
Paper, data, 2011

This musical score follows the sinking of the fishing vessel called the “Andrea Gail” which sank during the October 1991 Halloween Storm, also known as the “Perfect Storm”. The score is divided into three acts and is entirely made up of weather data.

Act 1 takes place on the Grand Banks fishing grounds off of Newfoundland. The Andrea Gail is out on a fishing trip. After a poor catch the ship heads out for the Flemish Cape, hoping for one last catch before the storm. The weather is fine, though radio messages warn them of the impending storm. On Oct 27th, the captain decides to return to Gloucester and steers the vessel towards home.

During Act 2, the Andrea Gail finds itself deeper and deeper in oceanic conditions it can no longer navigate through. A complex set of meteorological events leads to energy from Hurricane Grace being sucked up by the Halloween Storm, which veers back into the Gulf of Maine with renewed power. In the morning of Oct 28th, the wind shifts from NE to SE which is an ominous sign that the storm is coming. The last radio contact with the Andrea Gail comes at around 6pm on Oct 28th. While it has never been confirmed, it is believed that the ship sank somewhere between midnight and 2am, about 180 miles off Sable Island. During that time, wave heights of 75 – 100 ft and sustained winds 80-110 mph were reported.

Act 3 is written from the perspective of the Andrea Gail’s crew members’ families and friends. The ship was reported missing after being 2 days overdue. What imbues this
section of the score is the desperate waiting for some sort of miracle, as the grim reality slowly begins to sink in.

Imbedded in Act 3 is an old fishing song called “The Ghostly Crew” which dates back to the 1900’s and tells the story of the sinking of the Johnston, a vessel that was anchored on George’s Shoal. The Haskell, a ship from Gloucester was anchored nearby, when a sudden storm in the night ripped her cables. The Haskell rammed the Johnston and sank the ship and crew in a matter of minutes. The Haskell returned to Gloucester with barely a scratch. It is said that every time the Haskell went out fishing from that time on, it would be visited at night by a crew of ghostly sailors who came onto the ship and prepared the vessel for fishing. Eventually no seaman was willing to fish on the Haskell anymore as the rumors of “The Ghostly Crew” became more and more frequent. The vessel was eventually retired.
About the Artist:

Iñigo Manglano-Ovalle (b. 1961 in Madrid) is a conceptual artist working across media to create works that challenge our notions of the political and the cultural. He is internationally recognized for his activist-inspired public art and studio-based works. His work currently regards the inversion of utopia, the fabrication of war, and the hypersonic re-entry of Modernism. He has received numerous awards including a United States Artists Guthman Fellowship (2011); a Guggenheim Memorial Foundation Fellowship (2009), and a John D. and Catherine T. MacArthur Foundation Award (2001), as well as a fellowship from the National Endowment for the Arts (1995). Manglano-Ovalle has presented major projects at SITE Santa Fe, New Mexico (2012); Christopher Grimes Gallery, Santa Monica (2012); The Power Plant Contemporary, Toronto (2011); KW Institute for Contemporary Art – Kunst-Werke, Berlin (2011); The Art Institute of Chicago (2011); Musée D’Art Contemporain de Montréal (2010); Massachusetts Museum of Contemporary Art (2009), Documenta XII, Kassel (2007); Krefelder Kunstmuseen, Krefeld, (2006); Barcelona Pavilion, Mies van der Rohe Foundation, Barcelona (2002); the Guggenheim Museum, New York and Bilbao (2002 - 2003); and Museum of Contemporary Art, Chicago (1997). Currently he holds a professorship for Art Theory & Practice at Northwestern University. Manglano-Ovalle lives and works in Chicago, Illinois.

http://inigomanglano-ovalle.com/
Beginning in 2003 Manglano-Ovalle started to create sculptures based on large scale natural phenomena. His first *Cloud Prototype* was of a Cumulo-nimbus thundercloud scanned by the Department of Atmospheric Sciences at the University of Illinois at Urbana-Champaign in 2001. His *Hurricane Prototype No. 1* uses similar data from NOAA, the Joint Typhoon Warning Center, and the Bureau of Meteorology in Perth Australia. The data gathered in this case is of a 2003 cyclonic event named *Inigo*. On 4 April, *Inigo* attained Category 5 status on the Australian Cyclone Scale and reached peak winds of 150 mph while located about 590 mi. north of Western Australia. By April 8 the storm made land fall in Australia’s Pilbara region with winds of 45 mph and dissipated with 12 hours after moving ashore.

James Rondeau, Curator of Contemporary Art at the Art Institute of Chicago, states: "Iñigo Manglano-Ovalle is engaged in a process of understanding how certain extraordinary forces and systems—man-made and natural—are always and already in the process of remaking the world. As an artist, thinker, and citizen he absorbs and transforms catalytic ideas and paradigmatic events, adapting them within the context of a formal, intellectual, multivalent visual practice. ‘What I want to represent,’ the artist declares, ‘is how the world represents itself to us.’ Over the course of the last decade, his protean achievements include, but are not limited to, activist-inspired public art, sculpture, film, sound, and photography—all of which fuse the politics of contemporary urban culture with poetic meditations on aesthetics, history, and identity." (James Rondeau, Event Horizons, Iñigo Manglano-Ovalle, Fundacio "la Caixa" 2003.)
About The SENSEable City Lab:

The Massachusetts Institute of Technology’s SENSEable City Lab is a multidisciplinary research group that studies the interface between cities, people, and technology. The lab investigates how the ubiquity of digital devices and telecommunication networks are impacting urban living. With the goal of anticipating future trends and confronting the complex, multifaceted nature of urban problems, the lab brings together researchers from over a dozen academic disciplines to develop groundbreaking ideas and innovative real-world interventions. The research is undertaken in partnership with cities, public and private entities, and other universities. Through this collaborative approach the lab strives to reveal how emerging, rapidly expanding telecommunications and information technologies are altering the traditional principles of understanding, describing and inhabiting cities.

MIT SENSEable City Acknowledgements:

This research was undertaken in collaboration with: AT&T Labs, IBM Research, Ericsson, Qualcomm, Waste Management and other members of the MIT SENSEable City Consortium. With additional support from Sprint, the Architectural League of New York, the City of Seattle, Office of Arts and Cultural Affairs, Seattle Public Utilities, and the Seattle Public Library.

http://senseable.mit.edu/
MIT SENSEable City

**Digital Signatures of Society**, 2010-2012
Installation/Software-interactive web-based application

**Digital Signatures of Humanity**
A core component of the lab’s work is in data visualization: an interdisciplinary field that merges data mining, modeling and representation; human-computer interaction; and graphic design, all in an effort to make sense of vast quantities of data. Data visualization is an exceptionally effective communication device, especially when developed as an interactive tool, as it has the potential to enhance legibility through user exploration and participation. The medium has created a new common literacy through strong visual metaphors and narratives—giving form to the invisible and abstract.

The *Digital Signatures of Humanity* has taken key examples from ongoing research within the SENSEable City Lab that exemplify how data visualization may be employed as a communicative tool to reveal the digital traces of urban life. *Trash Track* embedded wireless devices within discarded objects to unearth the hidden infrastructure of waste removal. Revealing the invisible processes that support urban dwellers to give new meaning to the status quo of ‘out of sight, out of mind’. *Connected States of America* examines the digital footprints left behind by individuals as they use their cell phones in an effort to delineate communities of interaction across the country. Finally, the *Signature of Humanity* seeks to capture the weekly ebbs and flows of data activity over the breadth of telecommunication networks worldwide.
Paula Scher

Acrylic on canvas (Courtesy of Bryce Wolkowitz Gallery)

Paula Scher, born October 6, 1948 in Washington, D.C., is an American graphic designer, illustrator, painter and art educator in design, and the first female principal at Pentagram, which she joined in 1991.

Scher creates images that speak to an audience with emotional impact and appeal. The images she has created have become visually identical with the culture of New York City, Paris, as well as other large urban areas. She has developed brand and identity systems, promotional materials, packaging, environmental graphics, and publication designs for a range of clients.

She is the 16th recipient of the School of Visual Art's Masters Series Award and an exhibition of her work can be seen at the Visual Arts Museum & School of Visual Arts, which ties in with her book, *Make it Bigger*.

Paula Scher's maps resemble patchwork quilts from afar, but contained much textual detail. Scher created maps into layers that reference what we think when we reference various municipal systems, city and cultural boundaries, histories, routes, etc. within urban settings.

Scher's *The World* contains large-scale images of cities, states, and continents blanketed with place names and other information. It's full of mistakes and misspellings and visual allusions to stereotypes places such as South American, painted with hot colors and has two ovaries on the sides. It was not created to be a reliable map but convey a sense of the places that are mediated and mangled.

About the Artists:

Junichi OGURO (Sound Artist)
A sound artist who widens the realm of music. Born in Sapporo in 1974, Junichi started to compose music since his childhood, and received a grand prize at a national contest. In 2006 he visited Berlin for making music in various fields from commercial music for TV spots to sound space design in various areas of Europe. He also showcases sound art pieces in the realm of the contemporary art. He manages an ambient label "43d" which was established for creating leading edge sounds.

Motohiro SUNOUCHI (Media Architect)
A media architect and also researcher in the field of computer science and design. Born in Japan in 1977, Motohiro is assistant professor in Sapporo City University and research associate in Sapporo media arts lab. His works include web platform services, applications, cultural archives, interactive contents. He is co-founder of "43d".

About 43d:
"43d" is an ambient sound label from Sapporo. 43d practices activities to widen the consciousness of environmental sounds, and to express ideas of how to have fun through art works, workshop, application software, and web services. This project's goal is that people are interested in environment sound in their daily life and designs their sound space by themselves as DIY, eventually we promote development of new creative sectors for the activities.

http://labs.43d.jp/wsm/
http://www.junichioguro.com/archive.html
http://labs.43d.jp/wsm2012/
http://www.junichioguro.com/
http://www.43d.jp/
What can the soundscape evoke? Awake genius loci.

*World Sound Mix for Beall Center* is a sound visual installation, generating a whole earth soundscape. For the exhibition, the artists set up a globe visualized by clouds of placenames that resonate mixed soundscape. During the exhibition, the globe continues going round and mixing the sounds recorded at selected two locations somewhere in the world. When visitors utter a placename into the microphone, the globe starts mixing sounds at the place and genius loci in its place awaken.

By naming lands, human beings have occupied and developed lands on the globe. A placename and its sounds are intricately linked with environment, culture and history in each place. When we witness the globe covered by placenames and listen to the sounds, we may realize diversity and richness of our culture and expand an invisible image and context in the places. Not only that but we may consider about our history during the Age of Exploration, extermination of languages and placename, North-South issues and so on.

**About sounds data:**
*World Sound Mix for Beall Center* is based on a sound database from Freesound project etc. Its sounds have been recorded and gathered by sound hunters around the world. Use of sounds is under the respective CreativeCommons Licenses. The credits are shown in the work. The logs of sound trips by visitors are recorded during the whole period of the exhibition. The data will be used to release the next work created by 43d.
About the Artists:

**Fernanda Viégas and Martin Wattenberg** lead Google’s "Big Picture" visualization research group in Cambridge, Massachusetts. Before joining Google, the two founded Flowing Media, Inc., a visualization studio focused on media and consumer-oriented projects. Prior to Flowing Media, they led IBM’s Visual Communication Lab, where they created the ground-breaking public visualization platform Many Eyes. The two became a team in 2003 when they decided to visualize Wikipedia, leading to the "history flow" project that revealed the self-healing nature of the online encyclopedia.

Viégas is known for her pioneering work on depicting chat histories and email. Wattenberg’s visualizations of the stock market and baby names are considered Internet classics. Viégas and Wattenberg are also known for their visualization-based artwork, which has been exhibited in venues such as the Museum of Modern Art in New York, London Institute of Contemporary Arts and the Whitney Museum of American Art. They came to visualization from separate paths: Fernanda via design, Martin via mathematics. After admiring each other’s style from afar, they joined forces in 2003—and discovered the thrill of thinking and creating as a team. Together, they set off to explore the possibilities of visualization as a medium; it has become their tool for asking scientific, social, and artistic questions. Today they lead Google’s "Big Picture" visualization research group in Cambridge, Massachusetts. And in their artistic work, visualization is used to excite and provoke.

[http://hint.fm/](http://hint.fm/)
An invisible, ancient source of energy surrounds us—energy that powered the first explorations of the world, and that may be a key to the future. That energy, of course, is the wind. The Living Air makes visible the patterns of the wind across the United States. Based on live, continuously changing forecasts, it displays the intricate patterns traced by the flow of air with a densely animated visualization. The delicacy and beauty of these patterns can be a revelation to viewers accustomed to low-fidelity weather maps on television and in newspapers.

At the same time, there’s a powerful emotional element to the map when storms arise. The fact that such a familiar phenomenon has unseen and unsettling patterns raises the question of what else we may be missing when we look at everyday objects. The Living Air is accompanied with gentle hints about wind as an energy source; while the goal of the piece is to evoke wonder at unseen patterns, viewers will also come away, we hope, with an appreciation for the pure power of the wind.