Ryoji Ikeda. **Datamatics. data.tecture [5 SXGA+ version]**

**CONCEPT**

`data.tecture [5 SXGA+ version]` is a project specifically adapted for the monumental character of the Projects Room at LABoral. In this new large-scale audiovisual installation, Ryoji Ikeda presents a total immersive and sensory experience to the visitors. A single large video image is projected by five projectors directly onto the floor of LABoral’s large gallery space, which will immerse visitors' body, sight and hearing.

`data.tecture [5 SXGA+ version]` is an artistic re-orchestration of Ikeda’s acclaimed audiovisual concert piece `datamatics [ver.2.0]` (2006-in progress) that explores the potential to perceive the invisible multi-substance of data that permeates our world. Using pure data as a source for sound and visual compositions, `datamatics [ver.2.0]` combines abstract and mimetic presentations of matter, time and space in a powerful and breathtakingly accomplished work. From 2D sequences of patterns derived from hard drive errors and studies of software code, the imagery transforms into dramatic, rotating views of the universe in 3D, whilst the final scenes add a further dimension as four-dimensional mathematical processing opens up spectacular and seemingly infinite vistas.

Driven by the primary principles of `datamatics [ver.2.0]`, but conceptually deconstructing and re-composing its original elements – transformations, visualizations and sonifications of a vast amount of scientific data set such as DNA human genome, astronomical coordinates of stars in the universe, molecular structures of protein and even data architecture of datamatics itself – this new work `data.tecture [5 SXGA+ version]` creates a kind of meta-datamatics. Ikeda employs real-time programme computations and data scanning to create a further abstraction of the original datamatics. The technical dynamics of the piece, such as its extremely fast frame rates and variable bit depths, continue to challenge and explore the thresholds of our perceptions.

**Dates:** 02.03.2012 - 21.01.2013  
**Venue:** Project Room
CREDITS

**Concept and composition:** Ryoji Ikeda

**Production:** LABoral Centro de Arte y Creación Industrial

**Computer re-programming:** Tomonaga Tokuyama

**Original computer programming:** Shohei Matsukawa, Norimichi Hirakawa, Tomonaga Tokuyama

**Technological Partner:** projectiondesign

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THE ARTIST: Ryoji Ikeda (Gifu, Japón, 1966). Japan’s leading electronic composer and visual artist, focuses on the essential characteristics of sound itself and that of visuals as light by means of both mathematical precision and mathematical aesthetics. He has gained a reputation as one of the few international artists working convincingly across both visual and sonic media. He elaborately orchestrates sound, visuals, materials, physical phenomena and mathematical notions into immersive live performances and installations.

He performed and exhibited worldwide including Australian Centre for the Moving Image, Melbourne; MIT, Boston; Centre Pompidou, Paris; Sónar Festival Barcelona; Tate Modern, London; Irish Museum of Modern Art, Dublin; Auditorium Parco della Musica, Roma; ICC, Tokyo; Art Beijing; Göteborg Biennale; Mutek Festival, Mexico; Le Fresnoy, Tourcoing; Yamaguchi Center for Arts and Media; Le Laboratoire, Paris; Museum of Contemporary Art Tokyo; Ikon Gallery, Birmingham; Singapore Art Museum; Crossing the Line Festival, New York; Ars Electronica Center, Linz; Grec Festival, Barcelona; Aichi Triennale, Nagoya; Palazzo Grassi, Venezia; Armory Park Avenue, New York; Barbican Center, London; Museo de Arte, Bogota; Hamburger Bahnhof, Berlin; Laboral, Gijon; Festival d’Automne, Paris, as well as electronic music festivals and small DJ clubs. His albums +/- (1996), 0°C (1998), Matrix (2000), Dataplex (2005) and Test Pattern (2008) - pioneered a new minimal world of electronic music through his razor-sharp technique and aesthetics. His work matrix won the Golden Nica Award at Ars Electronica in 2001.
Notes on the immersive datascapes of Ryoji Ikeda

By Benjamin Weil. Artistic Director, LABoral, Gijón

For the past 15 years, Ryoji Ikeda has been developing a body of work that comprises large-scale installations, audiovisual performances, and ephemeral interventions presented either in public spaces or institutions such as museums or theaters. He has also produced albums, artist’s books of sorts, which usually combine an elaborate graphic narrative and sound work contained in a CD. As is the case with this book, the albums function as much as documentaries as they are an extension of the work carried out in other media. They are an integral part of Ikeda’s artistic research, and are in fact entirely conceived and developed by him.

Using light, images, and sound, the artist seeks to reformulate our perception of space and time by creating an acute consciousness of presence in the environment he has designed: one somehow becomes the protagonist in what may feel like a stage. Upon entering these environments, one is usually overwhelmed by scale and sensory overload, which in turn creates conditions of sharp awareness.

These immersive pieces also play off the architecture in which they are contextualized, as the projections, sounds, and sculptural elements tend to superimpose a new realm onto the space they occupy. The play with architecture is particularly evident in the case of *db*, Ikeda’s 2012 project for the Hamburger Bahnhof in Berlin, wherein he chose to produce a two-pronged installation that mirrors the structure of a building with two symmetrical wings. One can also retrieve a similar dynamic in a public space intervention carried out in Paris that consisted of a powerful light beam pointed at the sky adjacent to Tour Montparnasse, one of the tallest buildings in that city. The title of the most recent instalment in the *datamatics* series, *data.tecture [5SXGA+*

1 *db*, with a title that is formally symmetrical and also refers to the measurement of sound, is an ongoing series started in 2000. This latest installment was on view in Berlin from January 28 to April 9, 2012, and consisted of two rooms: one featured a sine wave in an overwhelmingly white environment, as well as a series of black prints installed so as to give the viewer the sense that they were floating on the wall; the other featured an extremely powerful beam of white light in a black environment where, in lieu of prints, the wall featured video projections of data flows that also generated a complex soundtrack.

2 An installment of the *spectra* series, this one-night intervention in public space was staged as part of “Nuit Blanche” on October 4 & 5, 2008.
version], installed at LABoral Centro de Arte y Creación Industrial in the spring of 2012, denotes this specific interest.

Whereas buildings are increasingly connected to the rest of the world with all kinds of cables and waves, this very connectivity is most of the time invisible, dematerialized. The data streams that flow in and out of offices and households alike are silent. What has become an essential part of our lives is therefore neither seen nor heard, until it materializes on the many screens of our communication devices. While in transit, data is merely a flow of electrical impulses. It is encoded so as to travel at the speed of light from one end of the world to the other, and it is decoded upon delivery. Whether it is personal, private, or public, the information therefore is formless most of the time, as is its manner of encoding. One could for instance evoke here the fact that a picture can be encoded so as to contain confidential information, a mean used by spies and terrorists alike. Therefore, it is the interpretation of the data flow that creates meaning; to a certain extent the same data may have different meanings. In the same fashion, images can be subliminal, and therefore contain more meaning than what is decipherable by the eye. Senses can be fooled and understanding consequently altered. What Ikeda chooses to do is to reveal and materialize an essential constituent of our realm, one that profoundly affects our understanding of the world.

This notion is somehow also at the core of Formula [ver.2.0-2.2] (2003), in which image and sound are created by the highly accelerated presentation of a large number of front-pages from The New York Times—30 per second—thus referring to the overload created by the continual flux of information. Projected on the floor as well as on an adjacent vertical surface, the monumental image—several hundred square meters—reshapes the space while materializing the datascape in ways that evoke a new form of “augmented reality.”

Ryoji Ikeda’s work unfolds in series, most of which have been developed over the course of many years and are still ongoing. All are linked to a specific point of investigation as revealed by their titles: datamatics is a study on the perception of invisible matter; formula attempts to combine sound and visual elements so as to create a perfect balance; matrix explores the purest form of sound (the sine wave) and the broadest spectrum of sound (white noise); spectra uses white light (the full spectrum of colours) to reflect upon the way we see and interpret the world around us; db is the abbreviation for “decibel,” the most widely used system of sound measurement; C4I (see for eye), probably the most visually rich series, deconstructs images to their original source-code form. The most recent series, time and space (2010 onwards) and the transfinite (since 2011), seem to indicate a more philosophical approach.

This use of serialism is all the more interesting in that it relates Ikeda’s work to experiments carried out both in the fields of sound and visual
art. Whereas the notion of series already existed in the 19th century—epitomized by Monet’s haystacks and cathedral paintings—it is in the 1960s that the likes of Donald Judd, Carl Andre and Sol LeWitt conceptualized serialism in the field of visual arts, taking their cue from music theory. Indeed, while they developed their work along the notion of series, they also referred to the research carried out by musicians who had been exploring new compositional structures informed by a more rigorous approach, one that tended to shun romanticism and subjectivity in favor of simplify. This lead to an aesthetics reduced to the bare essentials, devoid of any kind of ornament, that somewhat echoed the rationalism expressed by modern architecture. The serialist approach is a strong point of reference in the work of Ryoji Ikeda, as he not only unfolds serial works that are related to each other and united under the same title, but his pursuit of a visual and aural language that tends to be ever more pure and formally simplified results in works that can be qualified as sublime—a word also used by the American Minimalists.

Ryoji Ikeda’s interest in working with multimedia performances and environments seems to originate in his collaboration with Dumb Type, a collective formed in the mid-1980s in Kyoto (the historical capital of Japan, located in the Kansai area). This group of artists worked on performative installations that mixed references to visual arts and performance, as well as to experimental film and popular culture. Ikeda joined the group in the mid-1990s and quickly became an essential contributor.

The work of Dumb Type itself stems from a practice developed in the 1950s by artists today known as the Gutai group. Also based in Kansai, Gutai staged events that precisely reassessed various aspects of traditional Japanese culture while putting the notion of action at its core. One could argue that these artists unleashed a way of working that has led to rich explorations carried out in Japan (think of Butoh, for instance) as well as in the Western world: happenings and actions, as well as multimedia work developed in and around the Fluxus movement, to name a few examples. It is likely that the theatrical quality of Ikeda’s work is grounded in this collaboration that culminated in the late 1990s with OR, a seminal work for the stage, wherein one already could detect the emergence of a visual and aural vocabulary that would become key to the artist’s work.

Whereas his collaboration with Dumb Type has shaped Ikeda’s multidimensional work in an essential fashion, one must also point to other influences in the fields of music and visual art. For a start, Ryoji Ikeda has always worked on sound compositions that do not use traditional instruments. Rather, the computer is his baseline tool. The noise movement in Japan is another important reference for understanding Ikeda’s micromechanical soundscapes. One thinks of the seminal research carried out by John Cage, whose sound compositions took a new turn when the “concert” was performed not
with music instruments but rather with all kinds of other objects—for instance cooking utensils that were used to prepare food on stage. This notion of concert as happening—and of sound being generated by an action—is also found in the work of an artist like Christian Marclay, whose grounding is more in the field of visual arts than sound. His ongoing series of sound performances take the form of DJ sets that are complexified by sound effects and the use of custom-made vinyl recordings that are in fact assembled from many fragments. Marclay has always emphasized the importance of sound’s relationship to image, and his video compositions tend to express this complementarity perhaps even more so than his performative works.

Further examining the work of Ryoji Ikeda, one also thinks of the sound environments produced by La Monte Young, who posits the experience of sound in direct relation to the experience of light and space. Iannis Xenakis’s *Polytope* series similarly considers the condition of listening as intrinsically related to the perception of space and light. It is noteworthy that Xenakis was trained as an architect and mathematician. In those cases, the notion of a time-based experience is somehow questioned, as the spectator is in charge of the duration of her or his experience. There is an immersive quality to these works in which all the components —space, light, image— are meant to challenge, to awaken the visitor’s senses to new listening conditions.

Fundamental to Ryoji Ikeda’s formal vocabulary are the essential components of sound and image: white light and sine wave. With these two building blocks, the artist has developed a method of working that is increasingly grounded in mathematics. Indeed, for Ryoji Ikeda, the research led by mathematicians is the purest form of intellectual activity, and possibly as well the purest form of aesthetics, one that is also deemed the closest to absolute rationality and logic. Mathematics is also the linguistic structure that is closest to universality, perhaps even more so than art. The interpretation of Ikeda’s work can be considered totally open, yet it formally attains a state of extreme precision that implies the opposite. However, the work’s strongly evocative elements and the acute perceptual state they induce could point to another reading: a universality that precedes verbal language.
datamatics [prototype-ver.2.0], 2006-in process
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Photo: Ryuichi Maruo. Courtesy: Yamaguchi Center for Arts and Media (YCAM)
datamatics [prototype-ver.2.0], 2006-in process
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The Laboral Foundation

The LABoral Centro de Arte y Creación Industrial Foundation is a cultural body to serve the general interest, as well as the governing body of the art centre. The aims of the Foundation as described in Article 6.1 of the statutes are “to promote and disseminate art and industrial creation through the management of LABoral Centro de Arte y Creación Industrial.”

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WHAT IS LABORAL?
LABoral Centro de Arte y Creación Industrial is a space for artistic exchange. It was born with the aim of establishing an alliance between art, design, culture, industry and economic development, and aspires to become a space for interaction and dialogue between art, new technologies and industrial creation. Between its walls, it opens the way to the production, creation and research into the most recent artistic concepts. LABoral Centro de Arte y Creación Industrial is in the old Universidad Laboral as part of the set of projects developed by the Principality of Asturias for its City of Culture. Gijón, Asturias.

LOCATION
LABoral Centro de Arte y Creación Industrial is located in Gijón, Asturias, at around three kilometres from the city centre. Premises originally conceived for vocational training now house the over 14,400 functional square metres that are devoted to the exhibition, research, training and production of new art and creative industries. ADDRESS: LABoral Centro de Arte y Creación Industrial
Los Prados, 121
33394 Gijón (Asturias)

Getting There
By car: A-8 motorway. Take bypass on arrival to Gijón. Salida (exit) km. 385 Viesques. Follow directions to Hospital Cabueñes. Take third exit at third roundabout. The Centre has a public car park.
By bus from Gijón
The bus stop for the Centre is “Parada Universidad Laboral”. The bus lines available are the following:
Line 1 Cerillero- Hospital de Cabueñes
Line 2 Roces- Hospital de Cabueñes
Line 4 Cerillero- Viesques- Hospital de Cabueñes
Line 18 Nuevo Gijón- Hospital de Cabueñes

By plane
Closest airport: Asturias (Castrillón). Around 40 km from the Centre. A8 motorway, direction Gijón.

OPENING HOURS
Monday, Wednesday, Thursday and Friday, from 10 am to 7 pm
Saturday and Sunday, from noon to 8 pm
Closed every Tuesday (except for public holidays and local holidays)
ADMISSION
General public €2
Free:
Friends of LABoral, <10 years old, journalists, members from ICOM (International Council of Museums)
Days of free admission: All Wednesdays of the year plus 18th May (International Museum Day)
**02.03.2012-09- 04-2012**
Open Doors 5th Anniversary
Wednesdays, Saturdays and Sundays on July, August and September
Weekends after the exhibition’s opening

RESOURCES
Plataforma 0_LABoral Production Centre
Platform 0 is a multi-purpose space. It is a centre for production, artistic research, innovation and education. It is a place for implementing ideas and trying out prototypes, with work spaces for experimentation and production with audio, video, light, electronics, processing, movement capture, computer vision and videogames. The intended audience is the local artistic and creative community as well as artists, creators or foreign researchers in residence participating in the exhibitions at LABoral.

fabLAB
Laboratory equipped with digital fabrication machinery providing consultancy and production tools for individual or collective creation, courses and training workshops.

Plat0
Studio set for experimentation and research into expanded performative practices and new audio-visual forms.

Audiovisual Laboratories
Audio and digital video platform, with all the equipment necessary for recording, editing, production and postproduction.

ecoLAB
Located in Patio Sur, ecoLAB explores the potential of crossovers between art, ecology and open electronics.

Media Library/Archive
A place for the investigation, consultation and dissemination of today’s art and creative industries. It features the Archive of Asturian Artists, documenting the work of creators born from the 1950s onwards.

Chill-Out
A place for meeting, leisure, active participation and resting.
LABoral’s FITHT ANNIVERSARY

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