

BULL.MILETIC: PROXISTANT VISION

This world premiere exhibition, created by the art+tech team, Bull. Miletic, is the culmination of a seven-year artistic research project focused on the recent surge in aerial, moving-image technologies. During this research, the artist duo identified the emergence of a new, visual paradigm for which they have invented the descriptive words: *proxistance* (noun) and *proxistant* (adjective). Most prominently exemplified by Google Earth's "digital ride" from a global perspective to street level view, a proxistant vision names this combination of proximity and distance in a single, moving capture.

The artists argue that, although proxistance existed in the margins for centuries, it has come to occupy center stage in our time with advancements in digital zooming and surveillance infrastructure such as satellites, remote-sensing operations, and drone cameras. Bull.Miletic believes the desire for and ability to create proxistant visions is a paradigm shift in the centuries old practice of mapping the Earth. The result is a renewed, global "model," powerfully contributing to an alteration in one's perception of the world. This realization keenly sparked the artists' interest and led them to study the driving forces behind this cartographic phenomenon, including its history and lineage.

Presented here for the first time, Bull.Miletic has produced a body of three artworks, *Ferriscope*, *Venetie 1111100110*, and *Zoom Blue Dot*, which are the result of this extensive research project on proxistant vision. Each work has its own focus, but all trace the multiple paths and genealogies of the proxistant (overview to detail) effect. The

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projects presented explore this “all-seeing” promise across centuries: from the 16th Century’s mapping impulse and old dream of illustrating total visions of our environments, to the invention of the Ferris Wheel in the 19th Century, which broadened the geographic landscape to the naked eye, and on to the 21st Century’s 4 billion mile “zoom” from the Voyager 1 camera in outer space, capturing Earth as a tiny blue dot.

The artists’ ultimate goal was to examine the proxistant paradigm as an indicator of how knowledge, through vision, continues to shift as a result of targeted tracking, surveillance, the exponential increase in aerial imaging, and networked digital infrastructure.

Bull.Miletic’s artworks in this exhibition focus predominantly on a form of proxistant vision associated with the aerial view in motion. Their analysis of the technological operations governing the current paradigm of proxistance is approached through three case studies, pertaining to three imaging machines, operating in three different aerial strata, which constitutes the three-part structure of the exhibition.

The first artwork, *Ferriscope*, is categorized within the realm of “Grounded Machines,” as this work approaches the mobility inherent in the “ride” from close-up to overview facilitated by giant, urban observation wheels and their operational effects of proxistant visions within the context of urban development.

The second artwork, *Venetie 1111100110*, is categorized within the

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The third artwork, *Zoom Blue Dot*, is categorized within the realm of “Orbital Machines,” as this work is concerned with the question of scale. It starts out with the proxistant scaling of the world from the Earth as a speck of dust to the interior of an iPhone.

All the artworks in this exhibition loosely correspond to an imaginary ascent via earthbound, airborne and orbital machines, as well as into layers of mediation from the physical ride to the photographic capture, and eventually, to remote-sensing.

Any viewers of this unique exhibition should become enthralled with Bull.Miletic’s masterful and visionary art+tech production, on the forefront of a contemporary artists’ movement, creatively combining aesthetic creations with recent technological inventions. *Proxistant Vision* is an innovative endeavor that raises awareness about the impact of new aerial imaging technologies and their influence and power in everyday life.

–Carol Covington, Guest Curator

The *Proxistant Vision* research project was, in part, developed during Synne Tollerud Bull’s PhD Fellowships at the Faculty of Humanities, University of Oslo; and Dragan Miletic’s PhD Fellowships at the Trondheim Academy of Fine Art, Norwegian University of Science and Technology; including Artists in Residence Programs at the University of Chicago and UC Berkeley.

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ZOOM BLUE DOT (1990-2020)

In *Zoom Blue Dot*, Bull.Miletic addresses the proxistant paradigm as a predominant component in the overly mediated representation of Earth as a scalable interface, facilitated through a combination of remote-sensing technologies and data-analysis software.

In 1990, the Voyager 1 space probe pointed one of its cameras towards the Earth to snap one last photo. In this photograph, shot from a distance of roughly 4 billion miles, the Earth was essentially mapped into a crescent at only 0.12 pixel in size. One of the initiators of this photograph, astrophysicist and space exploration evangelist, Carl Sagan, poetically described it best; “the Earth appeared as a glimmering speck of dust, a *pale blue dot* suspended in a sunbeam.”

In *Zoom Blue Dot*, Bull.Miletic focuses on the proxistant Earth models produced with data obtained by orbiting satellites combined with ground and airborne imaging. In regard to Earth’s depiction as a speck of dust photographed by a spacecraft from a distance of 4 billion miles, this inquiry into proxistance is concerned primarily with the question of scale.

As they delved into this project, the artists investigated a number of proxistant visions of Earth. This research led them to discover an historic effort had been made to visualize, identify, and control the world as a unified globe. Here, different conceptions of scale guided a proxistant journey in which the most distant image of Earth meets the solid materials of rocks and crystals, where scientific models

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of calculation and prediction shaped an artistic vision, beyond visualization.

The videos Bull.Miletic created in this installation are inspired by the visual communications research conducted by the American design couple Ray and Charles Eames in their legendary films *Powers of Ten* (1977) and *A Rough Sketch* (1968). However, as opposed to the Eameses' camera, which travels from the outer limits of the observable universe into the molecular structure of the human body, the camera in *Zoom Blue Dot* zooms into the "pale blue dot" image of Earth. The artists displayed this image on two iPhones placed in the desert.

By diving into the smartphone screens with both laser and electron microscopes, the artists were able to study the different layers that make up the phones' liquid crystal displays, and thus uncover this proxistant vision's material support.

This effort was motivated by a desire to understand how the proliferation of scalable and composited mediations of Earth is inextricably tied up in multiple ways with the Anthropocene, a proposed name of our geological epoch that signals the significant human impact on Earth's geology and ecosystems. Smartphones, for example, can contain 30 different elements, including rare earth materials like cobalt, tungsten, and lithium. These materials require extensive mining, resulting in considerable environmental, social, and political impact.

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To present this extraordinary visual paradigm, Bull.Miletic designed and constructed a kinetic, two-channel video installation to project their two *Zoom Blue Dot* proxistant visions from a custom-made robot, housing two video projectors facing opposite directions. The artists chose to have the robot slowly traverse the exhibition space in a curved, spiral trajectory. This trajectory picks up where the earth artists Robert Smithson and Nancy Holt left off, with their interest in the spiral as a form that visualizes entropy, the path of Voyager 1 on its ongoing journey to outer space, and the constant force of all power in the universe.

The walls of the exhibition are covered with a reflective Mylar curtain. A 1950's American invention, metallic Mylar is a heat resistant, reflective film largely used both in space exploration and LCD technologies. Micro movements in the reflective curtain, caused by the airflow in the room, intentionally produce continuous deformations and changes in the projected images; reflecting the ongoing process of becoming, rather than being.

The acclaimed American composer, Phill Niblock, created the original soundtrack for *Zoom Blue Dot's* installation, which is intentionally out of sync with the video. The relationship between the sound and imagery, like Earth, is in perpetual development.

Niblock's composition is also periodically "interrupted" by fragments of selected compositions from the Voyager's Interstellar Record

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ZOOM BLUE DOT (1990-2020)

(1977). This way, the Voyager 1 journey also becomes part of the *Zoom Blue Dot* soundscape - delivering the hopes and dreams of future connections with the unknown in outer space.

The production of *Zoom Blue Dot* was generously supported by the Arts Council Norway, and the UC Berkeley Arts Research Center and Center for Science, Technology, Medicine, & Society. The work was realized on site, in Berkeley, during the inaugural, Arts + Science Residency in collaboration with Holly L. Aaron, at the Molecular Imaging Center, Danielle Jorgens at the Electron Microscopy Laboratory, Vasfi Burak Ozdol at the Molecular Foundry, Lawrence Berkeley National Laboratory and Christopher Myers and Kuan-Ju Wu at CITRIS Invention Lab.

Media: Two-channel video (color, sound), Mylar curtain, Mylar tape, custom robotics.

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FERRISCOPE (1893-2020)

In their study of the ongoing surge in new aerial imaging technologies such as satellites and drones, Bull.Miletic proposes the name proxistance to describe a visual paradigm in our time. Perhaps best exemplified by Google Earth, this paradigm combines proximity and distance in one image, zoom, or flight.

Bull.Miletic's intention with *Ferriscope* is to investigate how this visual paradigm of proxistance gains precedence beyond the screen. The artists suggest that giant observation wheels, popping up in cities around the world, can be seen as prime examples of proxistance.

In 2000, the 135-meter-high London Eye (re)launched the interest in large-scale urban observation wheels and propelled a rivaling appetite for ever grander designs on a global scale. As these wheels transport their passengers on circular journeys between detailed close-ups and vertiginous overviews, Bull.Miletic investigates how they participate in the smooth proxistant vision that has multiplied across the 21st century media landscape.

In the kinetic video installation *Ferriscope*, Bull.Miletic investigates this apparent boom of observation wheels across "world-class cities" by staging a meeting between some of the most iconic examples of wheels in operation today and the original Ferris Wheel, created by George W. G. Ferris Jr. in 1893 for the World's Columbian Exposition in Chicago.

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FERRISCOPE (1893-2020)

The Ferris Wheel experience and construction can be seen in line with the genealogy of immersive imaging practices, expanding upon the invention of the painted panorama, diorama, and, eventually, the aerial moving image. The installation addresses this lineage by merging technological imaging with observation-wheel rides.

Predating the official invention of the moving image by only a year, the view from the original, first Ferris Wheel was not documented on film. Hence, in the Ferriscope installation, the artists combined video sequences they shot from the London Eye, the Las Vegas High Roller, and the Wiener Riesenrad into a sequence of 24 animated, archival photographs taken from the original Ferris Wheel to create an impression of what it would have been.

Moreover, working on the principle of a thaumatrope, a pre-cinematic optical device, the installation stages a meeting between the Ferris Wheel and the color wheel in a single-chip DLP video projector, becoming a visual experiment, suspended between total overview and control on the one hand, and vertigo and instability on the other.

Bull.Miletic's intention is to bring the combination of mechanical movement and the aerial view from the Ferris Wheel to the forefront, as a force in cinematic revelation and curiosity. In doing so, the artists reveal and expand on the technical mediation between rides, cinema, and aerial imaging.

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Although a thrilling experience in light and color, the 5 minute video also alerts one to how these urban rides have impacted world-views and urban development. Bull.Miletic argues that the introduction of such gigantic observation rides into the urban environment powerfully suggests an idealized perception of the city as a spectacular, cinematic “establishing-shot”. This simple and seemingly benign maneuver plays a key role in the process of gentrification that transforms the city itself into a site for visual consumption.

Ferriscope is made in collaboration with Tom Gunning, Professor of Cinema and Media Studies, University of Chicago, and Jan C. Schacher, Zurich University of the Arts, Institute for Computer Music and Sound Technology. Torbjørn Helgesen Nordvik, Magnus Sjursen, Mikael Valen, and Jens Brynildsen at Bitraf, Oslo made significant contributions to mechanical and electronic engineering.

Ferriscope was nominated for the New Technological Art Award, Zebrastraat, Ghent, Belgium in 2022 and it received the Excellence Award, from the Japan Media Arts Festival in 2020.

Media: Single-channel video (black and white, sound), 1-Chip DLP projector, aluminum truss system, custom robotics.

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VENETIE 1111100110 (1500-2022)

At the center of Bull.Miletic's installation *Venetie 1111100110*, is the cartographic masterpiece *View of Venice 1500 (Venetie MD)*, a large-scale woodcut attributed to the workshop of the celebrated Italian artist Jacopo de' Barbari. As a significant leap in technological accomplishment, Bull.Miletic considered de' Barbari's 500-year-old map to be an astonishing example of an early trace of proxistant vision. It sets one's mind in motion between detail and overview in its presentation of multiple perspectives on the same plane, producing a vision that summons both totality and close-up simultaneously.

In their investigation, the artists found several relationships between this early map and the current digital paradigm of proxistance as exemplified by Google Earth and other digital maps. Recent research has shown that *Venetie MD* was assembled from multiple vantage points within the city. The making of the map is assumed to have entailed a small "army" of surveyors. Utilizing the perspective techniques of the time, these helpers may have used triangulation techniques, recording both street-view details and the multiple, partial overviews from the city's 103 bell towers.

These details from ground level and elevated perspectives, recorded by the assistant drafters, were combined in de' Barbari's workshop. This is similar to how digital maps operate today, where different bits and pieces come together to be arranged in a coherent flythrough 3D-rendering.

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The new life of de' Barbari's map as a digital interface further attested to such a comparative mode. The online version of *Venetie MD*, found on the Venice Project Center's website, is a composite of the 14,196 discrete image tiles that make up de' Barbari's digitally encoded map. These tiles are arranged in a grid with a computer algorithm similar to the contemporary digital maps.

What the artists additionally discovered was a "bug" (an infinitesimal error in the code) that produced a "defective" pattern within the map's spatial logic. When they selected a view to download and print, they received a scrambled view where the 14,196 image tiles were wrongly distributed, producing a scrambled map. This event evoked the instability of networked digital archives, "whose material structure is that of vectoral dynamics and electromagnetic fields," as Art Historian Ina Blom articulated.

Bull.Miletic wanted to bring attention to the instability of such a storage principle, which in fact points back to the instability of the decaying city of Venice itself: a cultural archive in its own right. In the desperate effort to keep up its virtual image, the city of Venice is in a constant process of preservation against the natural forces that threaten its 500-year-old face against the rising ocean tides and global tourism.

While focusing on this historical representation of proxistant vision in their video *Venetie 11111100110*, Bull.Miletic also combines a

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myriad of more contemporary aerial views of Venice from the Fotopiano archives of the late 1970s to the digital 3D flyovers popularized by Google Earth; from aerial views of the dense urban fabric embroidered with a network of canals to tight close-ups of the meeting points between the urban facades and its rising water lines.

As the video in this installation zooms in and out from various vantage points across 21st century Venice, the artists also wanted to create a sense of the current environmental crisis Venice is experiencing, to illustrate that the rising water level is just one of the destructive forces to which the city has been exposed for centuries.

In order to additionally point out the assemblage of fragments that underpins proxistance across both digital and historical maps, the video in the installation alternates between appearing conventionally on the wall and being scattered around the room as a myriad of fragments. This is done using a specially designed, robotic mechanism that allows the video projection to periodically hit a mirrored rhombicuboctahedron, an Archimedean solid with eight triangular and eighteen square faces, inspired by the one featured in de' Barbari's famous 1495 portrait of Luca Pacioli.

As the video transitions between the physical 3D map carved out of the pearwood blocks and the 3D animated google map of Venice, it exposes glitches and imperfections in both representations.

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Bull.Miletic's primary intention was to give Venice a new material life as a distributed network of changing configurations, using a 500-year-old map as a starting point, to address urgent questions related to new connections between digital archiving and the material weathering of this unique city married to the sea. With their navigational approach in this project, Bull.Miletic investigated how a proxistant vision was made 500 years ago, which also gave them insight into how such vision operates by exponential powers today.

Torbjørn Helgesen Nordvik and Jens Brynildsen at Bitraf, Oslo made significant contributions to mechanical and electronic engineering.

The prototypes of *Venetie 1111100110* were exhibited at the 2nd Research Pavilion at the 57th Venice Biennale and at Anglim Gilbert Gallery in 2017.

Media: Single-channel video (color, sound), suspended screen, aluminum truss system, mirrored rhombicuboctahedron, custom robotics.