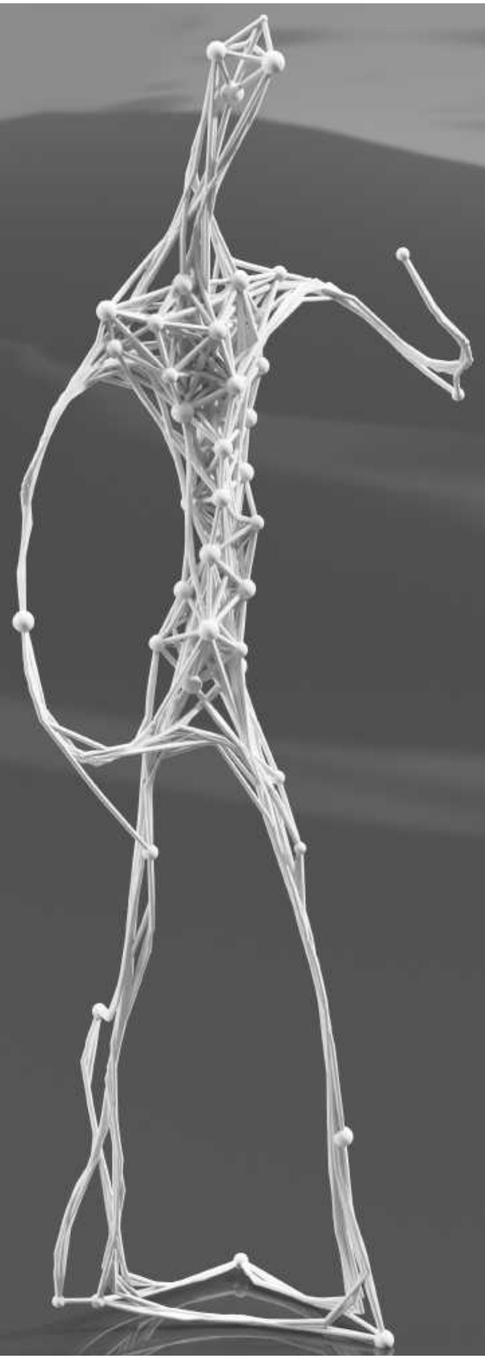
Mauro Martino PhD

Head of Visual AI Lab
IBM Research AI

Professor of Practice
Northeastern University

Artist in Residence
MIT-IBM Research AI



Portfolio 2024

Short Bio

Mauro Martino is a Principal Scientist at the MIT-IBM Watson AI Lab, where he founded the Visual Artificial Intelligence Lab, and a Professor of Practice at Northeastern University in Boston. His previous roles include Research Scientist at the Senseable City Lab, collaborating with Carlo Ratti, and Assistant Research Professor at Northeastern University, working with Albert-László Barabási at the Center for Complex Network Research and David Lazer at the Institute for Quantitative Social Science (IQSS) at Harvard University. He holds a PhD from Politecnico di Milano in Design and Technology.

With a rich portfolio of research, Martino has significantly impacted network science, data visualization, urban dynamics, and artificial intelligence. His notable publications include “Redrawing the map of Great Britain from a network of human interactions,” “Mapping the NFT revolution: market trends, trade networks, and visual features,” “A network framework of cultural history,” “The rise of partisanship and super-cooperators in the US House of Representatives,” and “Prospect theory for online financial trading.” His pioneering application of artificial neural networks across various domains has reshaped the landscape of AI and data visualization.

The project “Strolling Cities,” showcased at the 2021 Venice Biennale, transformed poetry readings into real-time film, merging language, technology, and visual art. Other significant exhibits include “NFT Revolution” at MEET | Digital Culture Center in Milan, “Exercises in Style” at the BCA Center in Burlington, and “Milano - Factory of Future” at Malpensa Airport. His work has been featured in prestigious venues such as the Venice Biennale, Serpentine Gallery in London, Ludwig Museum in Budapest, GAFTA in San Francisco, Lincoln Center in New York, ZKM | Center for Art and Media in Karlsruhe, MIT Museum in Cambridge, and Ars Electronica Center in Linz.

Collaborating with top media outlets, Martino has created data visualizations for the BBC, Scientific American, The New York Times, The Washington Post, Süddeutsche Zeitung, Der Spiegel, Le Figaro, Corriere della Sera, National Geographic, Popular Science, and Wired. His work has appeared in leading scientific journals like Nature, Science, and PNAS, as well as in key textbooks on AI Art and Data Visualization, including “Beyond Matter, Within Space” by Lívia Nolasco-Rózsás, “Possible Futures: Art scenarios and artificial intelligence” by Rebecca Pedrazzi, “Data Visualization” by Andy Kirk, “The Truthful Art” by Alberto Cairo, and “The Best American Infographics” (2015 and 2016 editions).

Throughout his career, Martino has received numerous accolades, including the Gold Medal at the 2017 Vizzies Visualization Challenge by the National Science Foundation, multiple Webby Awards, the Innovation by Design Award by Fast Company, and the Information is Beautiful Award. Additionally, he is the winner of the twelfth Italian Council of Contemporary Art by the Italian Ministry of Culture. His viral art project, AIPortraits (2018/2019), was the first generative GAN-based application to achieve global recognition, attracting over 8 million unique users per day. At NeurIPS 2018, he presented the first collection of sculptures generated with a 3D GAN model he invented.

Portrait of Mauro Martino generated by the AIPortraits model developed by Mauro Martino in 2019.

Projects Overview

AI Projects

UrbanaVerba: Milan Factory Of Future

LINK

Exercises in Style

LINK

Mapping the NFT revolution: market trends, trade networks, and visual features.

LINK

Strolling Cities

LINK

150 years of Nature

LINK

AI Portraits

LINK

Paper Graph

LINK

AI Sculptures

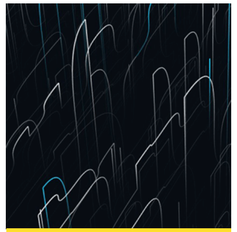
LINK

Wonder Net

LINK

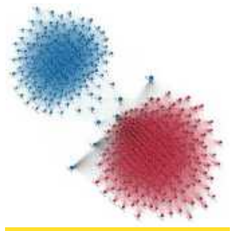
Forma Fluens: abstraction, simultaneity and symbolization in drawings.

LINK



Success in Science

LINK

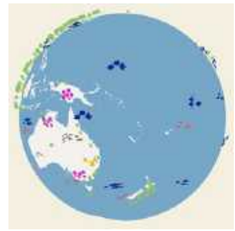


The Rise of Partisanship in the U.S. House of Representatives.

LINK

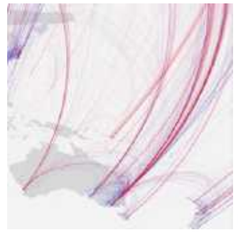
News Explorer

Link



Network Earth

LINK



Charting Culture

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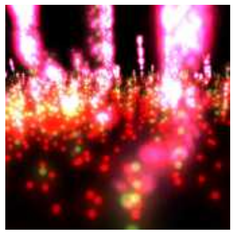
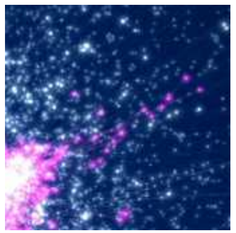


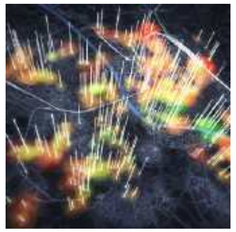
Controllability of Complex Networks

LINK



Interactome

LINK

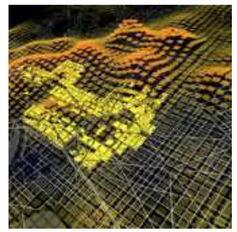


Place Pulse

LINK

Redrawing the map of Great Britain from a network of human interactions.

LINK



Obama | One people

LINK

Projects Overview

AI Projects

2024

Milan Airport, IT
Boston Library, US
Seville Art Center, SP
Ars Electronica, AT

2023

Burlington Art, US

2022

Meet Milano, IT
Ars Electronica,
AT

2021

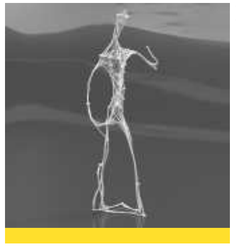
Venice Biennale, IT

2020

ZKM, GM
Oi Futuro, BR
Ludwig Mus., HU

2019

AI Portraits was the first interactive generative web application to go viral worldwide.



2018

Meet, IT
ZKM, GM
NeurIPS art exhibition, CA
MIT, US

2018

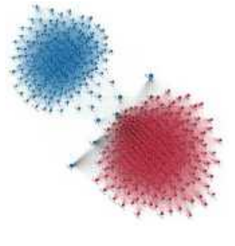
ZKM, GM
Oi Futuro, BR
Ludwig Museum, HU
Webby Award, US

2017

Forma Fluens is part of the permanent collection of the Ars Electronica Museum, AT

2016

Best Scientific Video award of the National Science Foundation, NSF, US

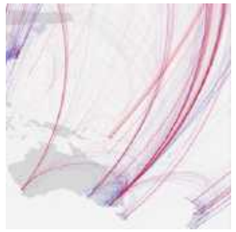


2015

Kantar Information is Beautiful Award – Gold Medal in Data visualization, UK

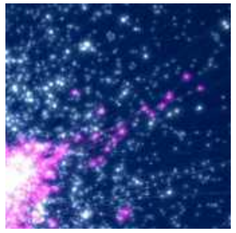
2015

Fast Company - Innovation by Design Awards, US



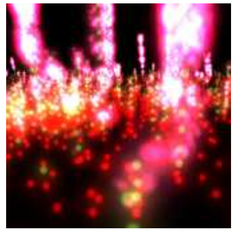
2014

Lincoln Center, US
Places & Spaces: Mapping Science exhibit, US



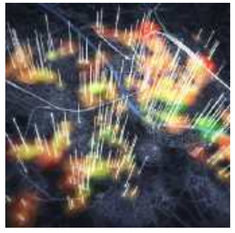
2013

ZKM, GM



2012

ZKM, GM

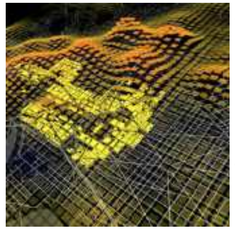


2011

Ars Electronica, AT

2010

MIT Museum, US
Serpentine Gallery, UK



2009

MIT Museum, US
Grey Area Foundation for the Arts, US






Urbana Verva
Milan Factory of Future

Urbana Verba is a digital art project using AI to create audiovisual artworks, reinterpreting urban spaces through literature, art, and architecture. It offers immersive experiences that blend real and imaginative cityscapes, starting with Milan's dynamic cultural legacy. By transforming classical narratives, the project envisions cities as ongoing creative processes, mixing past and future aesthetics.

The first project, "Milan Factory of Future," celebrates Milan's ever-evolving artistic spirit, combining old and new in a loop of cinematic, transformative frames.

More at: Urbana Verba












Mauro Martino's Exercises in Style

Mauro Martino's project on Raymond Queneau's Exercises in Style uses AI to translate Queneau's literary experiments into distinct films for each variation of the same story. Queneau's work, a masterclass in rhetorical form, plays with language's expressive potential, transforming a simple narrative through 99 distinct styles.

Martino leverages this to explore the capacity of text-to-video AI: Can an algorithm capture the unique texture of each variation? His approach scrutinizes how tightly AI-generated visuals are bound to the nuanced expressiveness of individual words.

By harnessing Queneau's rich manipulation of linguistic forms, Martino pushes AI's interpretive abilities to the limit, interrogating whether a single story told through different linguistic filters can generate entirely unique visual outcomes. As Queneau's exercises alternate between wordplay, semantic games, and rhetorical figures, the project becomes a meditation on AI's potential as a medium that reflects the intricacies of human language—probing how expressive constraints within text can shape and define visual outputs.

More at: Burlington City Arts

Mapping the NFT Revolution

Mauro Martino's Mapping the NFT Revolution is an expansive and immersive exploration of the NFT ecosystem, using advanced AI, deep-learning, and data visualization to map five years of its development. The installation delves into over 5 million NFTs and tens of millions of trades, revealing how digital assets are transforming the worlds of art, architecture, and fashion. Through the analysis of trade networks and visual patterns, Martino uncovers how traders form social clusters and specialize in specific types of NFTs, highlighting the evolving dynamics of digital marketplaces. This project not only documents the market's statistical properties but also reflects on the aesthetic dimensions of the NFT phenomenon, connecting the physical and digital realms. The work explores the potential of the metaverse and how it redefines concepts of ownership, creativity, and space. By immersing viewers in a virtual narrative, Martino invites us to consider the implications of this intangible revolution, offering a profound reflection on the future of digital culture and interaction.

More at: Meet

Mapping the NFT revolution: market trends, trade networks, and visual features.

209.000 Accesses - 2120 Altmetric score (01/29/2024)
One of the 100 most-discussed papers across all sciences in 2021.

PAPER VIDEO

Strolling Cities (2021)

Strolling Cities is a journey through
Italian cities reinterpreted by
Artificial Intelligence, capable of creating
poetic landscape starting from human voices.
The project was presented at
the Venice Biennale 2021.

LINK

Strolling Cities (2021)

Strolling Cities unveils the naked, materially seductive form of several Italian cities, by means of millions of photos taken during the recent lockdowns ('20/'21) that show the urban space as an unfiltered landscape of walls, streets, and buildings. Returned to the immanence of their materiality, cities abandon their stereotyped semantic contents, to embrace a new dimension of extreme elusiveness. A generative A.I. model trained with these images creates perpetually moving video-paintings, whose indefinite contours suggest a potential transformation of urban places, once ascribed to specific '*social functions*', into open spaces available to countless (re)writings. The observer strolls while standing still, and the city changes in front of her, generating a unique cognitive experience, questioning and re-imagining the space at once. The A.I. reacts to voice commands or to a poetic text, producing new associations that immensely broaden the urban imaginary of the future.

LINK

Venezia

A flying city, self-propelled,
wobbly over a forest
of stilt houses, mobile
in the enchantment of the weight
in the grace of distribution,
sloped,
oscillating in a slight tremble, a friction
that consumes it. Along its canals
full of fruit, loaded with fruit salad,
boats with deformed keels pass by
like vertebral columns, twisted
by the water, oblique,
barely balanced.

Valerio Magrelli, da Clecsografie, in Nature e venature, Milano, Mondadori, 1987

Como

I arrive in Como from the sea, after crossing horizontal plains, rice fields, poplar woods. And Como, with its lake, its hills, its whiteness, gives me back a sense of continuous movement and aerial verticality. Thus it reminds me of where I came from. The lake, I would say, is nestled among houses and peaks, like a diamond pin. If it weren't for the fact that the water overflows and at night it seems to want to absorb the streets. It seems to want to become a sea, in a dream.

Giuseppe Conte, Arrivo a Como, in In un lago infinite promesse. I poeti di Europa in versi e il lago di Como, La Casa della Poesia di Como, 2020

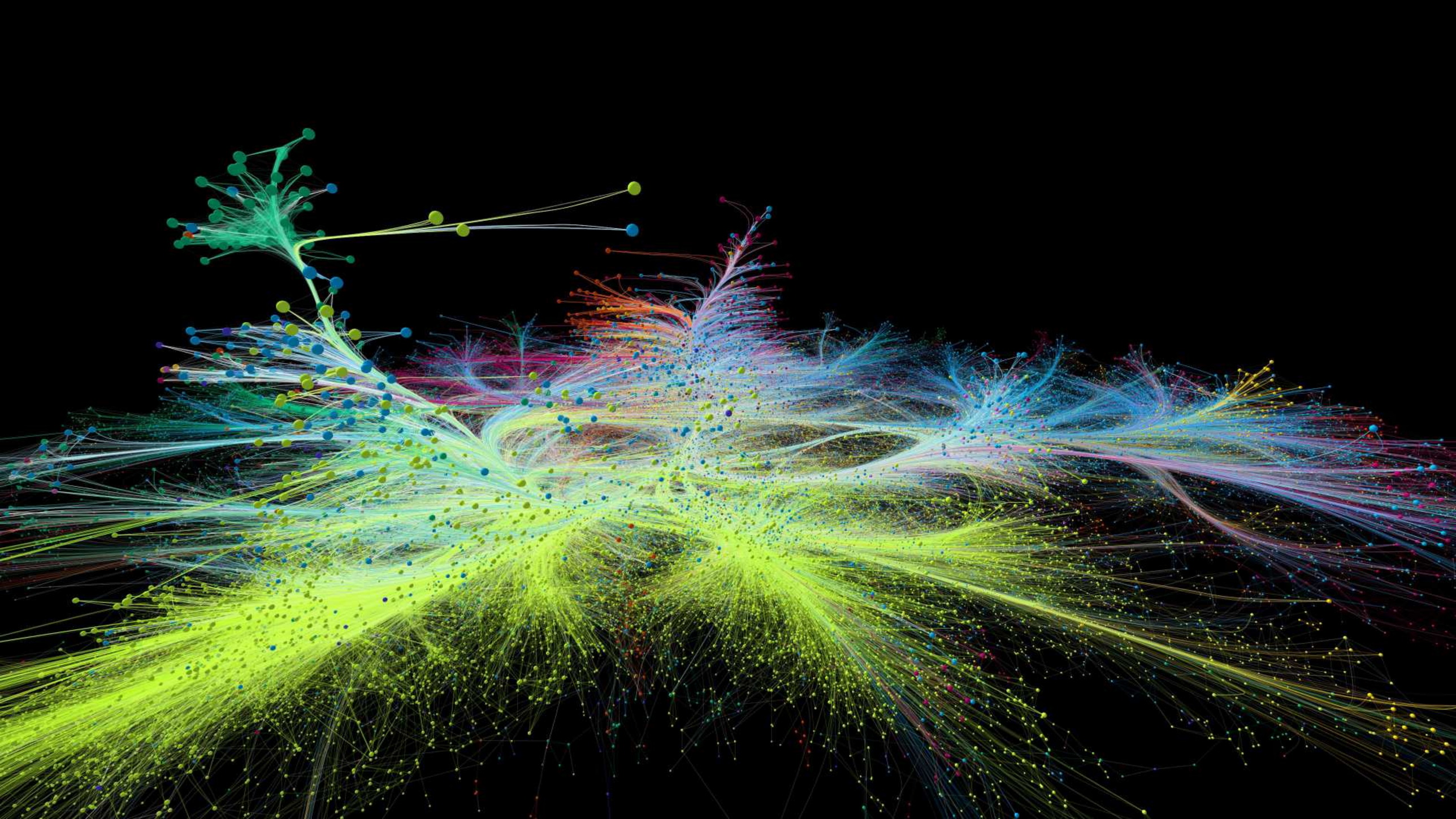
An image from Visual Poetry generated by Artificial Intelligence listening to Valerio Magrelli's poem dedicated to Venice.

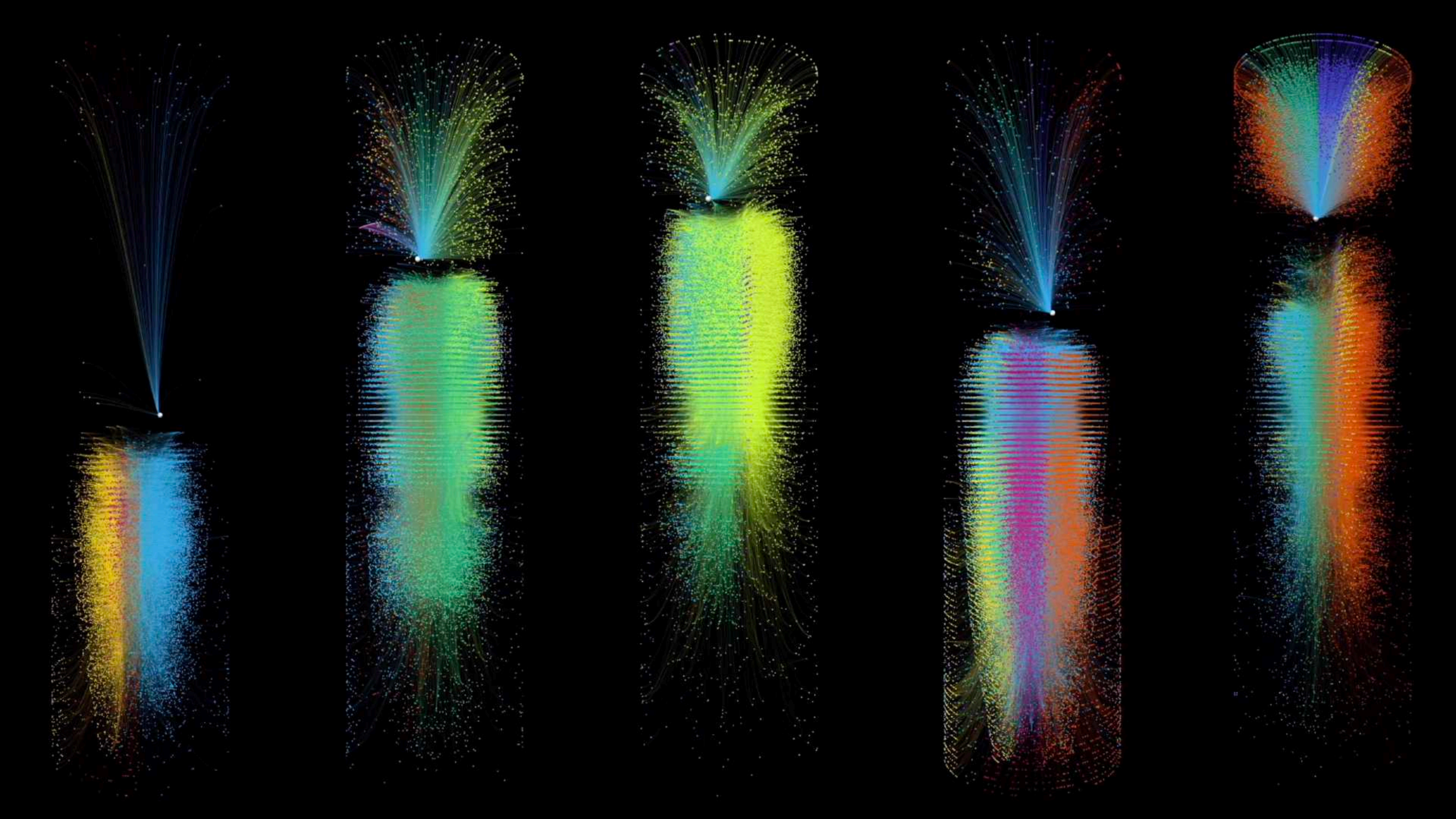
An image from Visual Poetry generated by Artificial Intelligence listening to Giuseppe Conte's poem dedicated to Como.

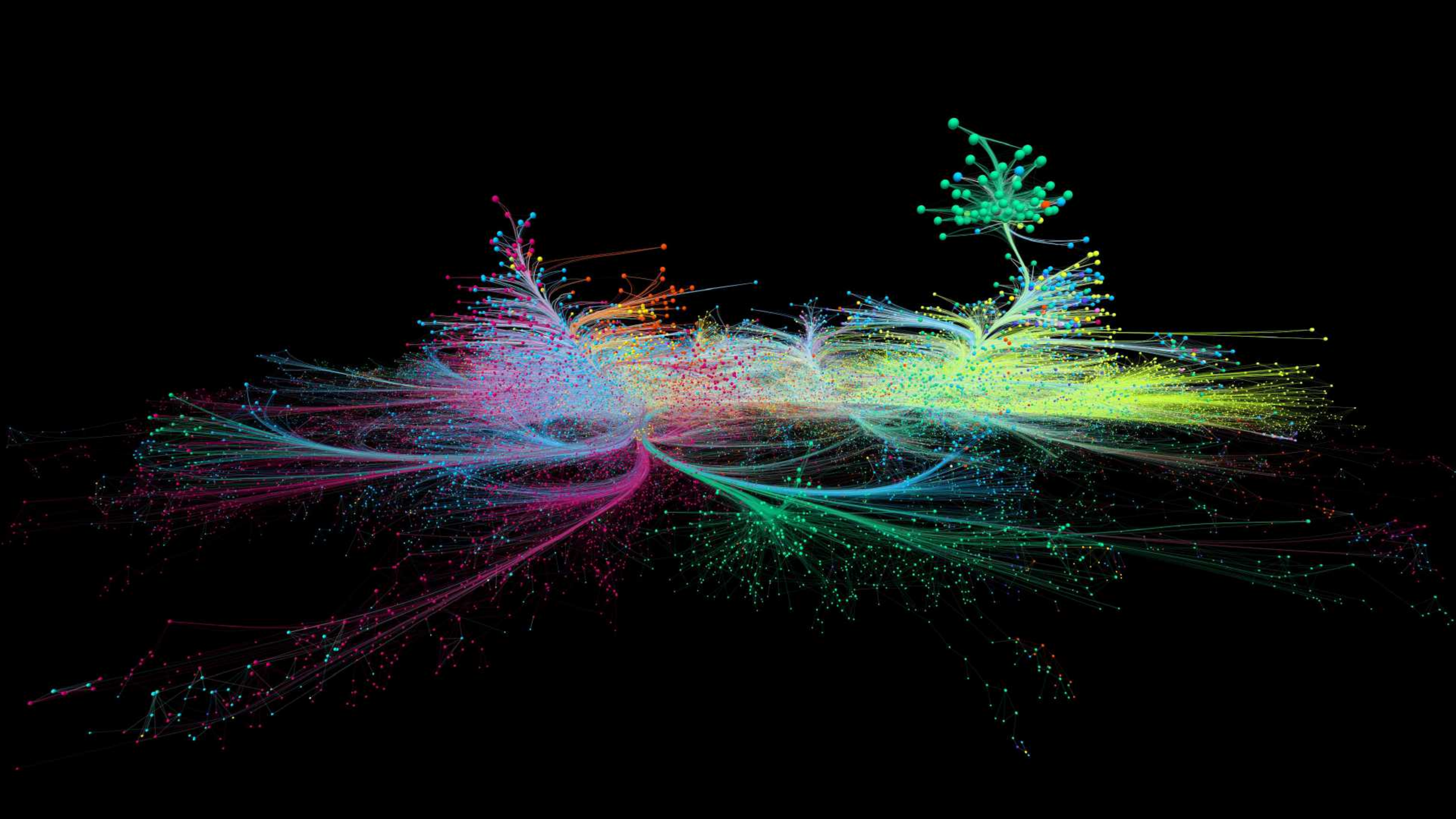
A network of science: 150 years of Nature papers

The Nature Journal contacted Mauro Martino (data visualization) and Laszlo Barabasi (data analytics) to celebrate the 150 years of its history.

VIDEO WEB APP







AI Portraits (2019)

An exploration of the AI biases generated by Renaissance portraiture

AI Portraits was a 10-days ex tempore interactive art project, in which I showed the world through the deformed lens of Western Renaissance culture.The lens is deformed because it is linked to the self-centered and self-glorifying concept of the Renaissance portrait.
Before the 15th century, the practice of commissioned painted portraits of individual sitters was rare. Perhaps this change in style reflects a shift in societal values toward individualism. The Italian Renaissance of the late 13th century, with the writings of Dante and the paintings of Giotto, was a period of increased self-consciousness, in which concepts of unique individual identity began to be verbalized. This was followed by the Renaissance glorification of the genius of woman and man, the representation of the unique and extraordinary ability of the human mind. Renaissance Portraits interpret the external beauty, the social status, and then go beyond the body and the face. A portrait becomes a psychological analysis and a deep reflection on our existence. Giovanni Battista Moroni was admired throughout Northern Italy for his ability to capture his sitters “from life,” or “from nature” - Tiziano Vecellio.
The identity of the sitter becomes the leitmotif in the portrait’s history. In the 16th century Florence, one of the key values of the Renaissance was born: humanism, individualism. Woman/Man who masters his destiny is capable of changing the world itself with his intelligence. These are the same values that we find after 500 years across the planet, the vain glory of the portrait that becomes a selfie. Woman/Man who comes first, before any other creature on Earth, man who pursues profit at the expense of any other moral value. Western portraiture becomes an instrument to convey a message against inequality. Inequality in culture, in economy, in the way we perceive ourselves.

AI Portraits is not only about the new aesthetics of Neural Network, it is about the data we use to train AI models. There is an individualistic message that was hidden in Western Renaissance art collection. AI Portraits is generated by a neural network model trained with museum open data collections. Museum collection is subject to bias, including creation bias (artists and patrons deciding to depict specific individuals back in the Renaissance), preservation bias (artworks surviving time since creation), collection bias (artworks being available on the market and selected by collectors for museums), and documentation bias (artworks being made available as digital images).

Western bias exists not only in paintings. Not contained and held in a frame, it expands to our economy and our everyday life.

LINK1 LINK2 LINK3 LINK4 LINK5 LINK6 LINK7

AI Portraits (2019)

A new efficient algorithm to embed a given image into the latent space of a GAN

AI Portrait was a 10-days ex tempore interactive art project, from ***July 16 to July 26, 2019***. The website reached ***eight million daily visits*** just a few days after launch.
AI Portraits was able to paint portraits in real time at 4k resolution.

We have trained Generative Adversarial Network (GAN) models to reproduce human portraits, with different styles and levels of abstraction. GANs are a very popular class of deep generative models. They are trained to learn a mapping of a latent vector $z \in Z$ to a generated image $y = G(z)$ with G being the generator. The latent space Z describes all possible portraits. AI Portraits pushes us towards an intuitive and playful way of interacting with state-of-the-art GAN models. By showing our face to the neural network, we walk through the Z space and identify the vector that best describes our face in the multidimensional space of the GAN. We trained AI Portraits using our GAN on 45,000 portrait images. To allow insertion of own images into the latent space of a model, we trained an inverter that can approximate the latent vector $z = I(x)$ from an image x.

The AI Portraits algorithm allows to embed a given image into the latent space of Renaissance paintings.

Some examples of pairs of results, real photos on the left and the equivalent embeded in latent space on the right.

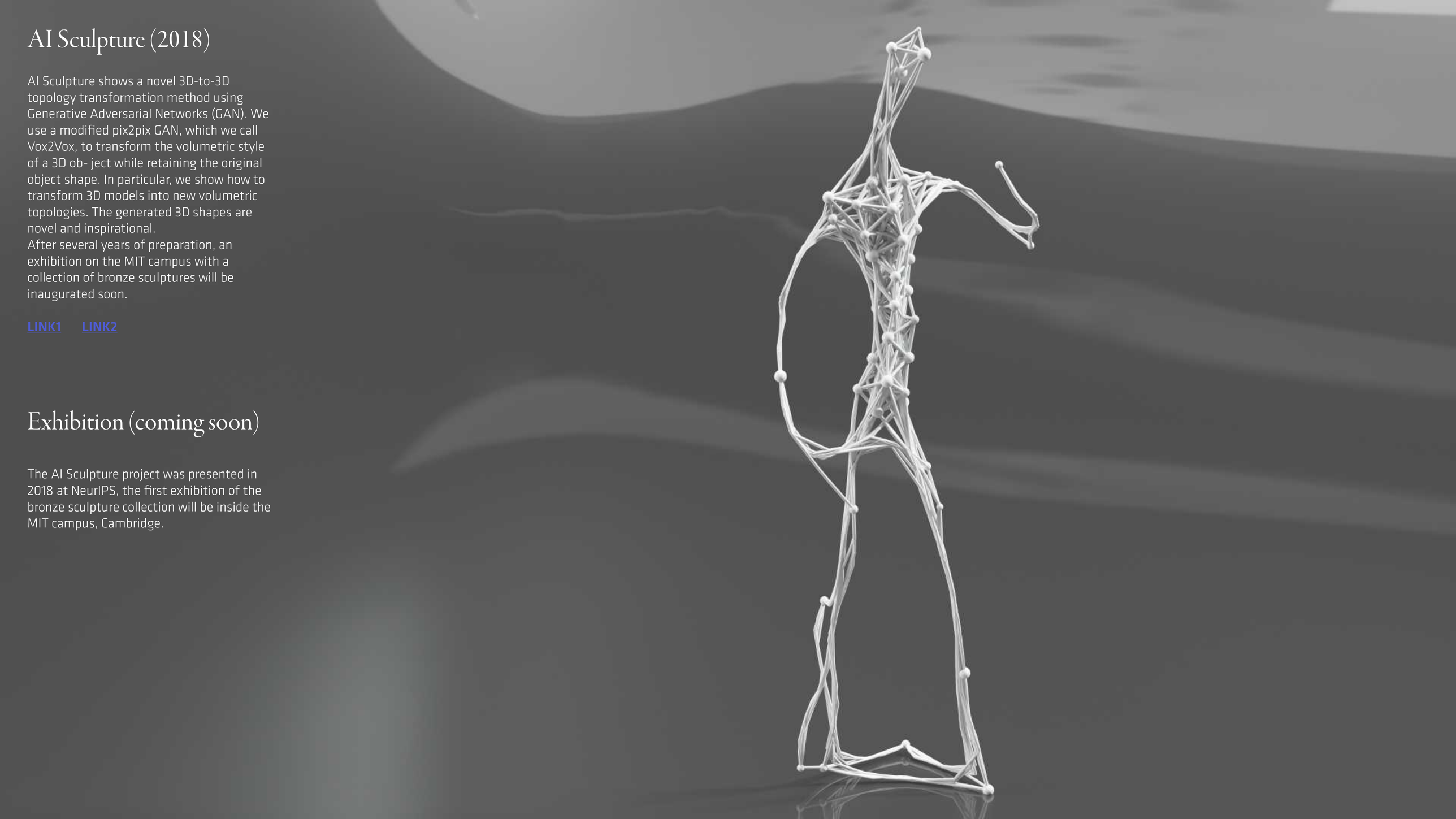
AI Sculpture (2018)

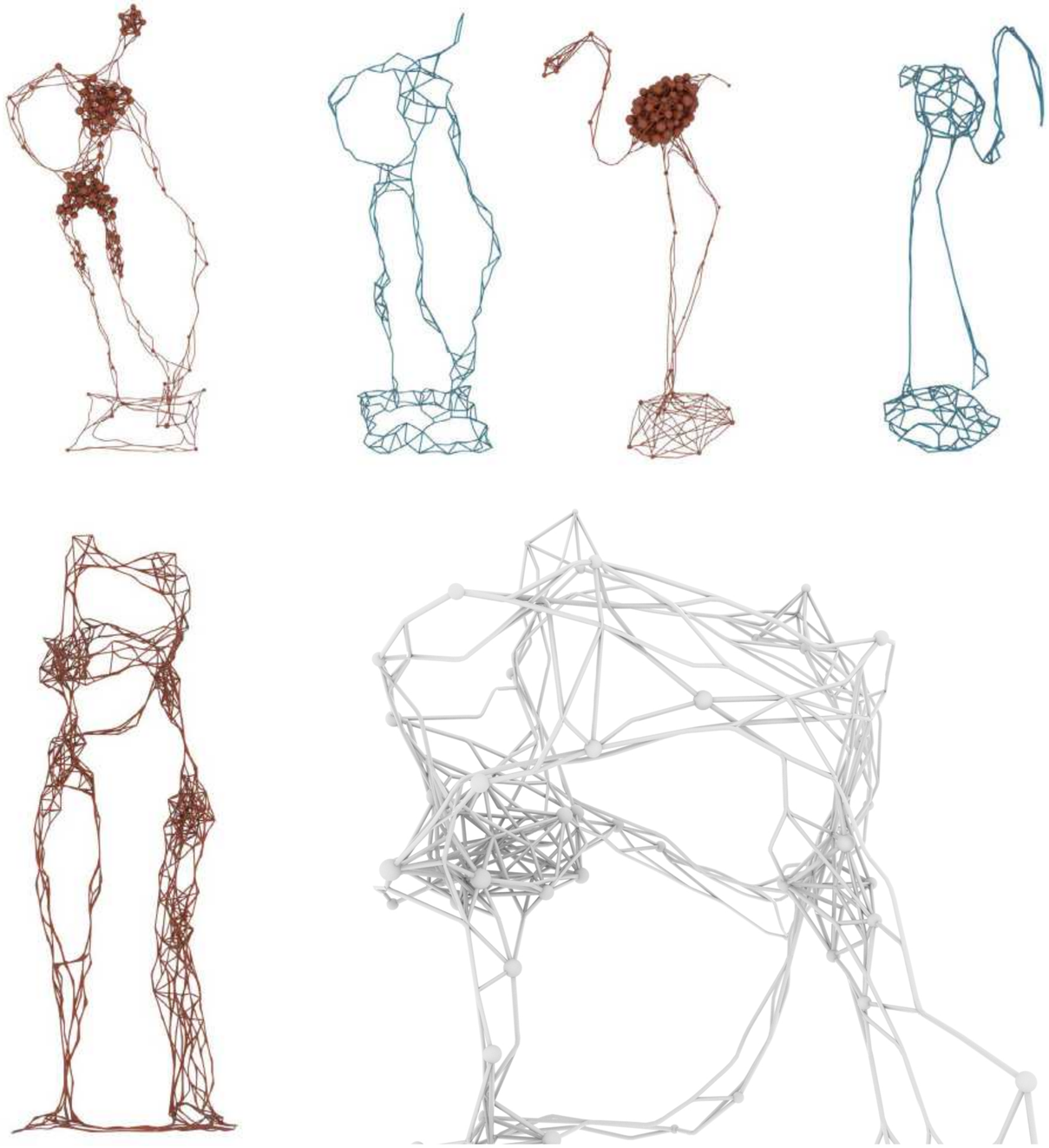
AI Sculpture shows a novel 3D-to-3D topology transformation method using Generative Adversarial Networks (GAN). We use a modified pix2pix GAN, which we call Vox2Vox, to transform the volumetric style of a 3D ob- ject while retaining the original object shape. In particular, we show how to transform 3D models into new volumetric topologies. The generated 3D shapes are novel and inspirational.
After several years of preparation, an exhibition on the MIT campus with a collection of bronze sculptures will be inaugurated soon.

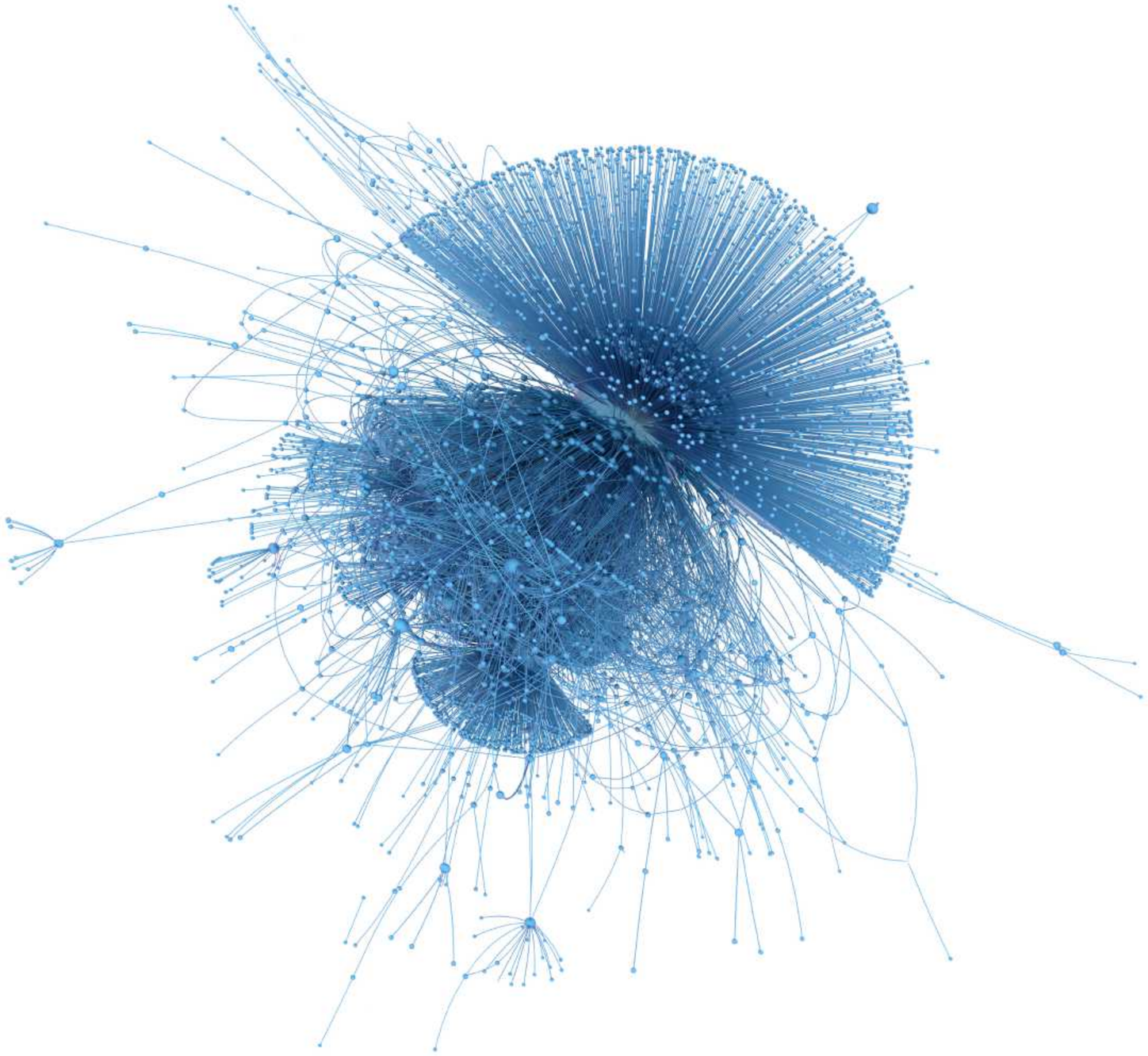
LINK1 LINK2

Exhibition (coming soon)

The AI Sculpture project was presented in 2018 at NeurIPS, the first exhibition of the bronze sculpture collection will be inside the MIT campus, Cambridge.







WonderNet:
Physicality of Networks (2018)

What is the shape of networks? How do we experience network sculptures? My goal with this project is to bring networks to life as physical objects, a testimony to their physical reality in spite of being an abstract mathematical construct. Networks are commonly visualized as node-link diagrams where nodes are generally represented as point-like objects and links as one-dimensional lines. We add physicality to the nodes and links to create a manifestation of a network in form of a three-dimensional object.

LINK

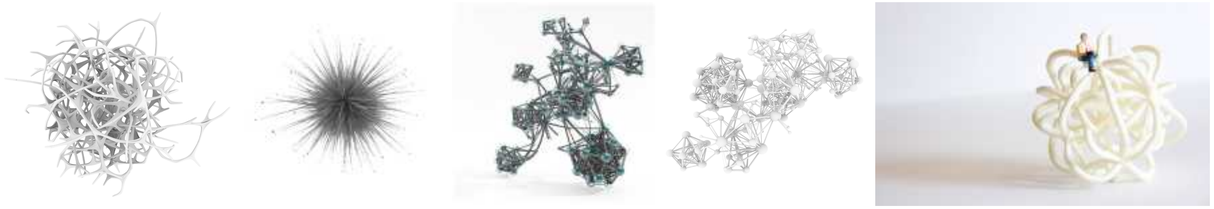
Elastic Link Model

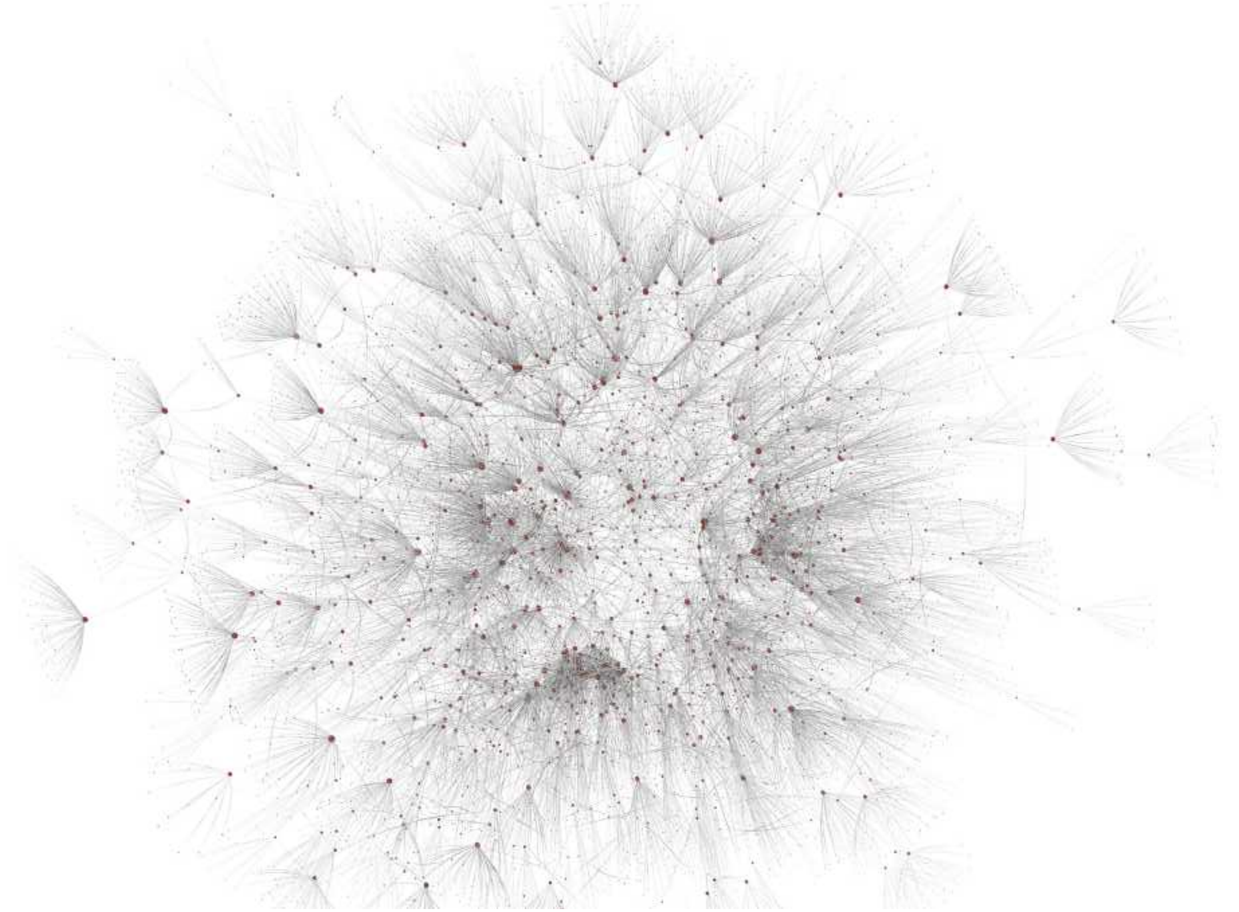
How can physicality be achieved to form these highly intricate, structural, sculptural network forms? If links and nodes have physical reality and occupy space, in traditional network models this results in multiple crossings between nodes and links, imposing a non-trivial algorithmic challenge. We developed a novel layout algorithm which uses physical forces to push conflicting nodes and links apart from each other. Additionally, we wanted the algorithm to find the most economical layout possible, in the sense that the links are as short as possible while avoiding overlaps. We modeled links as elastic tubes, which repel each other to avoid overlaps, but also bend and curve to find the shortest paths connecting their end nodes, similar to self-avoiding polymers.

AI & Lost-Wax Casting

Wonder Net has been on display in several museums, including: ***Ludwig Museum***, ***ZKM - Center for Art and Media***.
My collaboration with the ***Battaglia Foundry***, one of the best artistic foundries in Europe, started from this project.
The production of bronze sculptures of forms developed with very sophisticated AI technologies creates a “short circuit” between manufacturing and automation, between bronze casting and designing with GANs; a very interesting contrast between new and old, which takes *lost-wax casting* techniques to the limits.

LINK

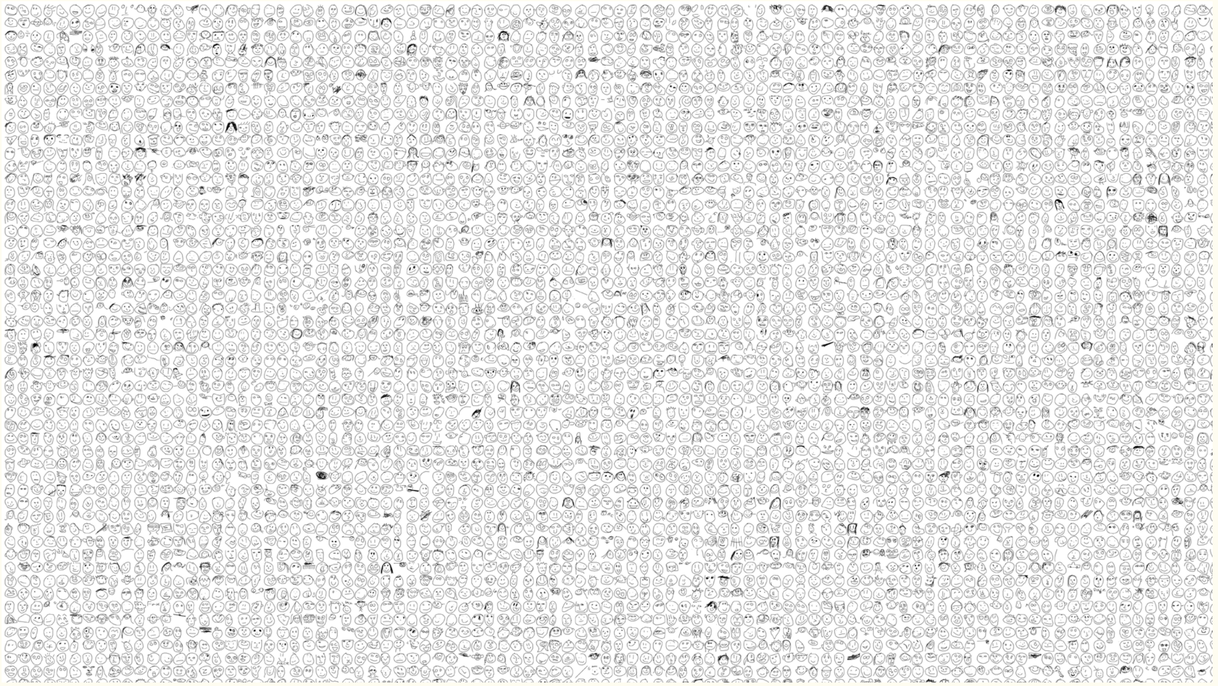




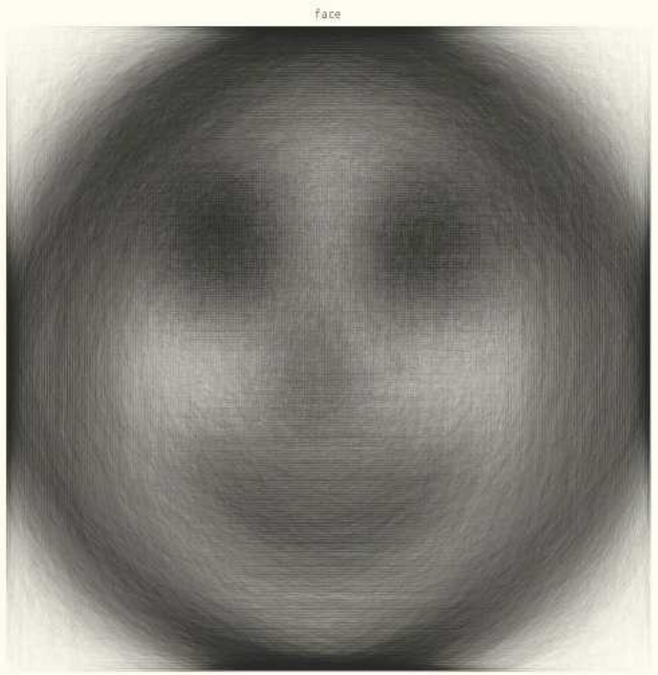
Forma Fluens: abstraction, simultaneity and symbolization in drawings. (2017)

Forma Fluens (Latin for “flowing form”) shows an overlapping collection of drawings made by over a billion people. Each picture is different but all of them together result in a new picture: the corners merge and an iconographic image of the object is created. Can this collection of drawings help us to learn something new about humanity? A similarity of form among the drawings could indicate a similarity in cultural atmosphere, ideals, or the inner feelings expressed in these external forms: individual drawings show how we see the object being represented, how we imagine and remember it.

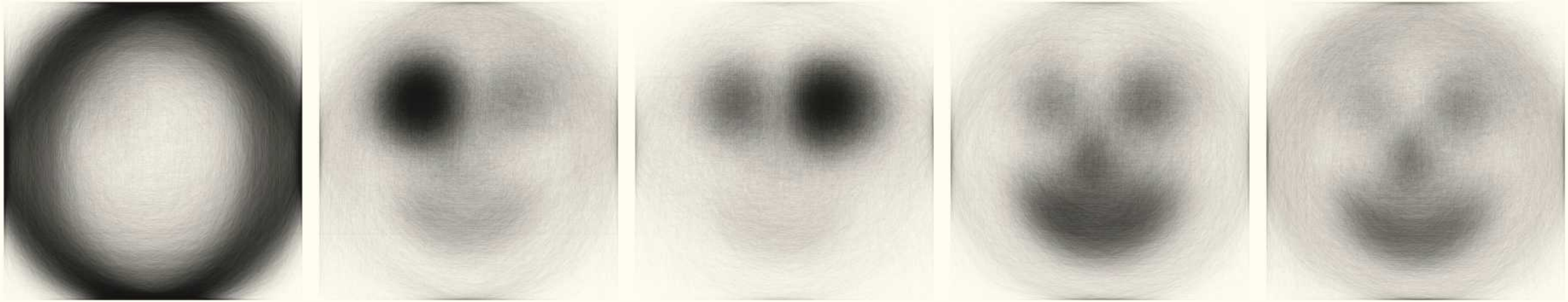
LINK1 LINK2



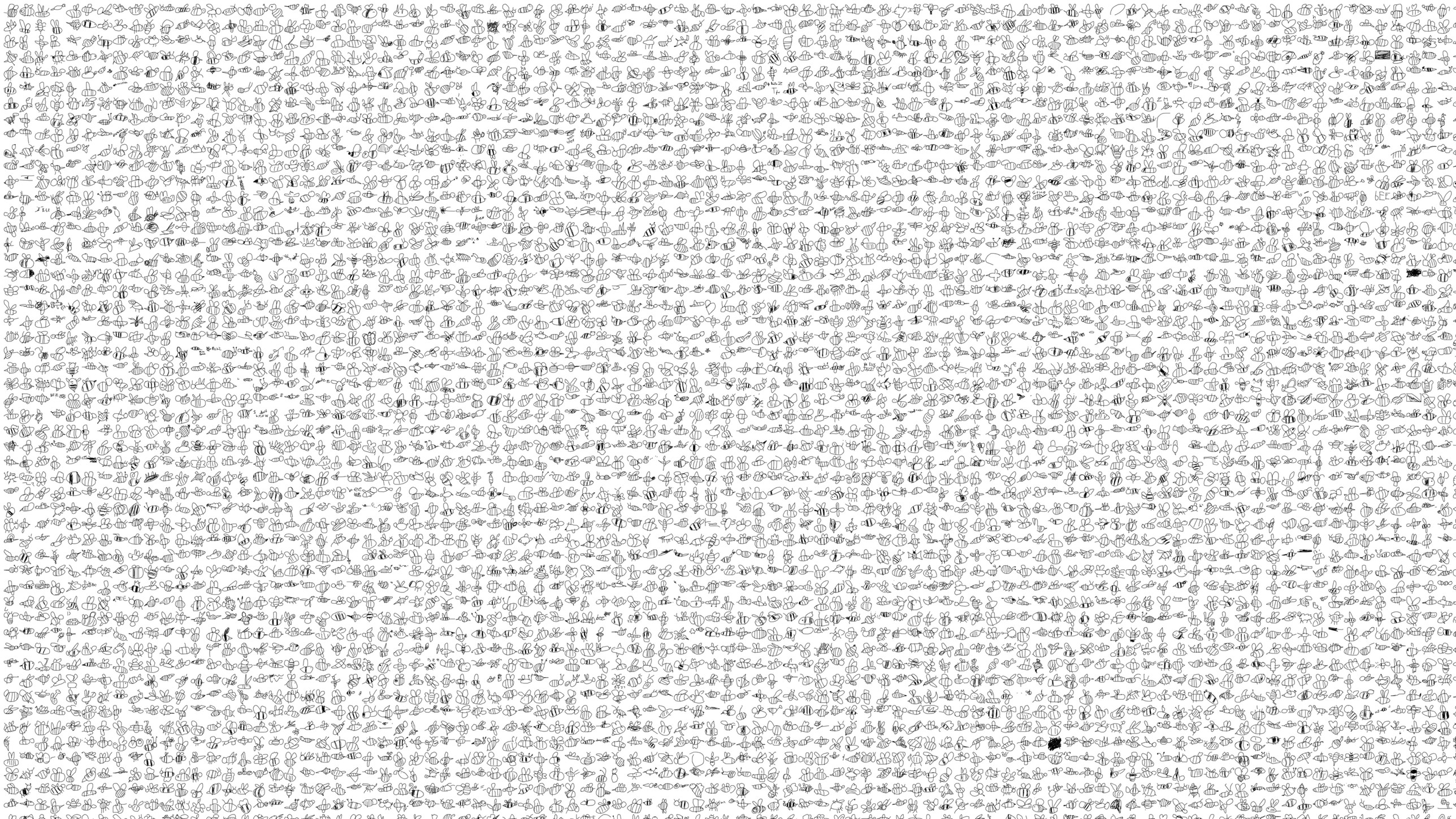
Millions of face sketches from Quick Draw.

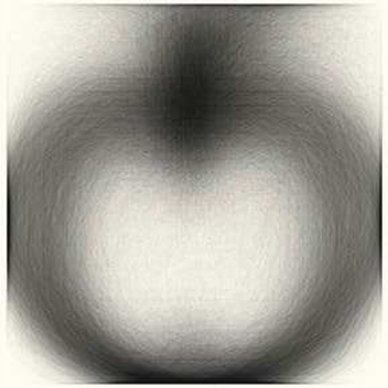


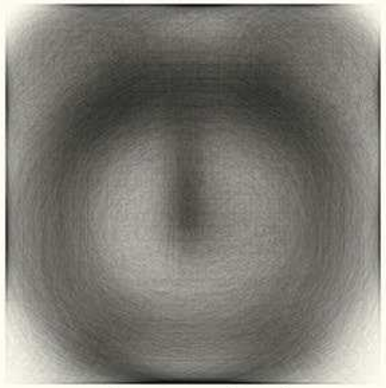
In the face drawing we observe a strong convergence in the sequence of drawing sketches. We tend to draw outer shapes first to define a frame and then add details.



Time sequence on how 161,515 people from all over the world draw a human face.




apple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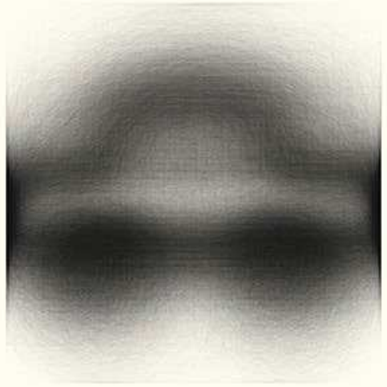
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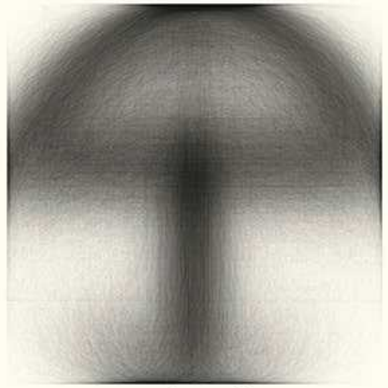
rain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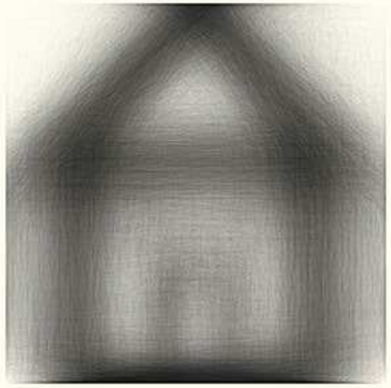
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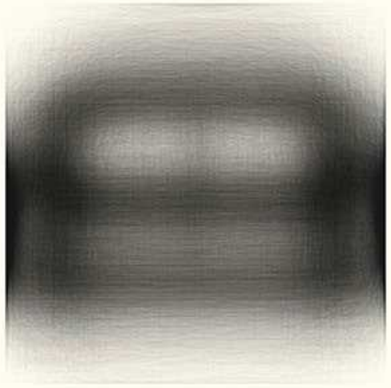
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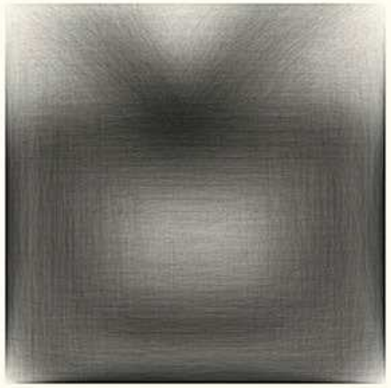
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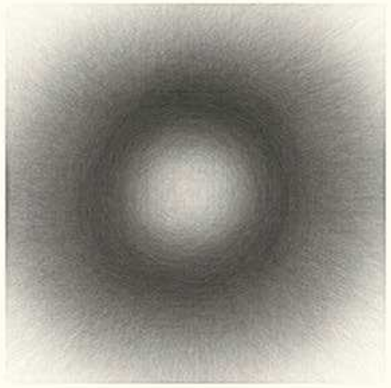
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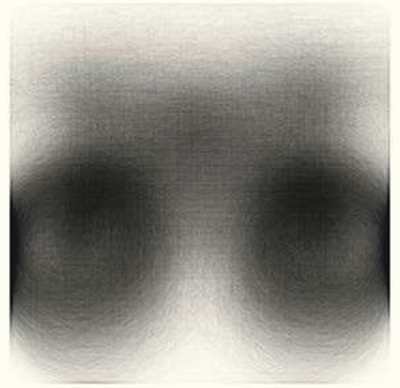
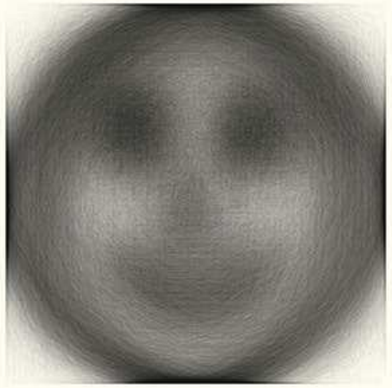
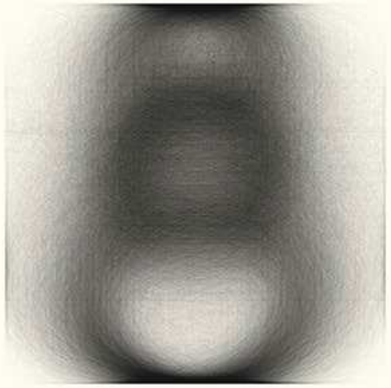
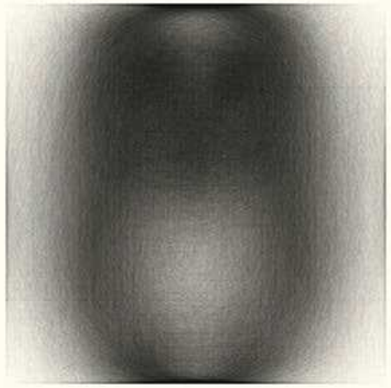
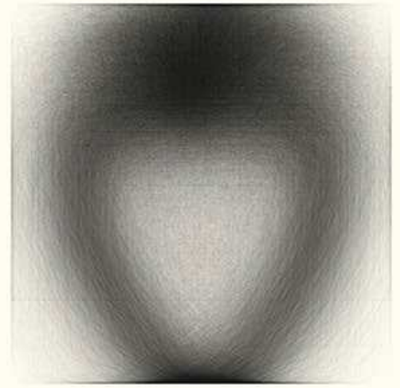

bicycle

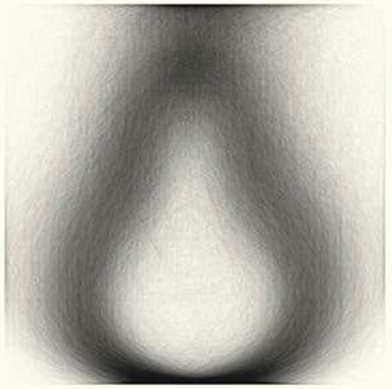

face

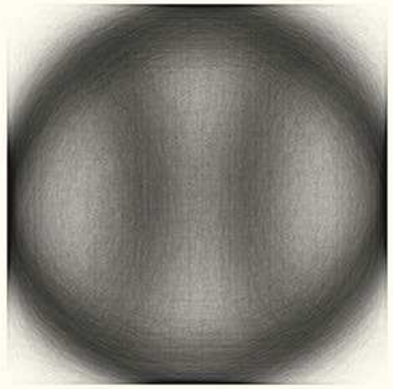

snowman


calculator


owl


strawberry


pear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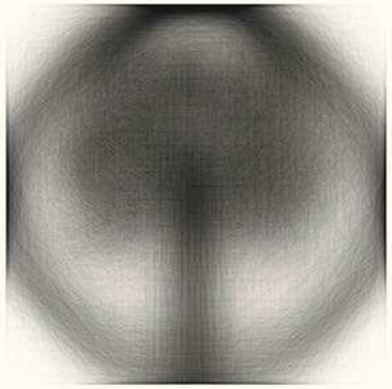
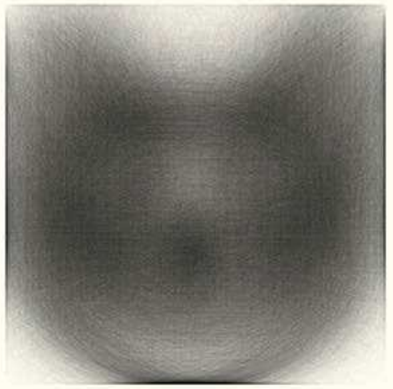

stop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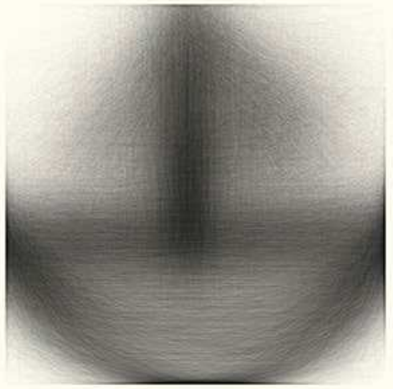
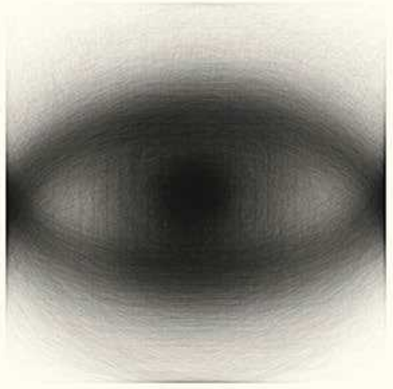
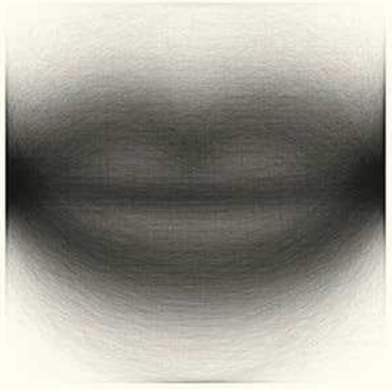
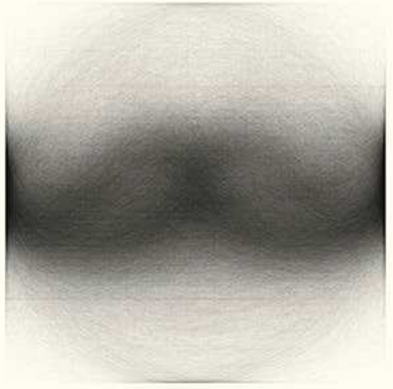
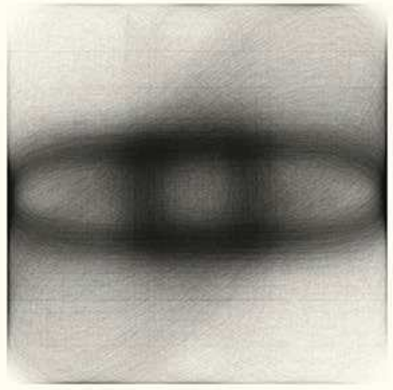

sailboat

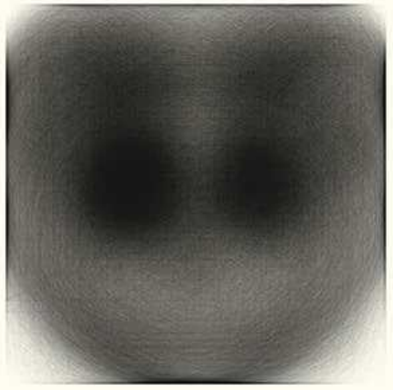

eye

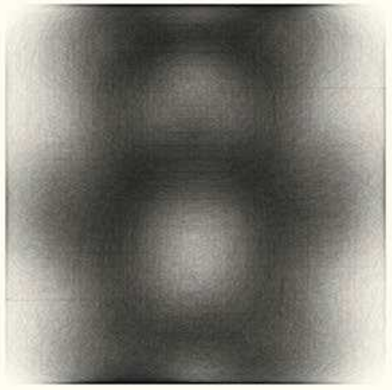

mouth

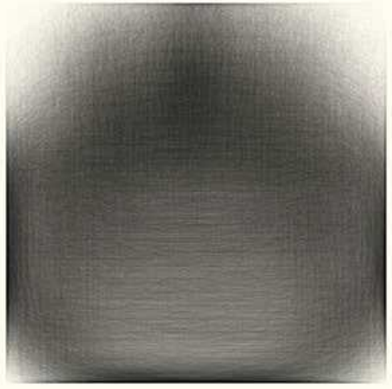

moustache

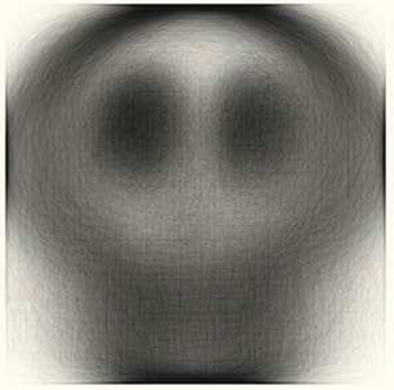

The Mona Lisa

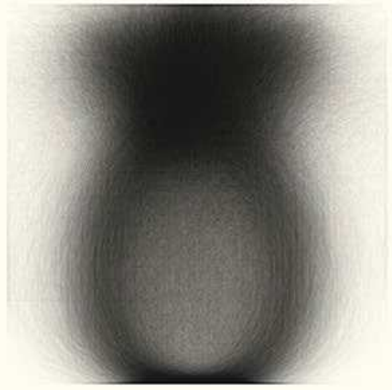

bandage


panda

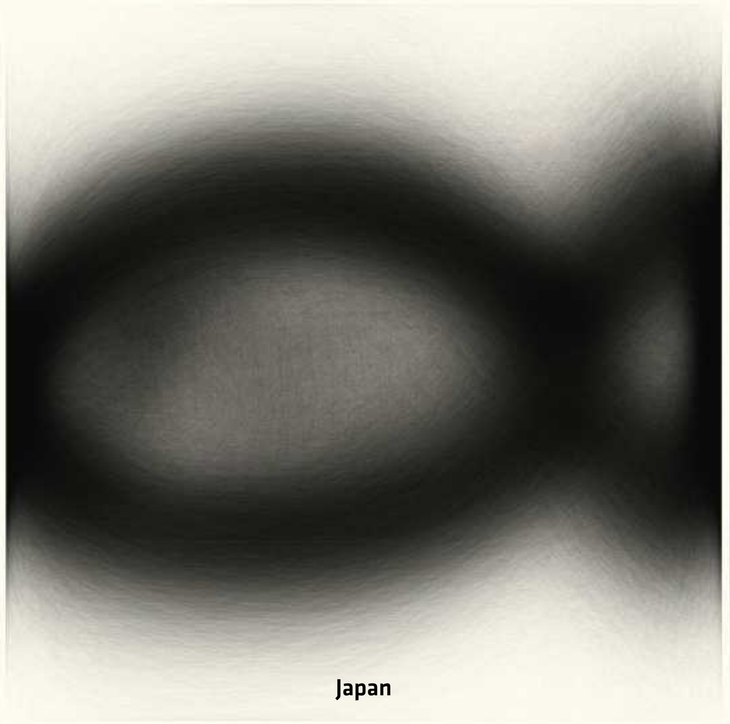

teddy-bear


cake


skull

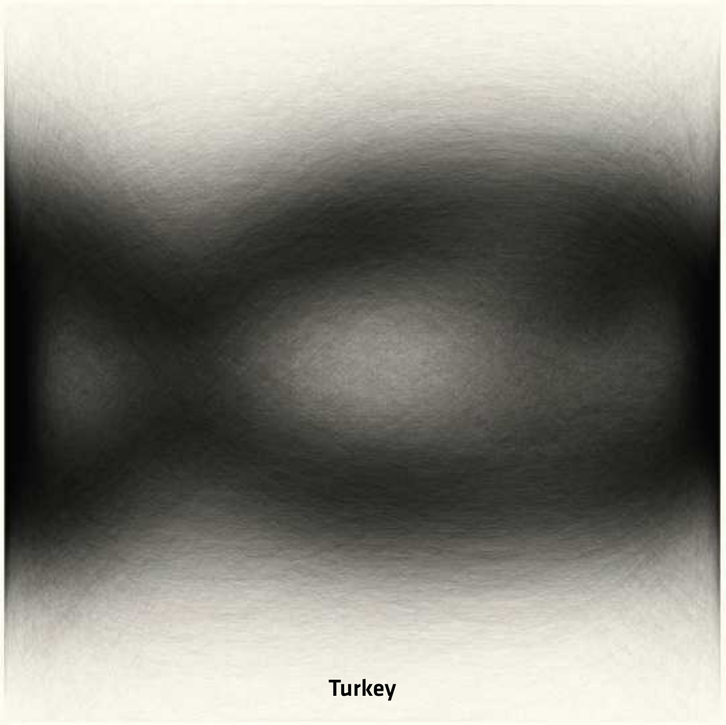

pineapple

Worldwide



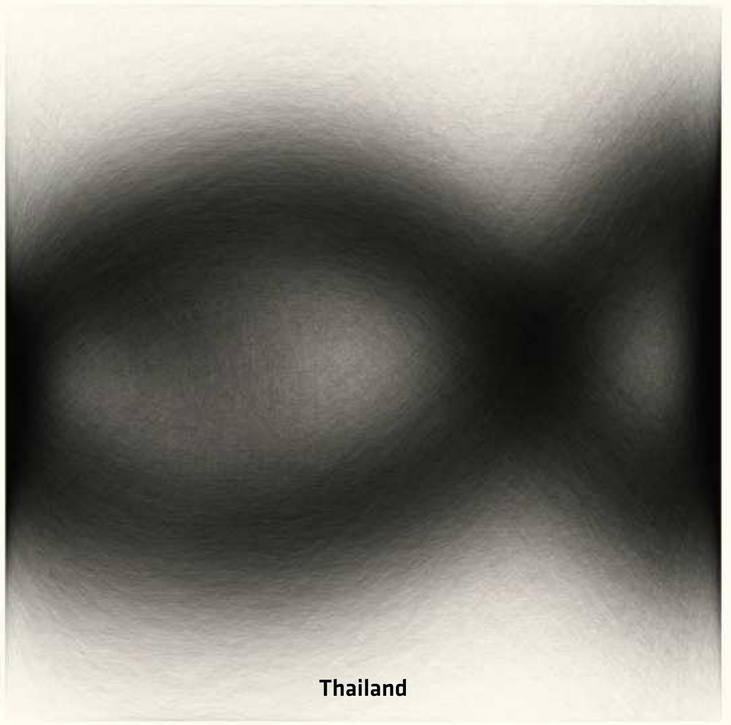
Japan

India



Turkey

Taiwan



Thailand

Regional cultural dynamics

The fish swims to the left in India, Japan, Korea, Taiwan, Thailand, to the right in Turkey, while in the rest of the world there is no agreement.

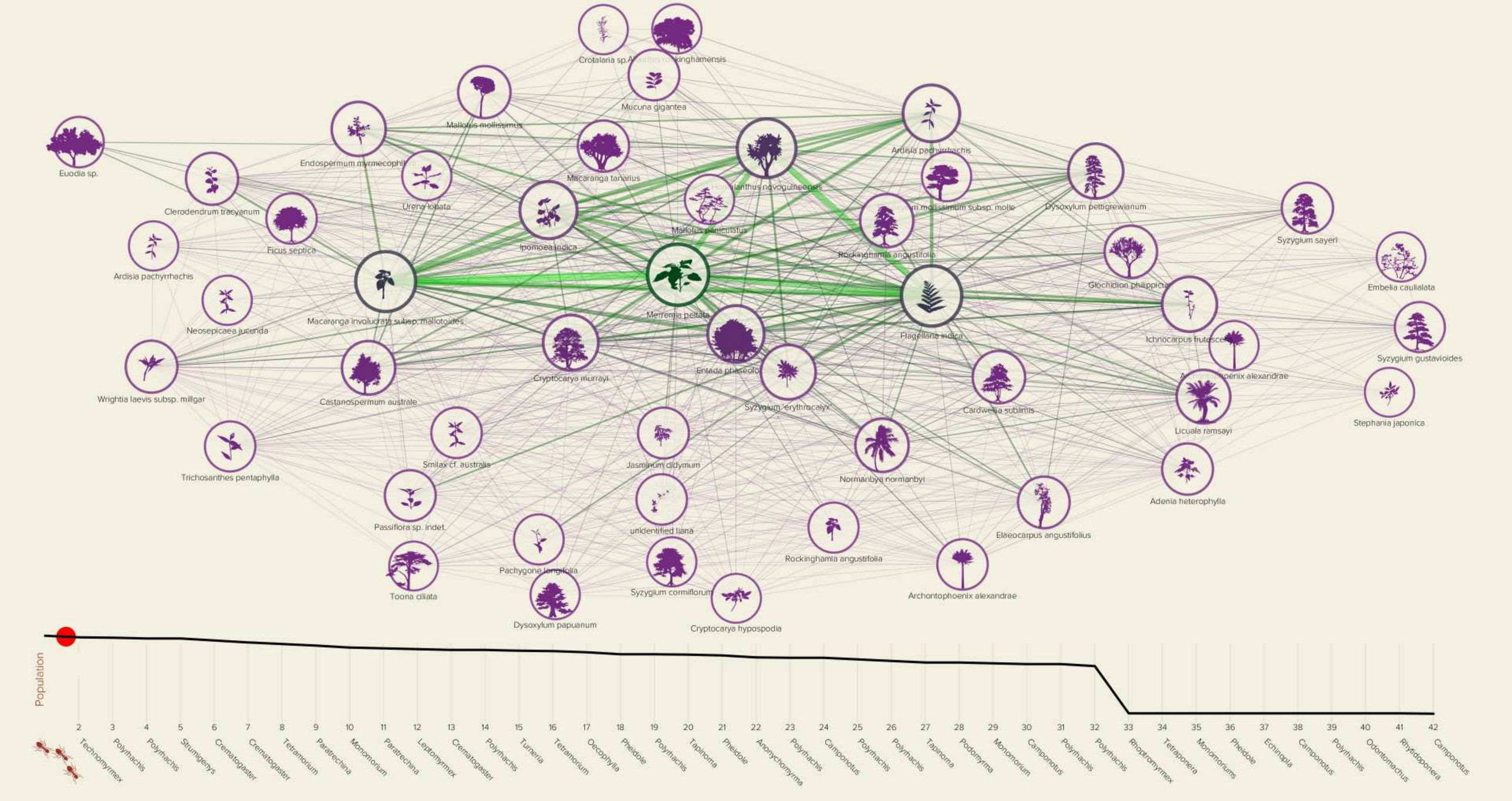
Exhibitions and publications.

This is the first analysis of the Quick Draw dataset, presented at the IEEE VIS 2017 Arts Programe conference.
This work has been featured in several galleries and exhibitions and published in several books and articles. The project is in the permanent collection at Ars Electronica Center, Linz, Austria.

Network Earth (2016)

Earth is animated by complex interactions between its life forms, rocks, atmosphere, and water. All living creatures - animals and plants, bacteria, fungi, and others - are involved in a worldwide, multi-layered web of cooperation. In this video we explore, as an example, the connections that exist between Ants and Plants, and we discover the resilience and fragility of this network. Our life depends on the health status of these and many other connections between all life forms, and the film shows how it is possible now to monitor these connections and identify whether ecological systems are in danger of failing.

LINK1 LINK2

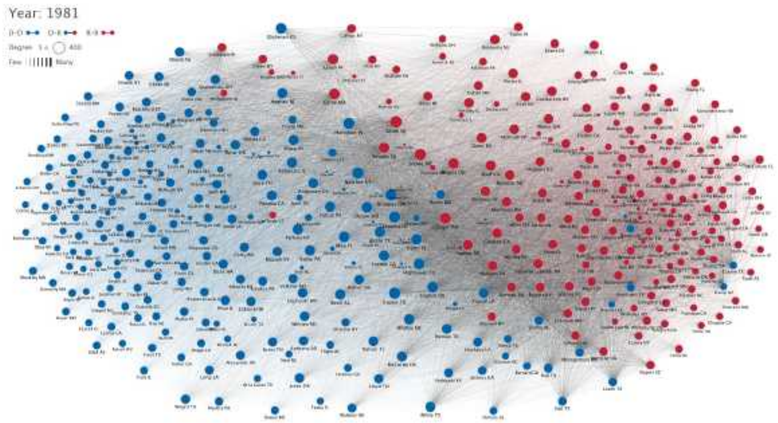

Crotalaria sp.
Mucuna gigantea
Mallotus mollissimus
Endospermum myrmecophil
Euodia sp.
Clerodendrum tracyanum
Urena lobata
Macaranga tanarius
Ardisia pachyrrhachis
Dysoxylum pettigrewianum
Ficus septica
Ipomoea indica
Mallotus penicillatus
Rockinghamia angustifolia
Syzygium sayeri
Ardisia pachyrrhachis
Glochidion philippicum
Embelia caulialata
Neosepicaea jucunda
Macaranga involucrata subsp. mallotoides
Merremia peltata
Flagellaria indica
Ichnocarpus frutescens
Syzygium gustavioides
Wrightia laevis subsp. millgar
Cryptocarya murrayi
Entada phaseoloides
Castanospermum australe
Syzygium 'erythrocalyx'
Cardwellia sublimis
Licuala ramsayi
Stephania japonica
Trichosanthes pentaphylla
Smilax cf. australis
Jasminum didymum
Normanbya normanbyi
Adenia heterophylla
Passiflora sp. indet.
unidentified liana
Elaeocarpus angustifolius
Pachygone longifolia
Rockinghamia angustifolia
Toona ciliata
Syzygium cormiflorum
Archontophoenix alexandrae
Dysoxylum papuanum
Cryptocarya hypospodia
Population
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42
Technomyrmex
Polyrhachis
Polyrhachis
Strumigenys
Crematogaster
Crematogaster
Tetramorium
Paratrechina
Monomorium
Paratrechina
Leptomyrmex
Crematogaster
Polyrhachis
Turnera
Tetramorium
Oecophylla
Pheidole
Polyrhachis
Tapinoma
Pheidole
Anonychomyrma
Polyrhachis
Camponotus
Polyrhachis
Polyrhachis
Tapinoma
Podomyrma
Monomorium
Camponotus
Polyrhachis
Polyrhachis
Rhoptromyrmex
Tetraponera
Monomorium
Pheidole
Echinopla
Camponotus
Polyrhachis
Odontomachus
Rhytidoponera
Camponotus

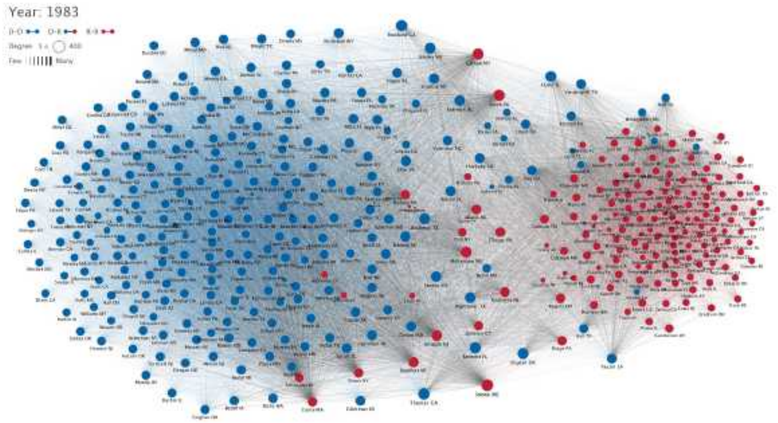
The Rise of Partisanship in the U.S. House of Representatives. (2015)

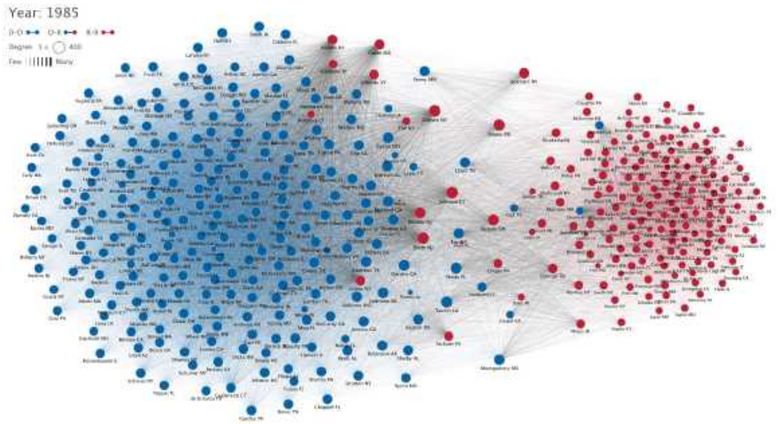
Political Polarization in the U.S. Congress has been a topic of much discussion recently. We show the party polarization of the House of Representatives through time, with a focus on which members continue to participate across party lines (such as southern Democrats from Alabama, Mississippi, Texas and Louisiana cooperating with many Republican voters in the late 1990's and 2000's).

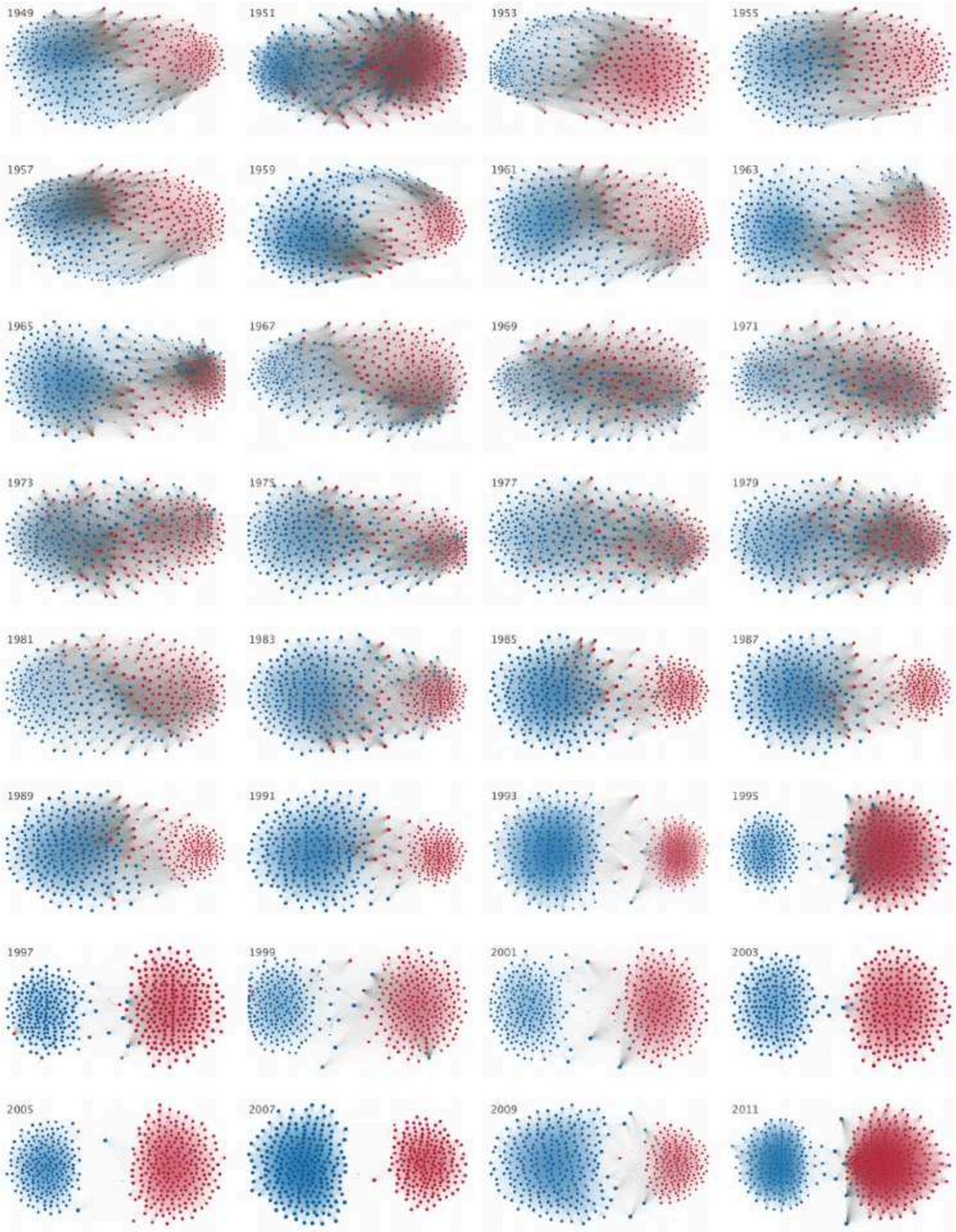
Description:
Each member of the U.S. House of Representatives from 1949 - 2012 is drawn as a single node. Republican (R) representatives are in red and Democrat (D) representatives are in blue, party affiliation changes are not reflected. Edges between nodes are drawn if each member agrees with another member more often than the "threshold value" of votes specific to that particular Congress. The threshold value is the number of agreements where any pair exhibiting this number of agreements is equally likely to comprised of two members of the same party (e.g. D-D or R-R), or a cross-party pair (e.g. D-R). (Methodology and mathematical descriptions available in our paper). Each node is made bigger or smaller based on the number of connections it has. Edges are thicker if the pair agrees on more votes. The starting year of each 2-year Congress is written above the network. The network is drawn using a linear-attraction linear-repulsion model with Barnes Hut optimization.

LINK1 LINK2









News Explorer (2015)

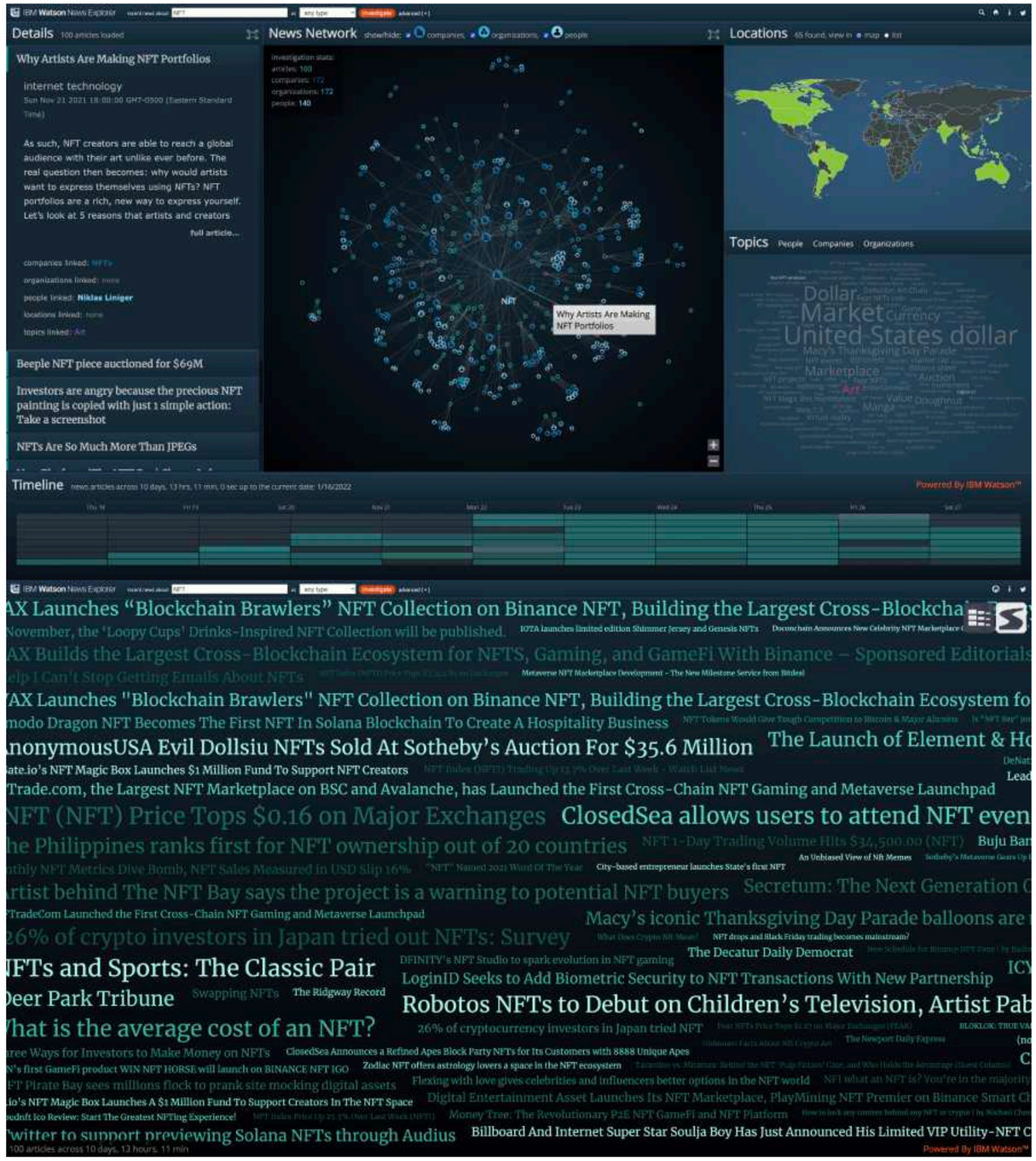
Many multimedia visualizations abstract the underlying content into aggregate displays, requiring user interaction in order to expose the original text, images or video. The drawback of this approach is that unlike traditional, numerical data, multimedia data is readily interpretable. Users can catch an image or phrase and immediately understand the content.

News Explorer processes up-to-date news, 250,000 articles per day, 70,000 sources, distilling vast unstructured text into entities and concepts and connecting the dots within a suite of linked data visualizations.

LINK1 LINK2

News Exlporer lets a client who wants to know more about NFTs (for example) find information about People, Companies, Organizations, Locations and Topics occurring in the news. The relevant documents are aggregated on each dimension and visualized in connection networks, generated on the fly by the application.

On the left, there is the list of the most relevant articles; in the upper right corner, the map with the countries most cited in the articles, and in the lower right corner, the word cloud of the topics, people, companies, organizations that appear the most in newspaper articles.



IBM Watson News Explorer recent news about NFT as any type investigate advanced [+]

Details 100 articles loaded

"NFT" Named 2021 Word Of The Year

internet technology

Tue Nov 23 2021 19:00:00 GMT-0500 (Eastern Standard Time)

Home > Tech > "NFT" Named 2021 Word Of The Year "NFT" Named 2021 Word Of The Year Dia Dipasupil/Getty Images "NFT" beat out "crypto" and "double-vaxxed" to be Collins Dictionar's word of the year. If you've used the internet more than a handful of times in 2021, it's almost

full article...

companies linked: **NFTs**, **Collins Learning**

organizations linked: none

people linked: **Collins**, **Collins Dictionar**, **Alex Beecroft**, **Eminem**, **Post Malone**, **Benny**

locations linked: none

topics linked: Hip hop

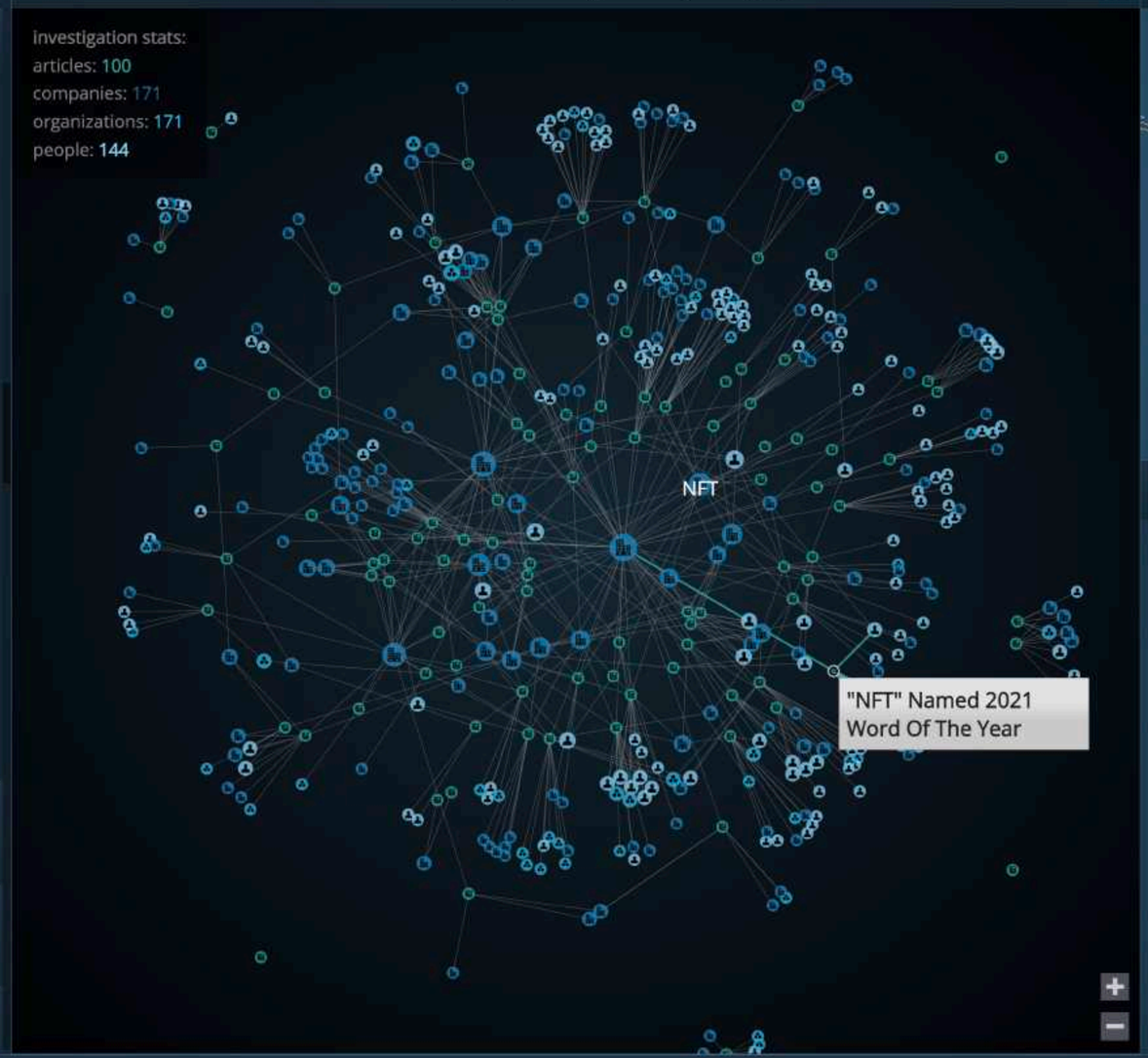
Money Tree: The Revolutionary P2E NFT GameFi and NFT Platform

IOTA launches limited edition Shimmer Jersey and Genesis NFTs

Macy's iconic Thanksgiving Day Parade

News Network show/hide: companies, organizations, people

investigation stats:
articles: 100
companies: 171
organizations: 171
people: 144

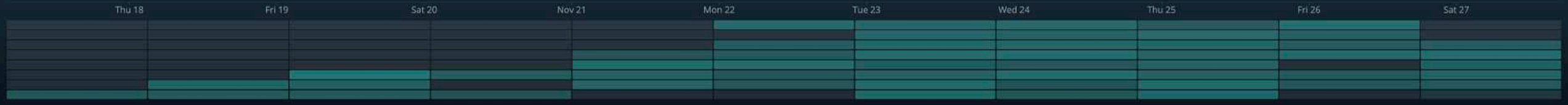


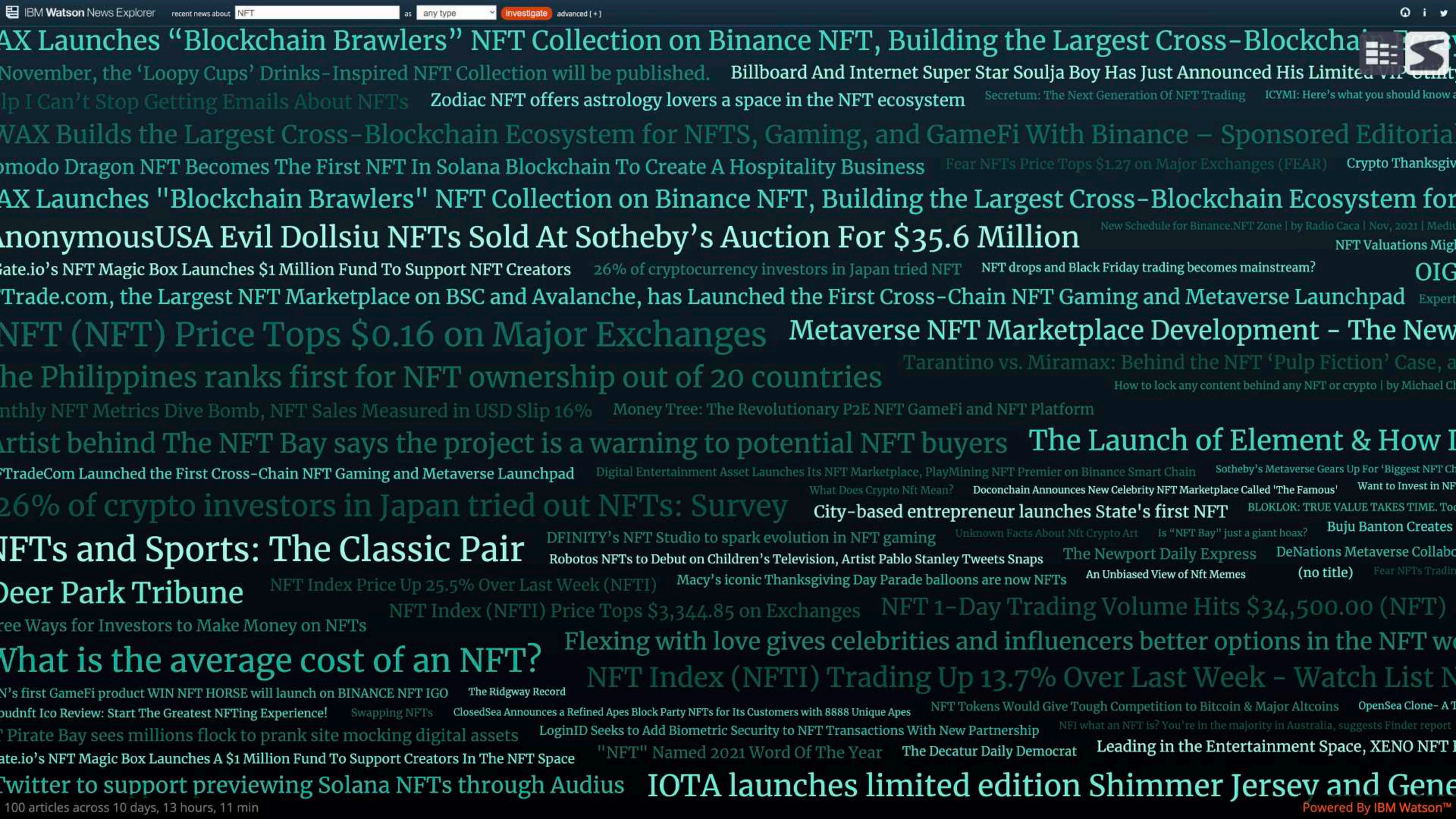
Locations 68 found, view in map list

Topics People Companies Organizations

Timeline news articles across 10 days, 13 hrs, 11 min, 0 sec up to the current date: 1/15/2022

Powered By IBM Watson™




IBM Watson News Explorer
recent news about
NFT
as
any type
investigate
advanced [+]
AX Launches “Blockchain Brawlers” NFT Collection on Binance NFT, Building the Largest Cross-Blockcha
November, the ‘Loopy Cups’ Drinks-Inspired NFT Collection will be published.
Billboard And Internet Super Star Soulja Boy Has Just Announced His Limited
lp I Can’t Stop Getting Emails About NFTs
Zodiac NFT offers astrology lovers a space in the NFT ecosystem
Secretum: The Next Generation Of NFT Trading
ICYMI: Here’s what you should know a
WAX Builds the Largest Cross-Blockchain Ecosystem for NFTS, Gaming, and GameFi With Binance – Sponsored Editoria
omodo Dragon NFT Becomes The First NFT In Solana Blockchain To Create A Hospitality Business
Fear NFTs Price Tops $1.27 on Major Exchanges (FEAR)
Crypto Thanksgiv
AX Launches "Blockchain Brawlers" NFT Collection on Binance NFT, Building the Largest Cross-Blockchain Ecosystem for
AnonymousUSA Evil Dollsiu NFTs Sold At Sotheby’s Auction For $35.6 Million
New Schedule for Binance.NFT Zone | by Radio Caca | Nov, 2021 | Medit
NFT Valuations Migh
Gate.io’s NFT Magic Box Launches $1 Million Fund To Support NFT Creators
26% of cryptocurrency investors in Japan tried NFT
NFT drops and Black Friday trading becomes mainstream?
OIG
Trade.com, the Largest NFT Marketplace on BSC and Avalanche, has Launched the First Cross-Chain NFT Gaming and Metaverse Launchpad
Expert
NFT (NFT) Price Tops $0.16 on Major Exchanges
Metaverse NFT Marketplace Development - The New
Tarantino vs. Miramax: Behind the NFT ‘Pulp Fiction’ Case, a
he Philippines ranks first for NFT ownership out of 20 countries
How to lock any content behind any NFT or crypto | by Michael Ch
nthly NFT Metrics Dive Bomb, NFT Sales Measured in USD Slip 16%
Money Tree: The Revolutionary P2E NFT GameFi and NFT Platform
Artist behind The NFT Bay says the project is a warning to potential NFT buyers
The Launch of Element & How I
TradeCom Launched the First Cross-Chain NFT Gaming and Metaverse Launchpad
Digital Entertainment Asset Launches Its NFT Marketplace, PlayMining NFT Premier on Binance Smart Chain
Sotheby’s Metaverse Gears Up For ‘Biggest NFT Ch
What Does Crypto Nft Mean?
Doconchain Announces New Celebrity NFT Marketplace Called 'The Famous'
Want to Invest in NF
26% of crypto investors in Japan tried out NFTs: Survey
City-based entrepreneur launches State's first NFT
BLOKLOK: TRUE VALUE TAKES TIME. Too
NFTs and Sports: The Classic Pair
DFINITY’s NFT Studio to spark evolution in NFT gaming
Unknown Facts About Nft Crypto Art
Is “NFT Bay” just a giant hoax?
Buju Banton Creates
Robotos NFTs to Debut on Children’s Television, Artist Pablo Stanley Tweets Snaps
The Newport Daily Express
DeNations Metaverse Collabo
Deer Park Tribune
NFT Index Price Up 25.5% Over Last Week (NFTI)
Macy’s iconic Thanksgiving Day Parade balloons are now NFTs
An Unbiased View of Nft Memes
(no title)
Fear NFTs Tradin
NFT Index (NFTI) Price Tops $3,344.85 on Exchanges
NFT 1-Day Trading Volume Hits $34,500.00 (NFT)
ree Ways for Investors to Make Money on NFTs
Flexing with love gives celebrities and influencers better options in the NFT w
What is the average cost of an NFT?
NFT Index (NFTI) Trading Up 13.7% Over Last Week - Watch List N
N’s first GameFi product WIN NFT HORSE will launch on BINANCE NFT IGO
The Ridgway Record
oudnft Ico Review: Start The Greatest NFTing Experience!
Swapping NFTs
ClosedSea Announces a Refined Apes Block Party NFTs for Its Customers with 8888 Unique Apes
NFT Tokens Would Give Tough Competition to Bitcoin & Major Altcoins
OpenSea Clone- A T
Pirate Bay sees millions flock to prank site mocking digital assets
LoginID Seeks to Add Biometric Security to NFT Transactions With New Partnership
NFI what an NFT is? You’re in the majority in Australia, suggests Finder report
ate.io’s NFT Magic Box Launches A $1 Million Fund To Support Creators In The NFT Space
"NFT" Named 2021 Word Of The Year
The Decatur Daily Democrat
Leading in the Entertainment Space, XENO NFT
Twitter to support previewing Solana NFTs through Audius
IOTA launches limited edition Shimmer Jersey and Gene
100 articles across 10 days, 13 hours, 11 min
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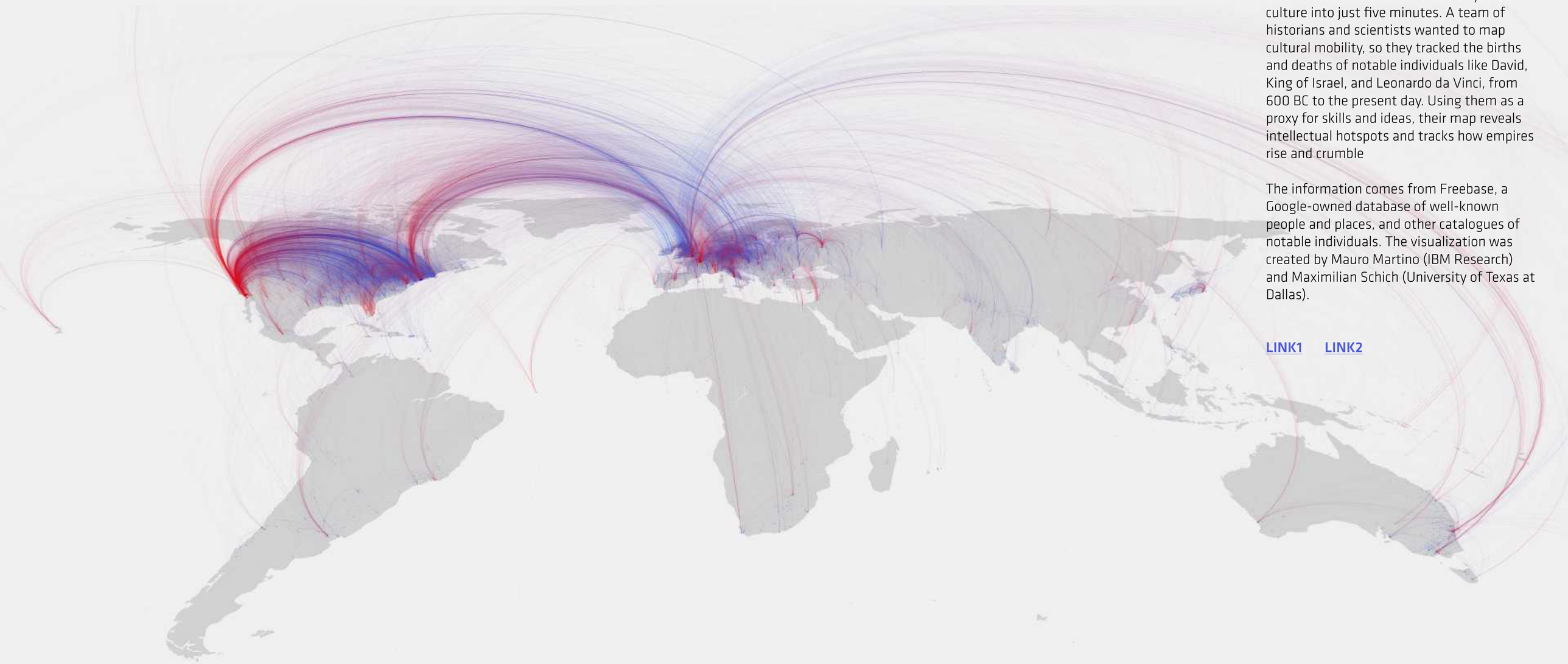
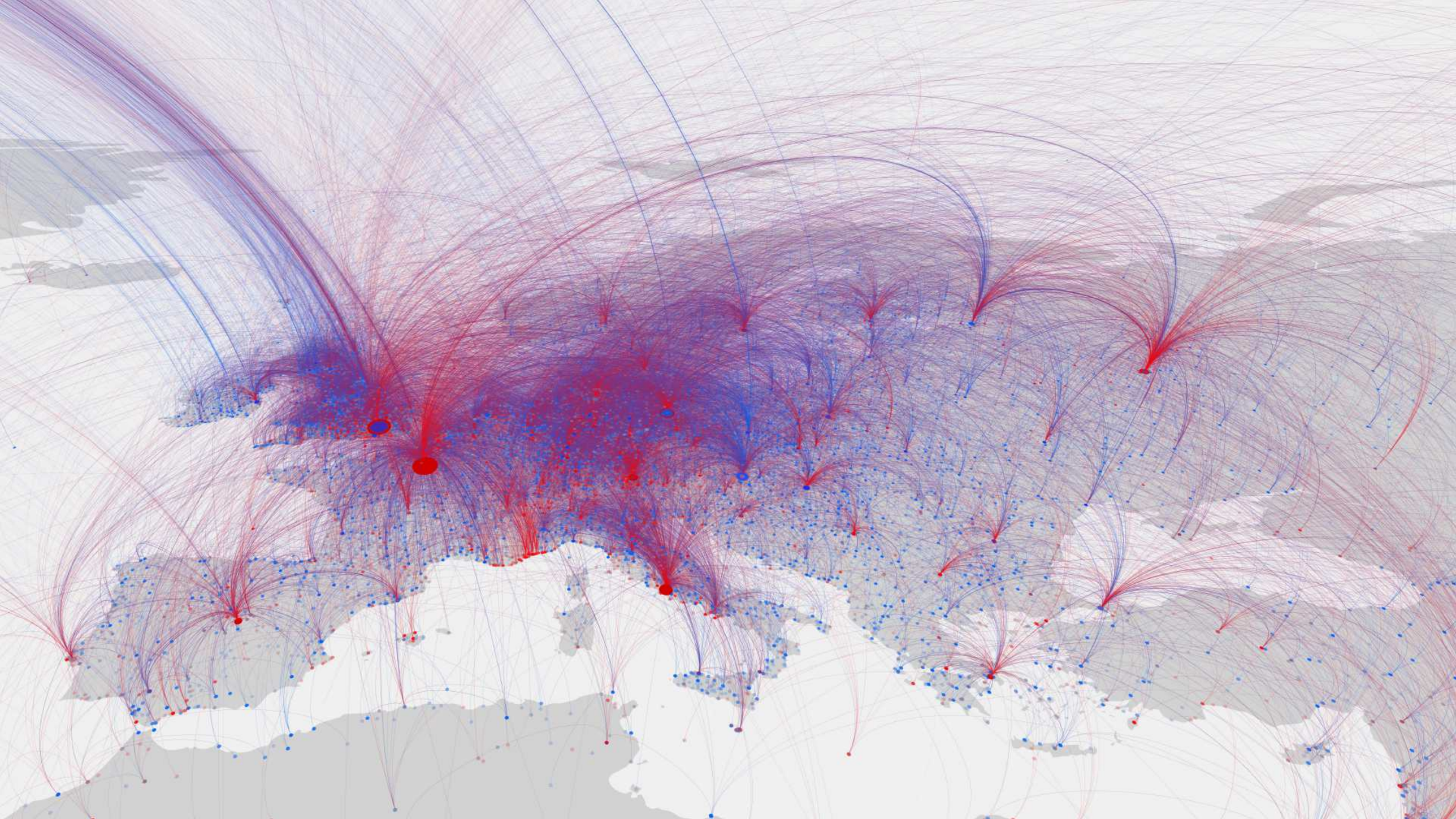


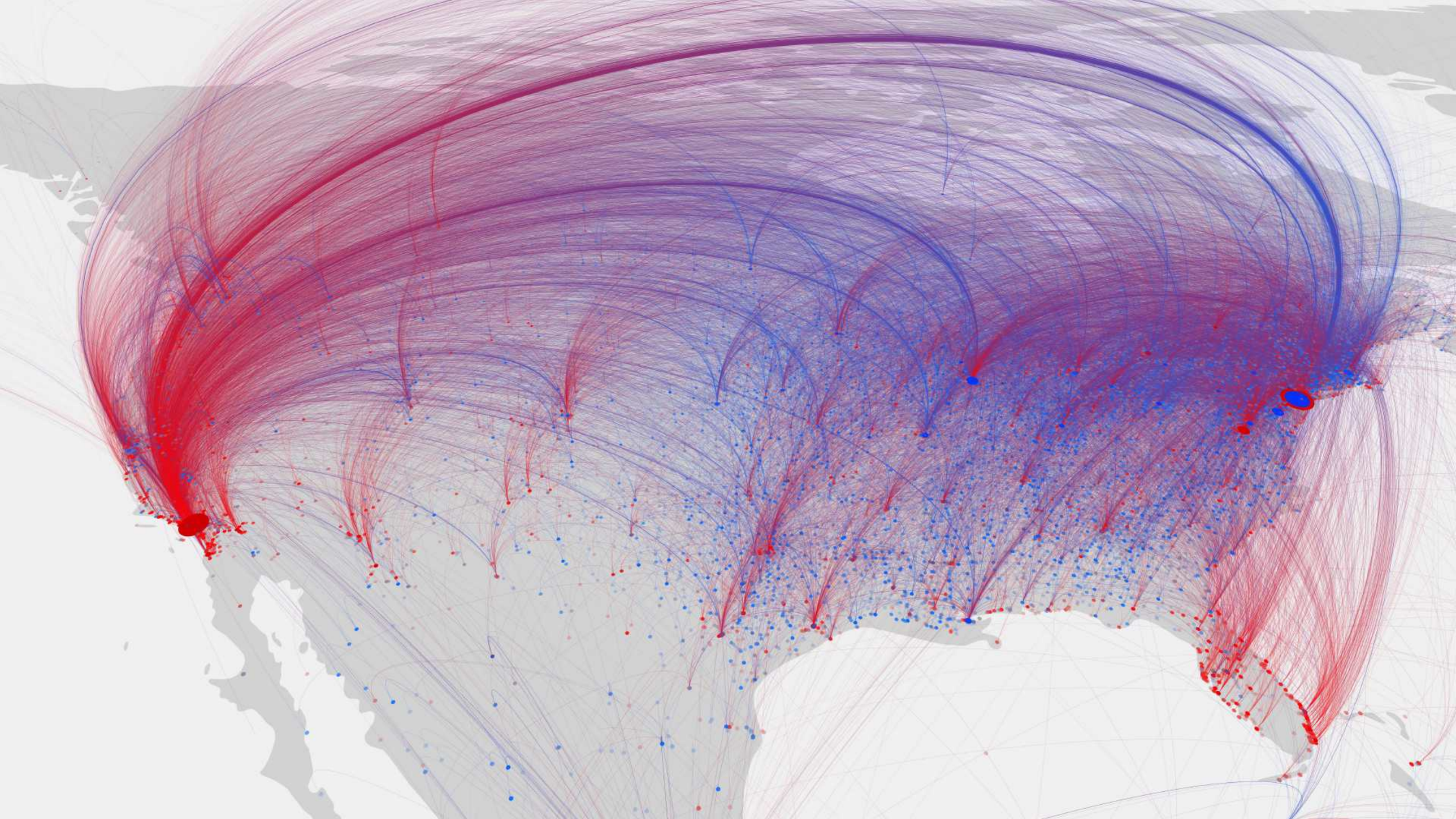
Charting Culture (2014)

This animation distils hundreds of years of culture into just five minutes. A team of historians and scientists wanted to map cultural mobility, so they tracked the births and deaths of notable individuals like David, King of Israel, and Leonardo da Vinci, from 600 BC to the present day. Using them as a proxy for skills and ideas, their map reveals intellectual hotspots and tracks how empires rise and crumble

The information comes from Freebase, a Google-owned database of well-known people and places, and other catalogues of notable individuals. The visualization was created by Mauro Martino (IBM Research) and Maximilian Schich (University of Texas at Dallas).

LINK1 LINK2

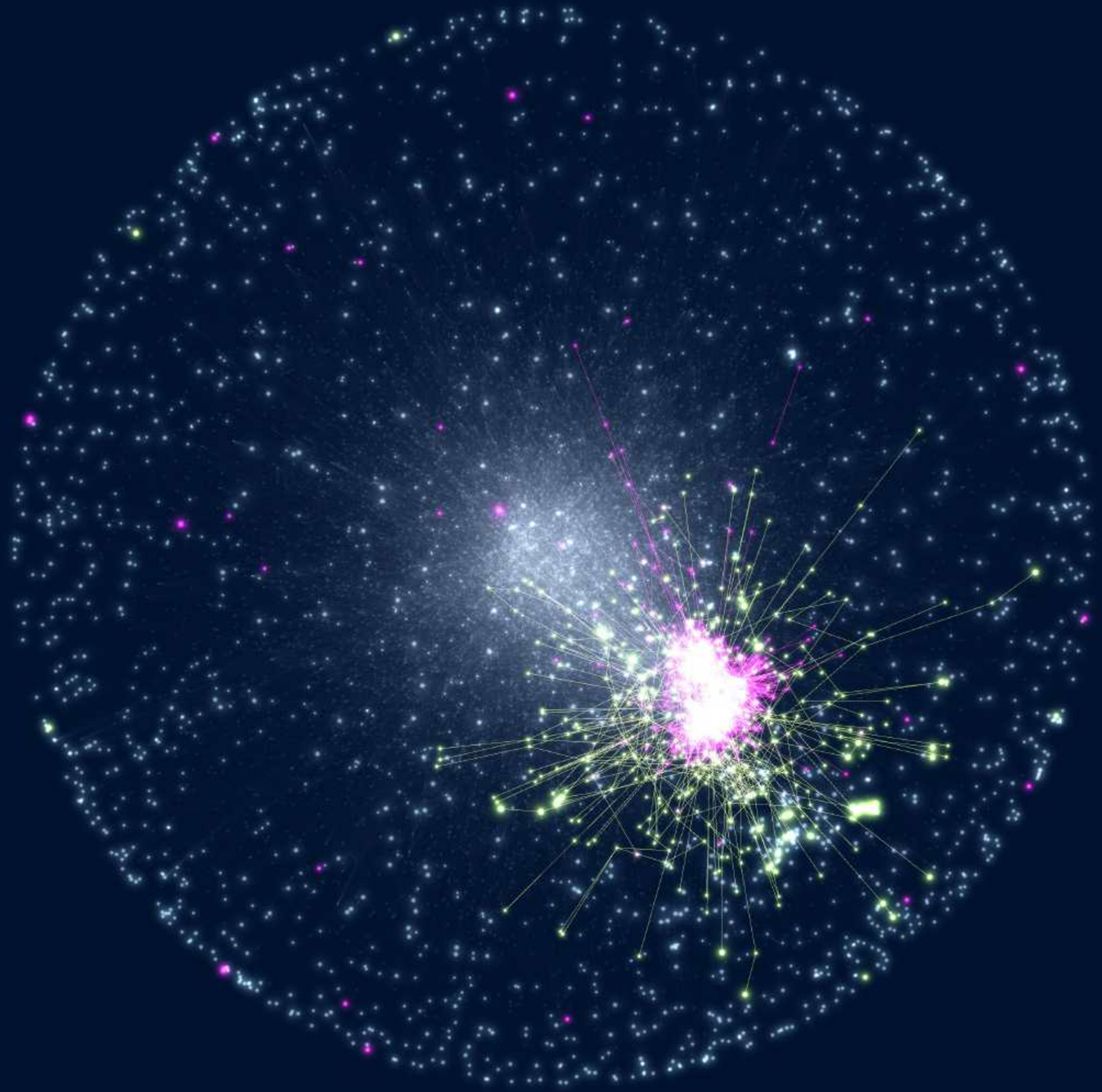


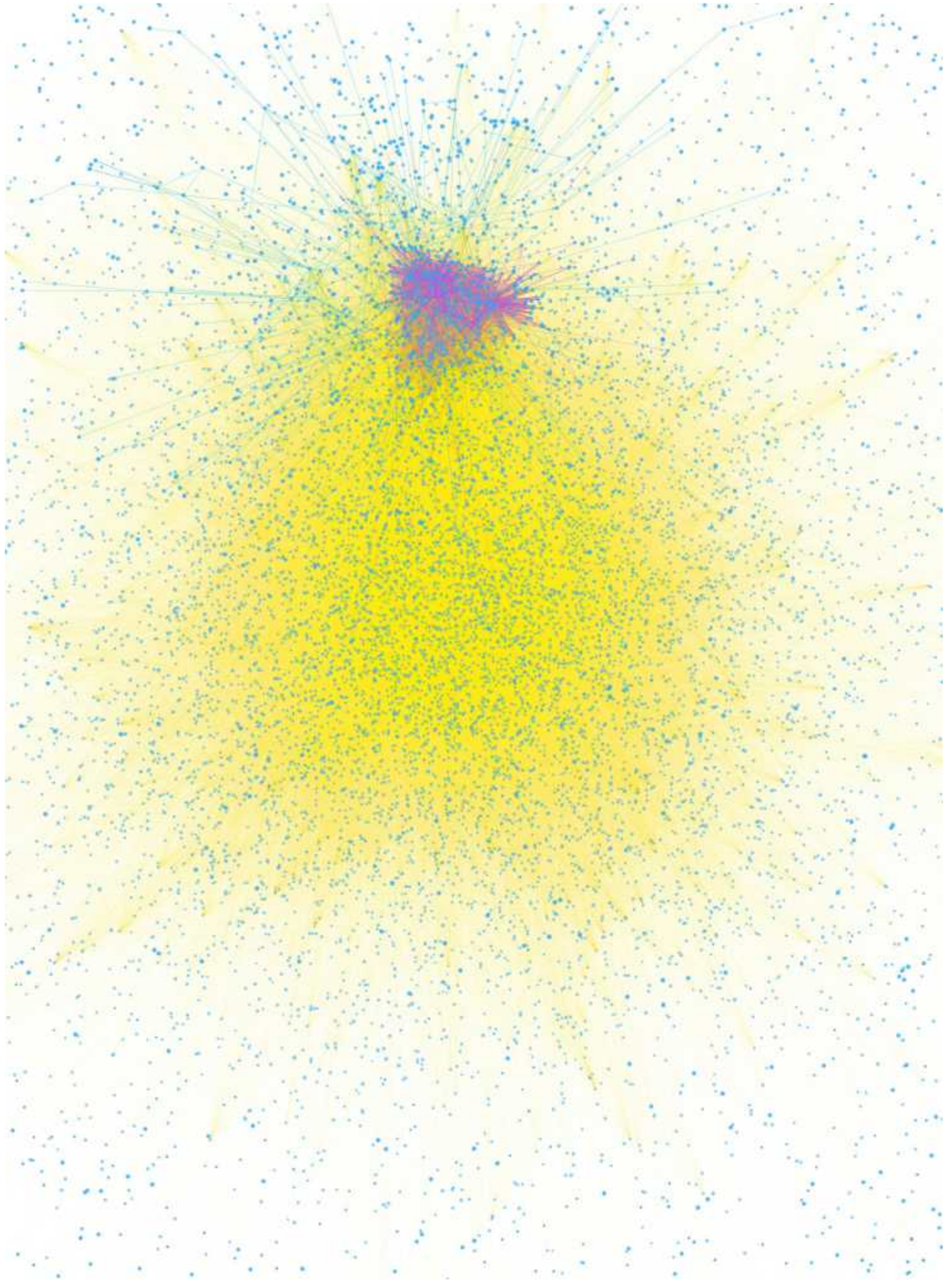


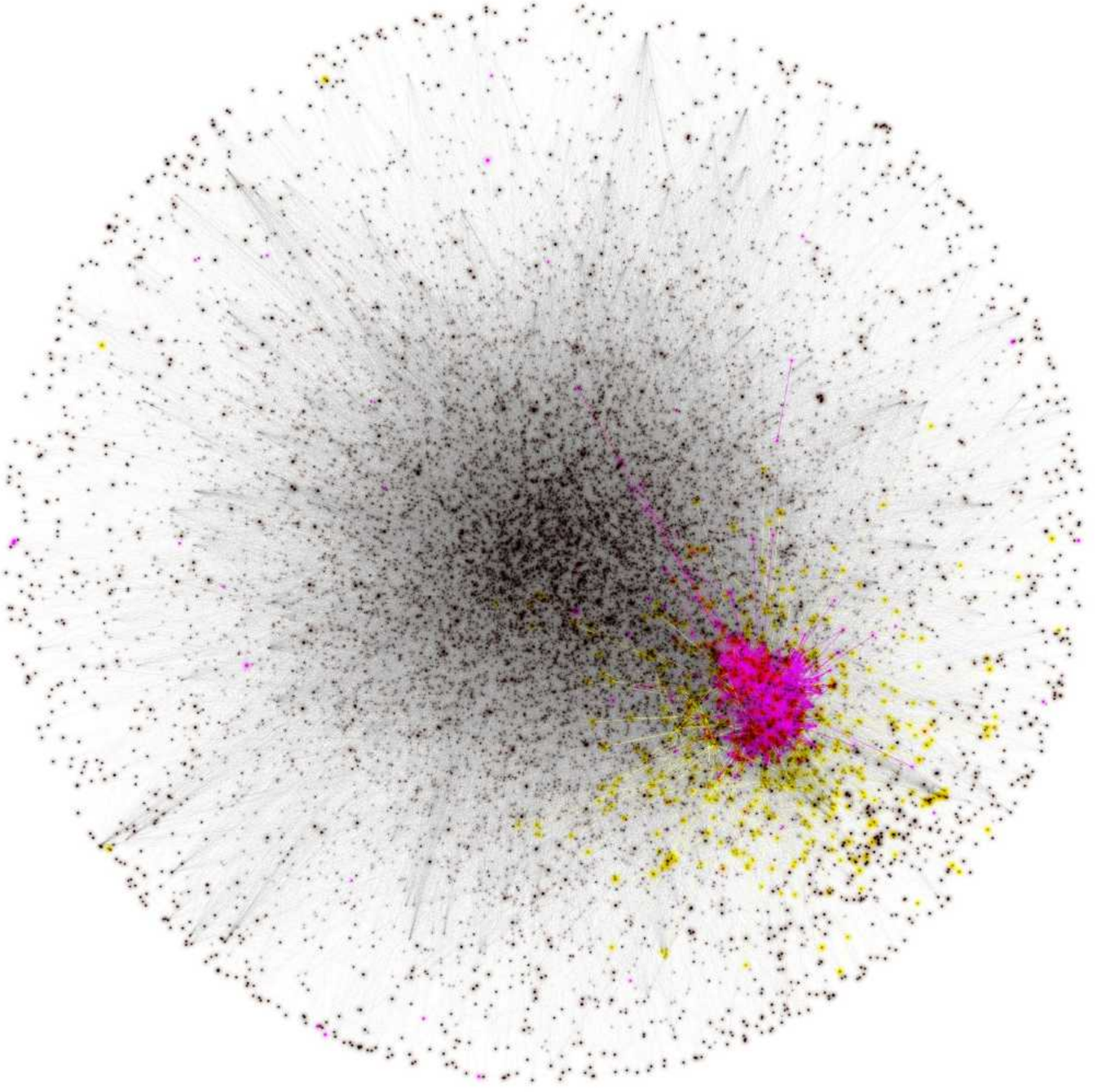
Interactome (2012)

Network-based approaches to human disease have multiple potential biological and clinical applications. As the first step in exploring the interplay between networks and human diseases, we need a comprehensive and accurate molecular and phenotypic networks. Network within our cells elucidates how our genes and molecules interact with each other. But how do we connect this stunning map of our inner cellular interconnectedness to human disease?
To grasp the magnitude of the problem, let us look at the current network of a human cell.

VIDEO



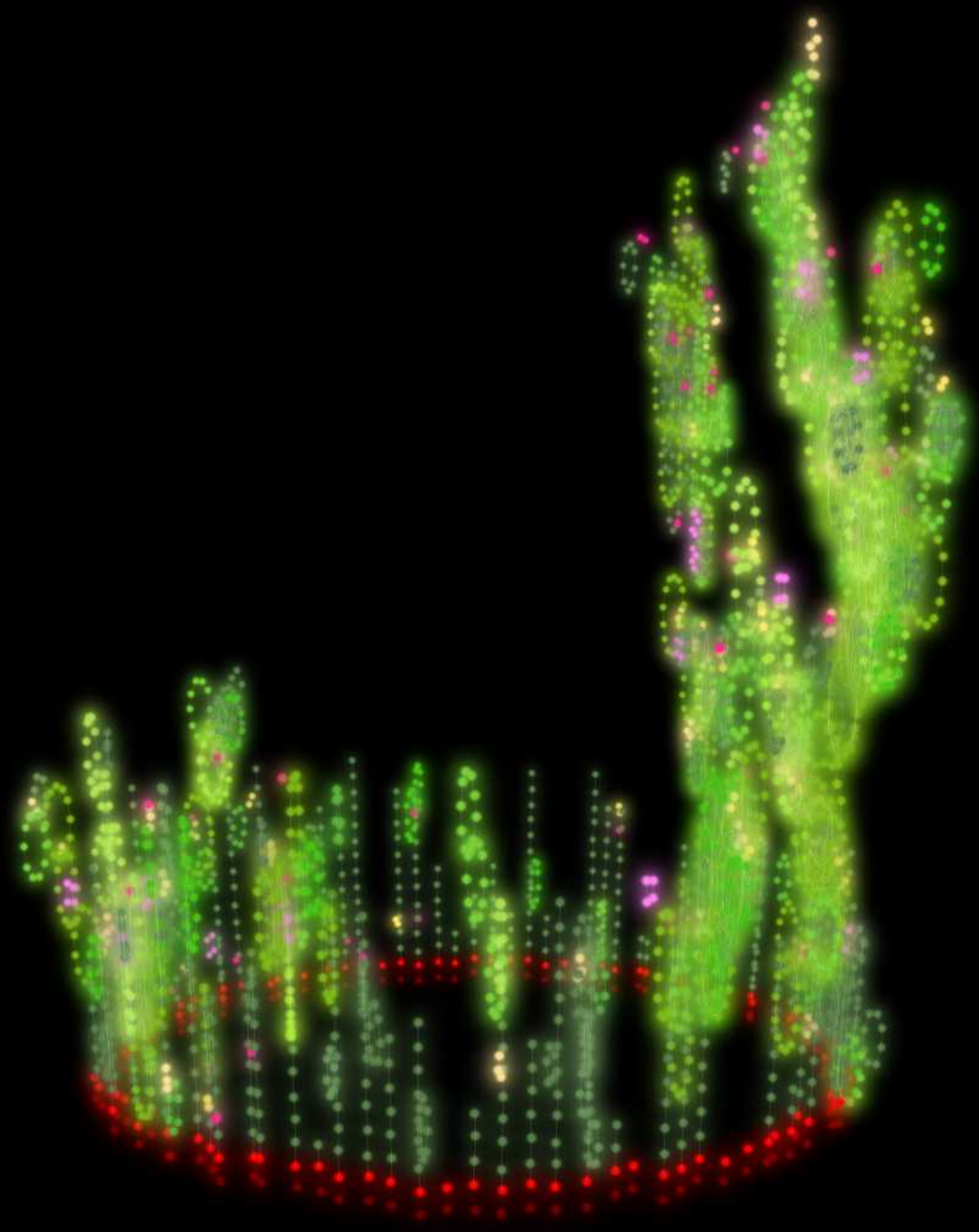


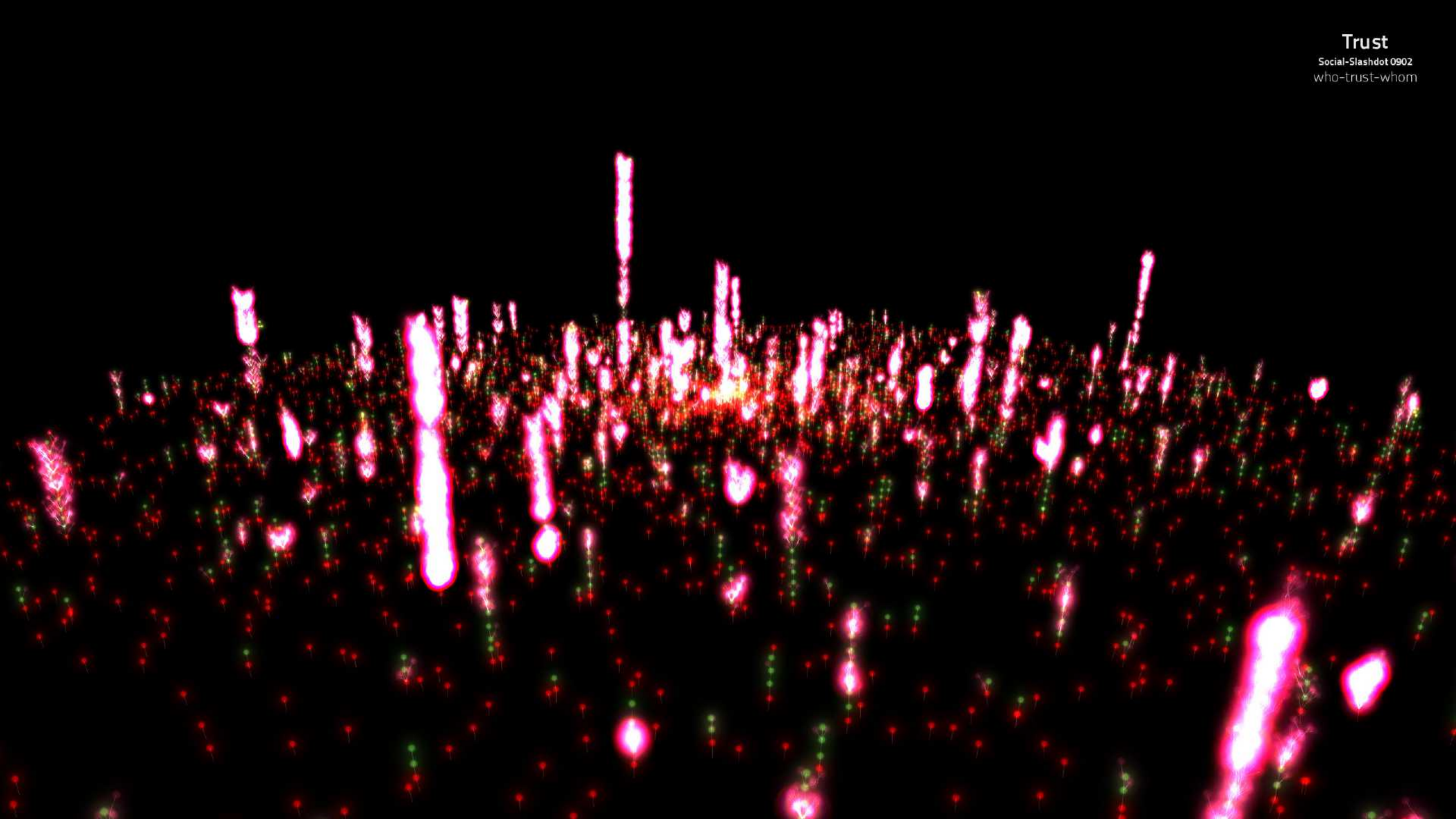


Controllability of Complex Networks (2011)

This movie demonstrates vividly the essence of the network controllability paper: How to control a complex network with minimum number of nodes? For a given directed network, we calculate its maximum matching: a largest set of edges without common heads or tails. From it we identify the minimum set of driver nodes to control. By injecting signals to those driver nodes, we can fully control the network. There is a “cactus” structure underlying the controlled network, which is the “skeleton” for maintaining controllability. We show the cactus structures for both random networks and real-world networks in the movie.

LINK

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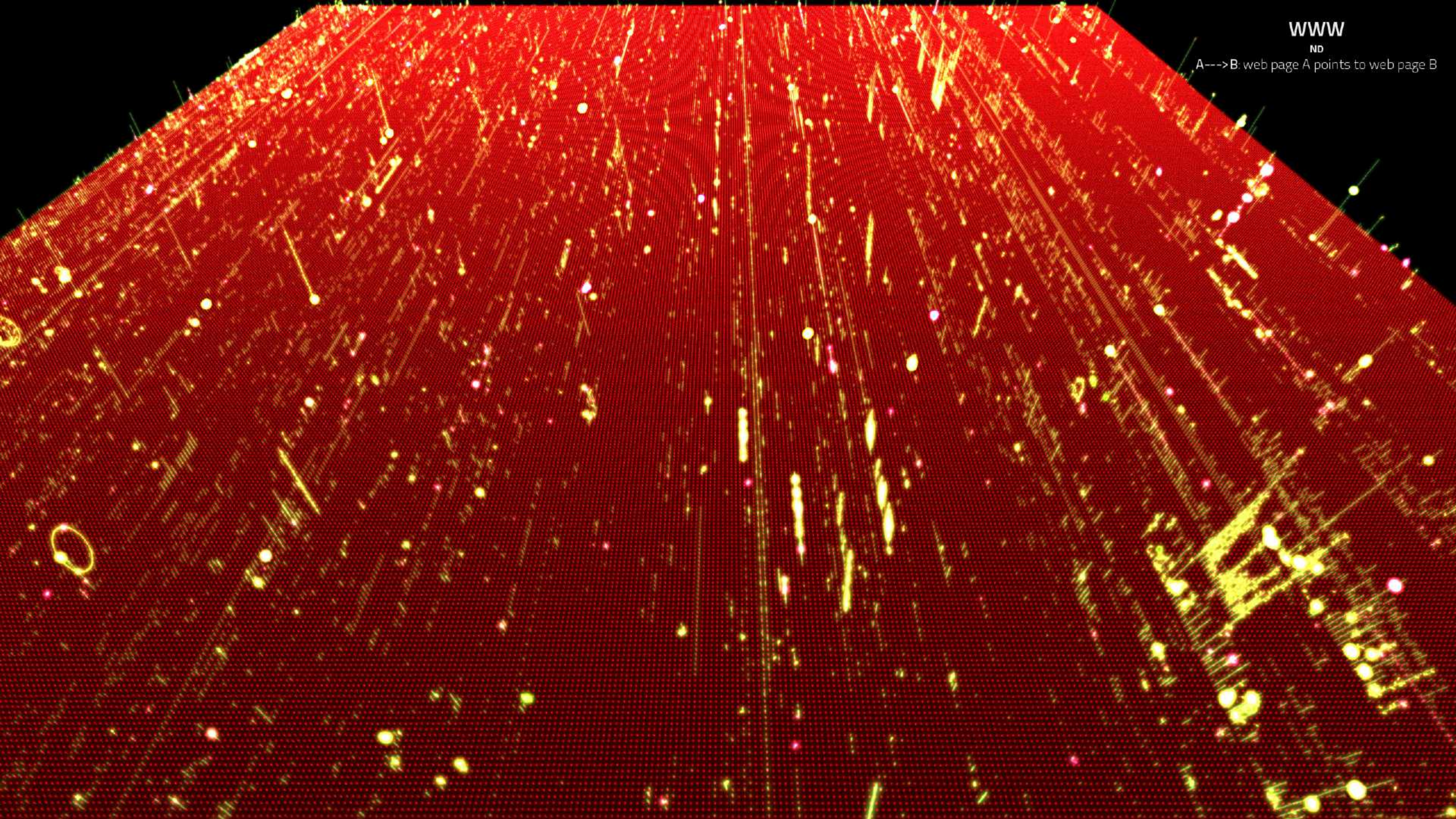
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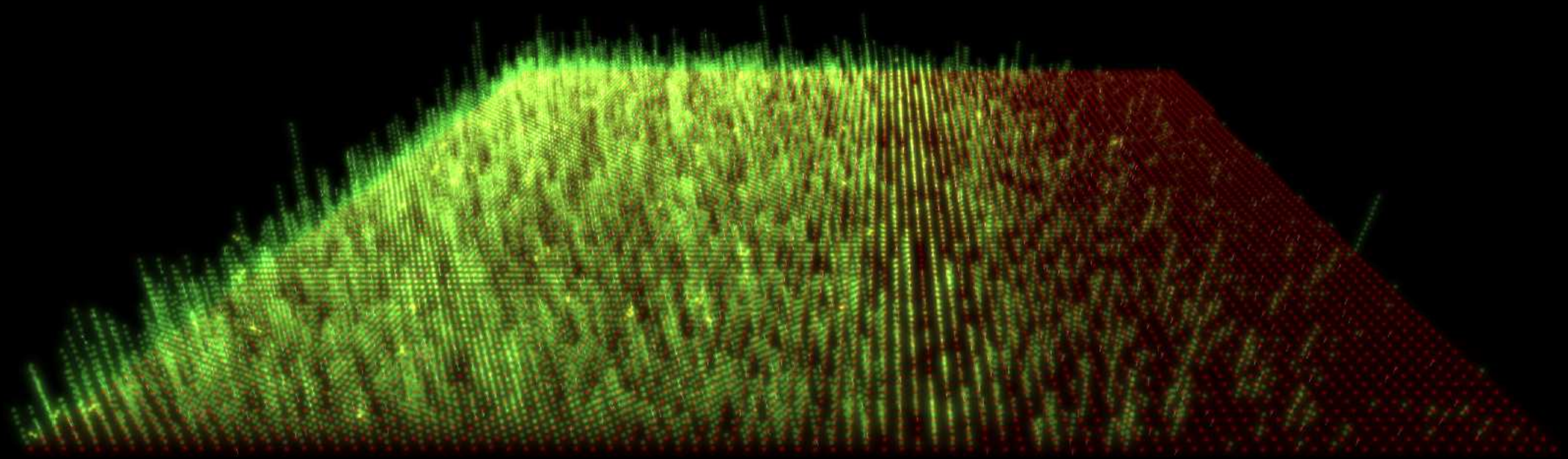

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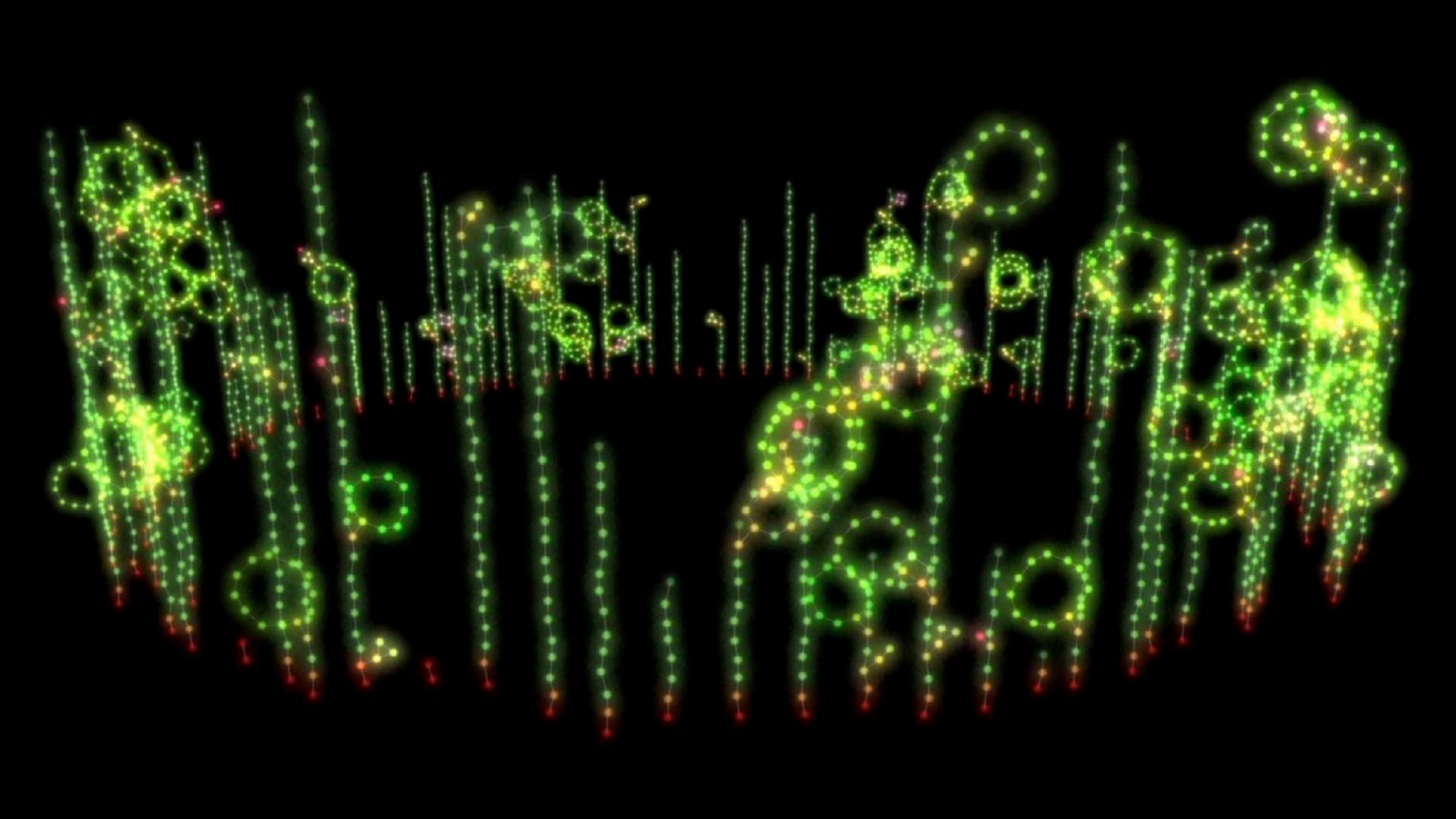

Place Pulse (2013)

Place Pulse web-app uses crowdsourcing to convert people's perceptions of streets into a quantitative benchmark for measuring fuzzy qualities like how safe, rich, and unique a city feels.

VIDEO LINK

Redrawing the map of Great Britain from a network of human interactions. (2010)

Do regional boundaries defined by governments respect the more natural ways that people interact across space? This paper proposes a novel, fine-grained approach to regional delineation, based on analyzing networks of billions of individual human transactions. Given a geographical area and some measure of the strength of links between its inhabitants, we show how to partition the area into smaller, non-overlapping regions while minimizing the disruption to each person's links. We tested our method on the largest non-Internet human network, inferred from a large telecommunications database in Great Britain. Our partitioning algorithm yields geographically cohesive regions that correspond remarkably well with administrative regions, while unveiling unexpected spatial structures that had previously only been hypothesized in the literature. We also quantify the effects of partitioning, showing for instance that the effects of a possible secession of Wales from Great Britain would be twice as disruptive for the human network than that of Scotland.

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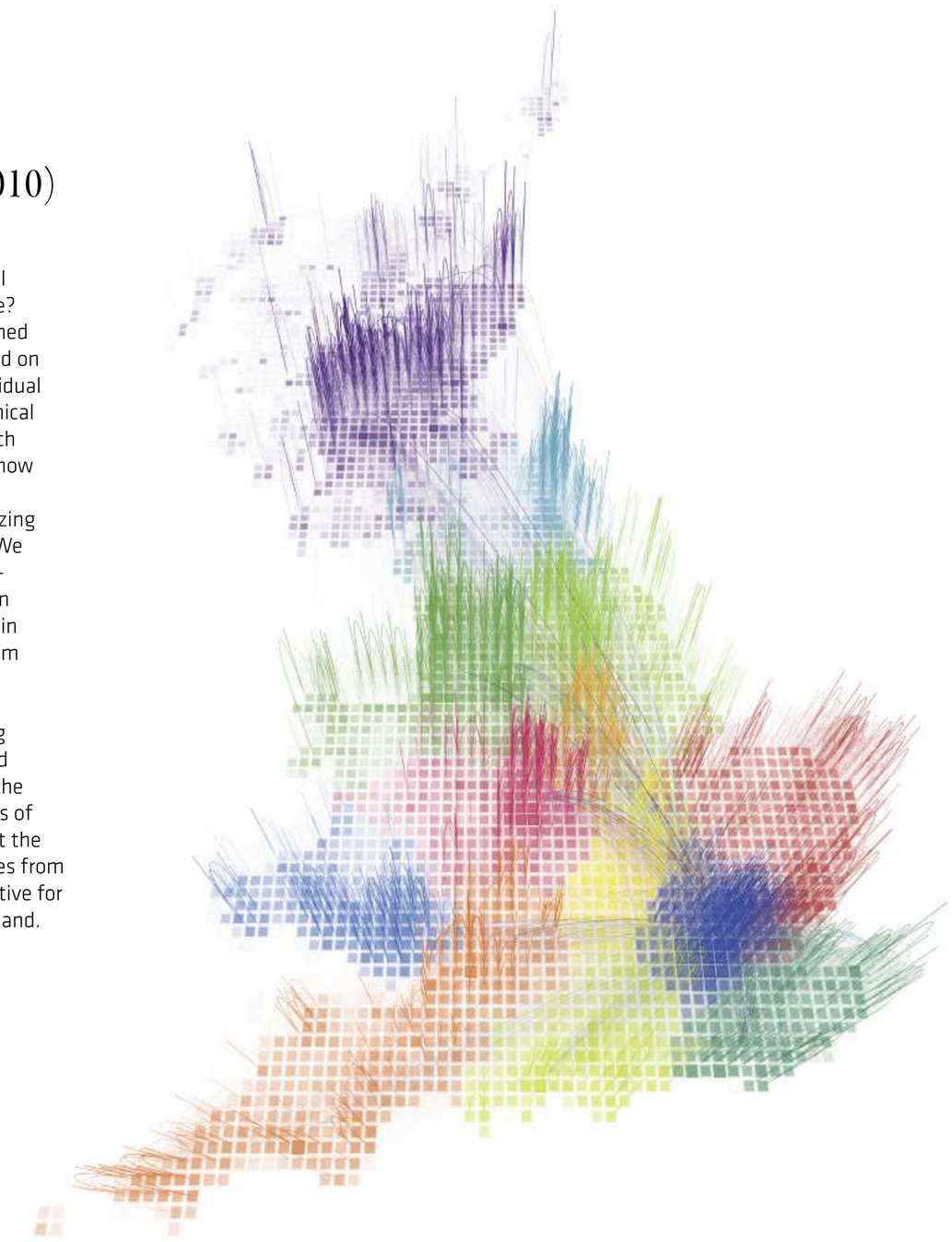
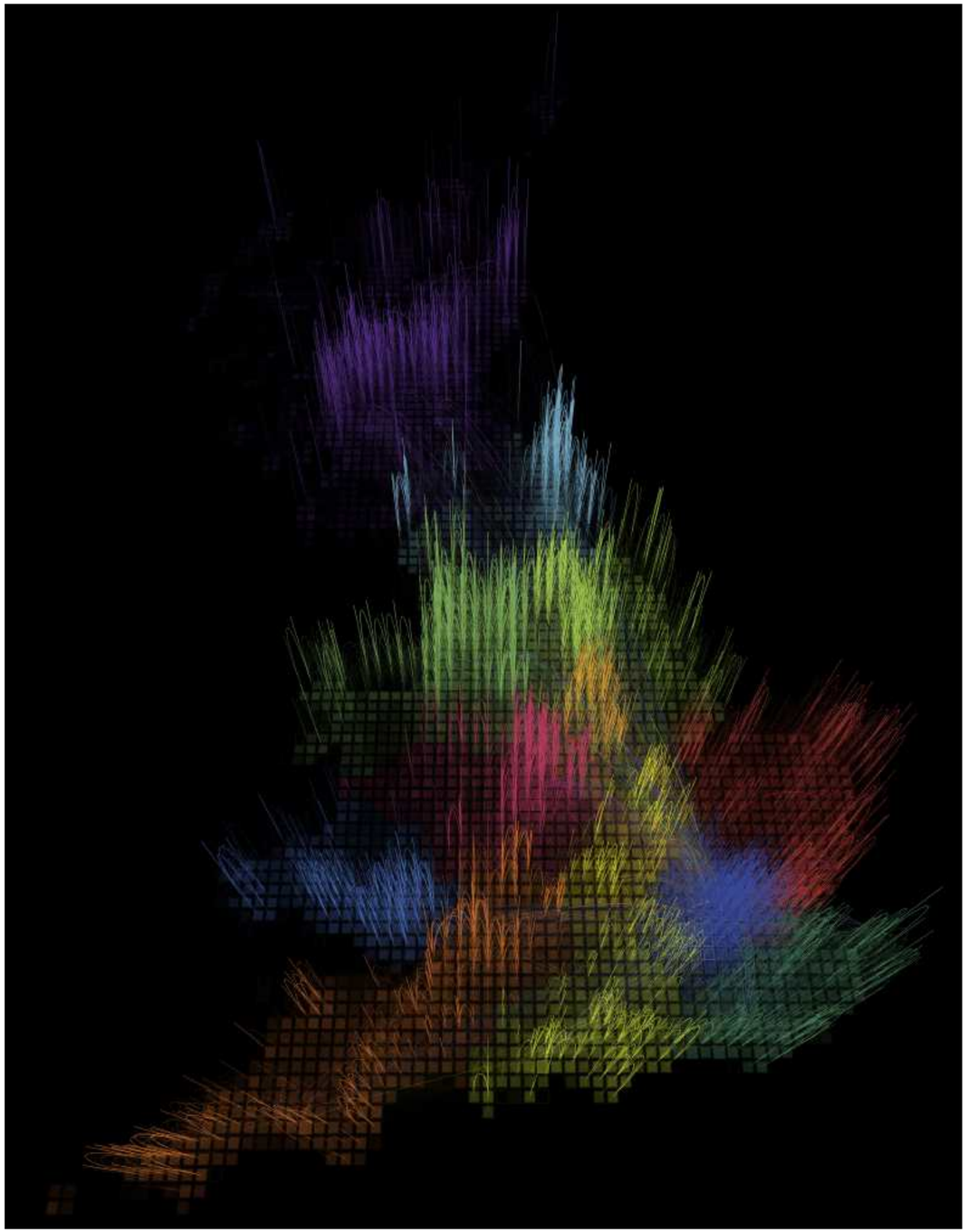
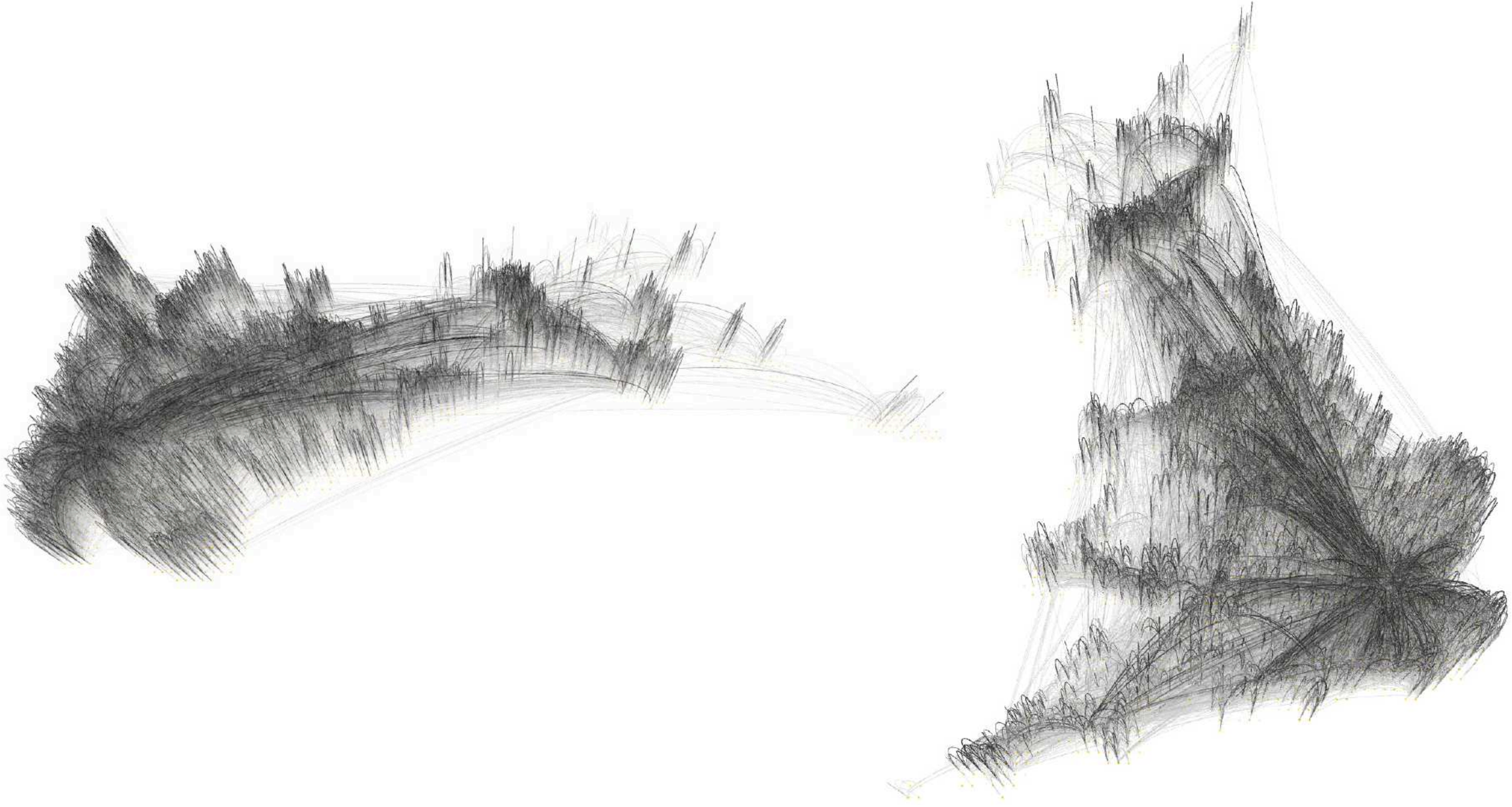


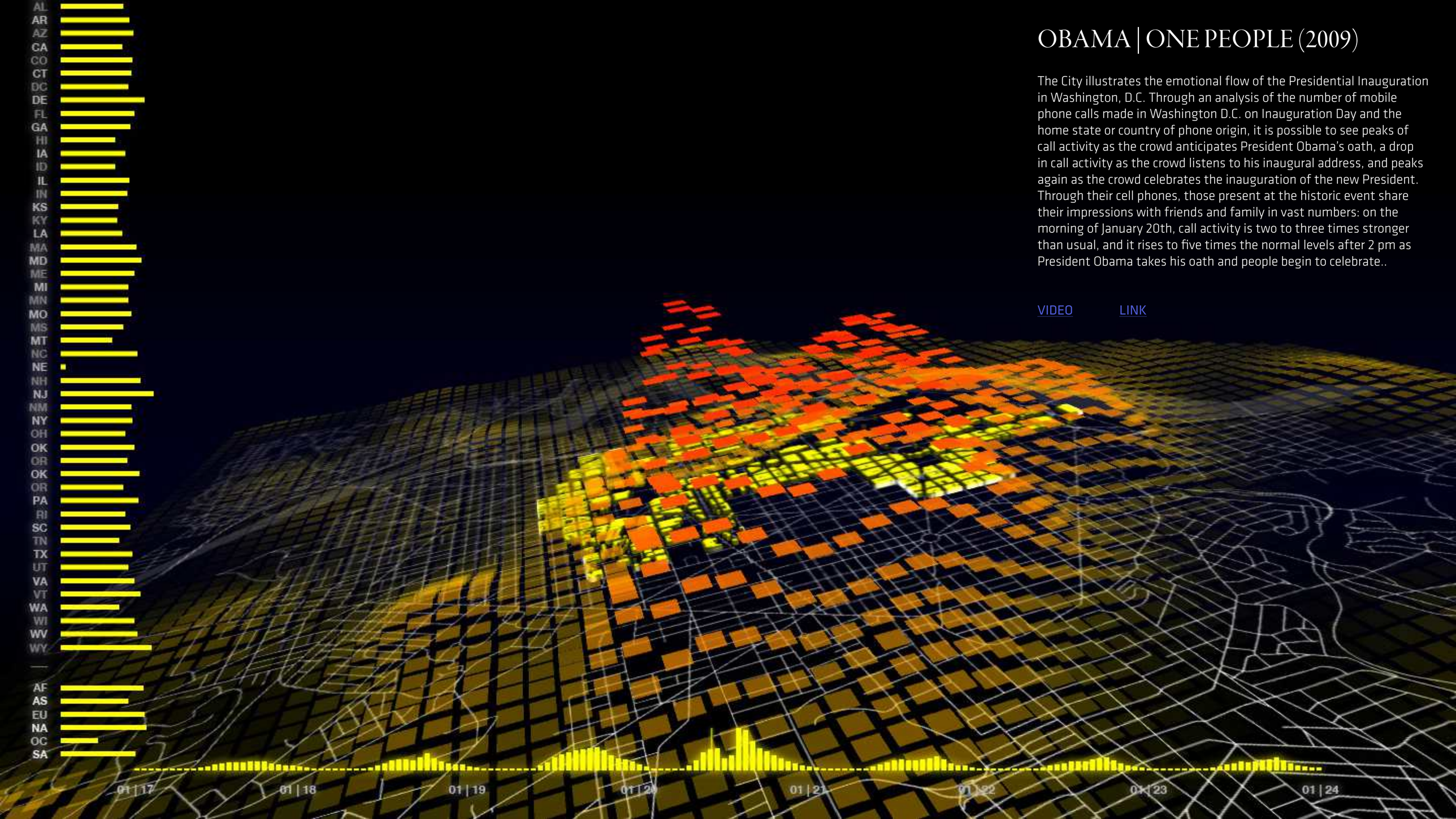


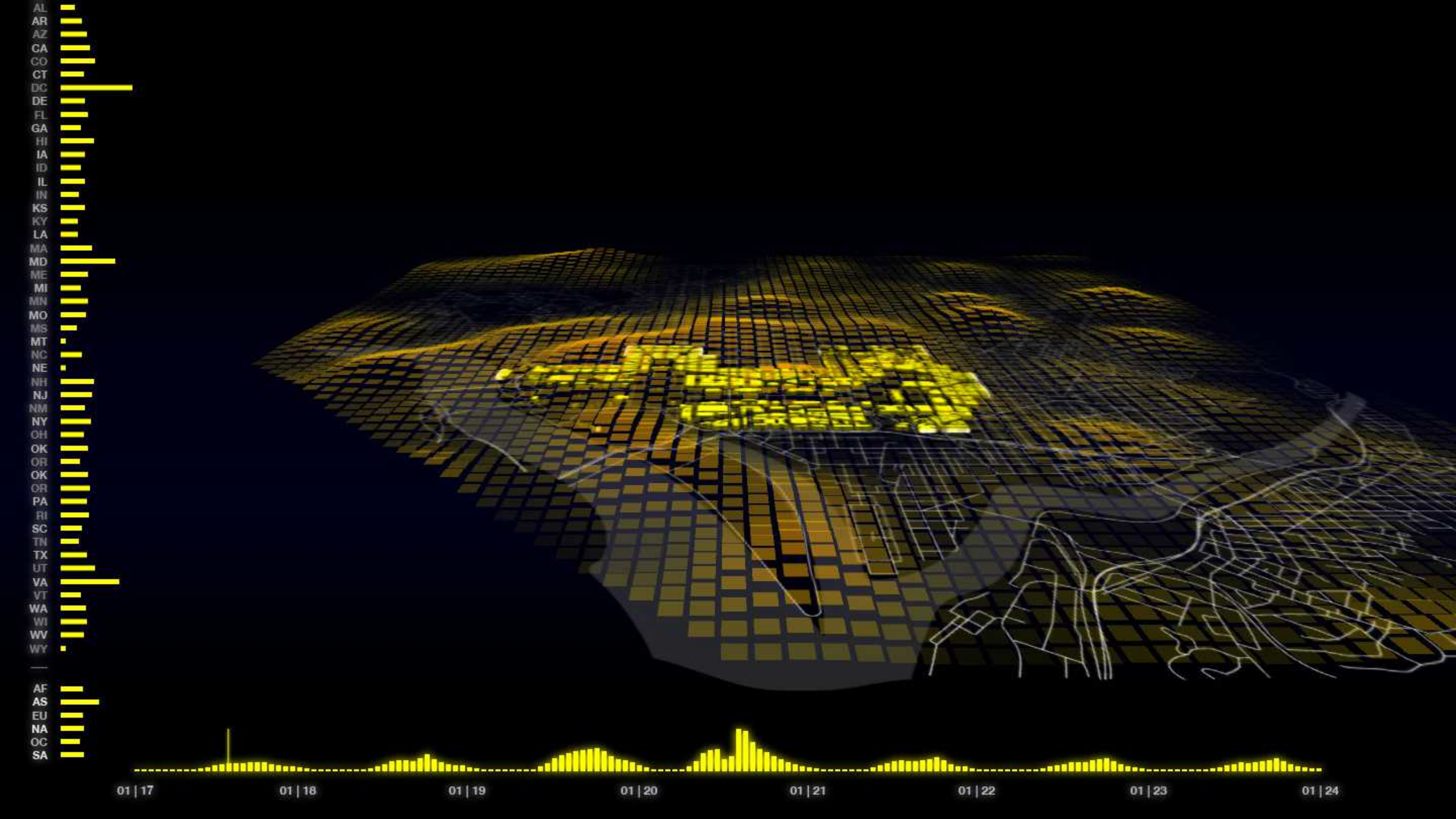


OBAMA | ONE PEOPLE (2009)

The City illustrates the emotional flow of the Presidential Inauguration in Washington, D.C. Through an analysis of the number of mobile phone calls made in Washington D.C. on Inauguration Day and the home state or country of phone origin, it is possible to see peaks of call activity as the crowd anticipates President Obama's oath, a drop in call activity as the crowd listens to his inaugural address, and peaks again as the crowd celebrates the inauguration of the new President. Through their cell phones, those present at the historic event share their impressions with friends and family in vast numbers: on the morning of January 20th, call activity is two to three times stronger than usual, and it rises to five times the normal levels after 2 pm as President Obama takes his oath and people begin to celebrate..

VIDEO LINK

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