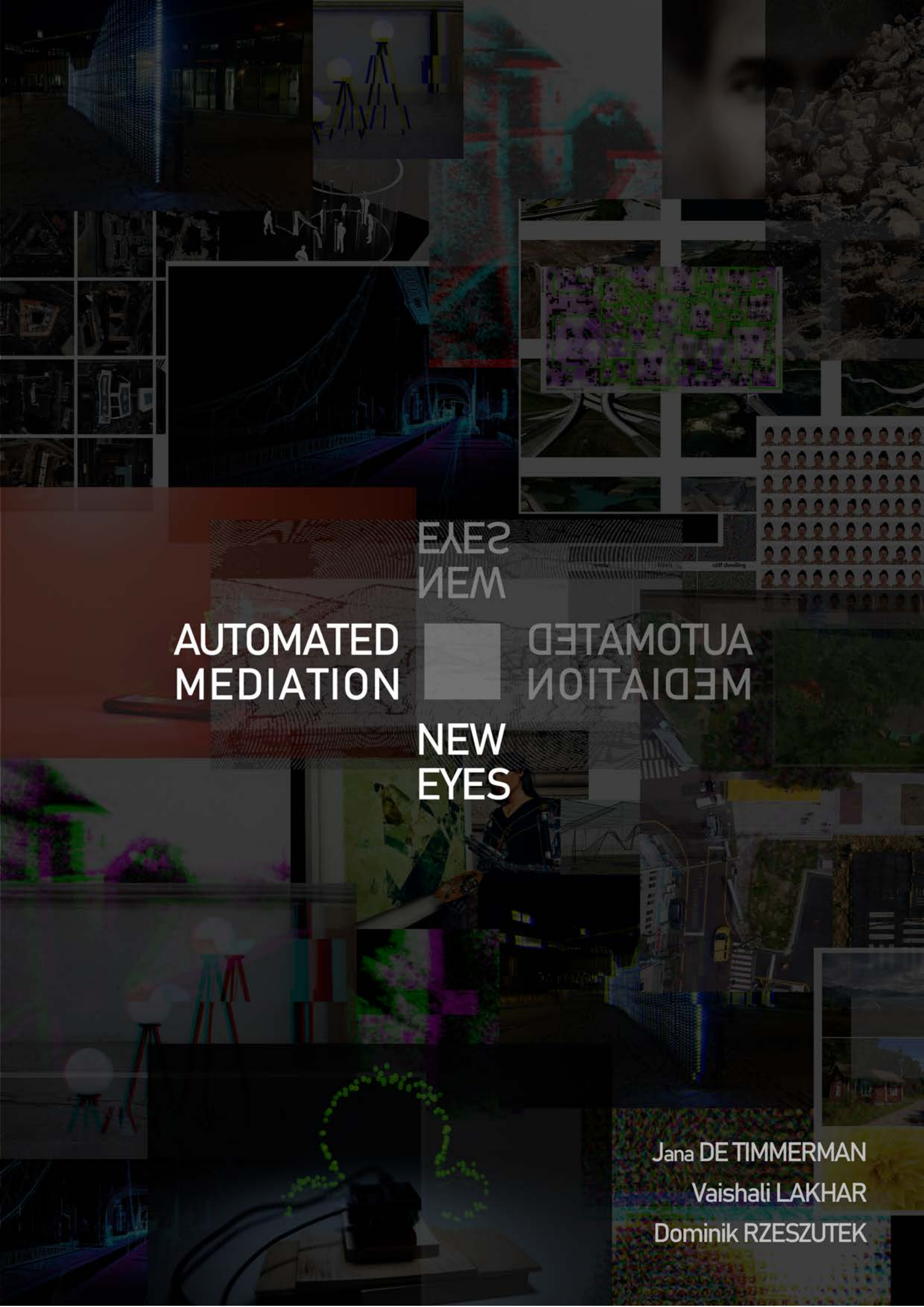

Jana DE TIMMERMAN
Vaishali LAKHAR
Dominik RZESZUTEK

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LEXICON

A

Adversary
/ˈadvəəs(ə)ri/
noun

one's opponent in a contest, conflict, or dispute

Aerial
/ˈɛ:rɪəl/
adjective

existing, happening, or operating in the air.

Aircraft
/ˈɛ:kra:ft/
noun

an aeroplane, helicopter, or other machine capable of flight.

Anomaly
/əˈnom(ə)li/
noun

something that deviates from what is standard, normal, or expected.

Application
/aplɪˈkeɪS(ə)n/
noun

a computer program that is designed for a particular purpose.

Artificial intelligence
noun

the theory and development of computer systems able to perform tasks normally requiring human intelligence, such as visual perception, speech recognition, decision-making, and translation between languages.

B

C

Calibrate
/ˈkalɪbreɪt/
verb

mark (a gauge or instrument) with a standard scale of readings.

Computational
/kompjuˈteɪS(ə)n(ə)l/
adjective

- using or relating to computers.
- relating to the process of mathematical calculation.

D

3D
adjective

three-dimensional.

noun

the quality of being three-dimensional.

Database
/'deɪtəbeɪs/
noun

a structured set of data held in a computer, especially one that is accessible in various ways.

Drone
/drəun/
noun

a remote-controlled pilotless aircraft or missile.

E

Exposure
/ɪk'spəuzə,ɛk'spəuzə/
noun

the action of exposing a photographic film to light.

F

G

Glitch
/glɪtS/
noun

a sudden, usually temporary malfunction or fault of equipment.

verb

suffer a sudden malfunction or fault.

Google
/'gu:gl/
verb

search for information about (someone or something) on the Internet using the search engine Google.

H

I

Image
/ɪmɪdz/
noun

- a visible impression obtained by a camera, telescope, microscope, or other device, or displayed on a computer or video screen.
- an optical appearance or counterpart produced by light from an object reflected in a mirror or refracted through a lens.
- a point or set formed by mapping from another point or set.
- an exact copy of a computer's hard disk, made for backing up data or setting up new machines.

LEXICON

verb

make a representation of the external form of.
make a visual representation of (something) by scanning it with a detector or electromagnetic beam.
make an exact copy of (a computer's hard disk).

Infosphere
/ˈɪnfəʊˌsfɪə/
noun

electronic communication and networking as a whole

J

K

L

Learning
/ˈlə:nɪŋ/
noun

the acquisition of knowledge or skills through study, experience, or being taught.

Lidar
/ˈlʌɪdɑ:/
noun

a detection system which works on the principle of radar, but uses light from a laser.

M

Machine-readable
/məʃi:nˈri:dəb(ə)l/
adjective

(of data) in a form that a computer can process.

Mapping
/ˈmapɪŋ/
noun

an operation that associates each element of a given set (the domain) with one or more elements of a second set (the range).

N

Network
/ˈnɛtwə:k/
noun

- an arrangement of intersecting horizontal and vertical lines.
- a group or system of interconnected people or things.

verb

- connect as or operate with a network.
- interact with others to exchange information and develop professional or social contacts.

O

Omen
/'əumən/
noun

an event regarded as a portent of good or evil.

Optical character recognition
noun

the identification of printed characters using photoelectric devices and computer software.

P

Photogrammetry
/ˌfəutə(u)'gramltri/
noun

the use of photography in surveying and mapping to ascertain measurements between objects.

Pixel
/'plks(ə)l,'plksɛl/
noun

a minute area of illumination on a display screen, one of many from which an image is composed.

Postcard
/'pəus(t)ka:d/
noun

a card for sending a message by post without an envelope, typically having a photograph or other illustration on one side.

Privacy
/'prlvəsi,'prAlvəsi/
noun

- a state in which one is not observed or disturbed by other people.
- the state of being free from public attention.

Q

QR code
noun

a machine-readable code consisting of an array of black and white squares, typically used for storing URLs or other information for reading by the camera on a smartphone.

LEXICON

R

Recognition
/rɛkəg'nIS(ə)n/
noun

identification of someone or something or person from previous encounters or knowledge.
acknowledgement of the existence, validity, or legality of something.

Reference
/'rɛf(ə)r(ə)ns/
noun

the action of mentioning or alluding to something.
the use of a source of information in order to ascertain something.

Representation
/,rɛprIzɛn'teIS(ə)n/
noun

- the action of speaking or acting on behalf of someone or the state of being so represented.
- the description or portrayal of someone or something in a particular way.

Resolution
/rɛzə'lu:S(ə)n/
noun

the smallest interval measurable by a telescope or other scientific instrument; the resolving power.

Robot
/'rəubot/
noun

(especially in science fiction) a machine resembling a human being and able to replicate certain human movements and functions automatically.

S

Satellite
/'satəlAIt/
noun

an artificial body placed in orbit round the earth or moon or another planet in order to collect information or for communication.

Scan
/skan/
verb

- look at all parts of (something) carefully in order to detect some feature
- cause (a surface, object, or part of the body) to be traversed by a detector or an electromagnetic beam.

Sensor
/'sɛnsə/
noun

a device which detects or measures a physical property and records, indicates, or otherwise responds to it.

Surveying
/sə'veɪɪŋ/
noun

the profession or work of examining and recording the area and features of a piece of land so as to construct a map, plan, or detailed description of it.

T

Target
/'ta:gɪt/
noun

a person, object, or place selected as the aim of an attack.

verb

select as an object of attention or attack.

Trick
/trɪk/
verb

cunningly deceive or outwit.

U

V

View
/vju:/
noun

the ability to see something or to be seen from a particular place.

verb

look at or inspect.
regard in a particular light or with a particular attitude.

Visual
/'vɪz(j)uəl,'vɪzjuəl/
adjective

relating to seeing or sight.

noun

a picture, piece of film, or display used to illustrate or accompany something.

W

X

Y

Z

INTRODUCTION

AUTOMATION is everywhere.
The radical evolution of technology in the last decades has forever changed our world, and had a huge impact on the society we live in today.
In this field guide we pose four QUESTIONS:

HOW HAS OUR VIEW OF THE WORLD **CHANGED** WITH THE **ARRIVAL** OF THESE NEW AUTOMATED TECHNOLOGIES?

HOW DO THESE TECHNOLOGIES **PROCESS** THE IMAGES WE FEED THEM AND HOW DO THEY **PERCEIVE** OUR WORLD?

HOW CAN
INTERNAL
THESE
VISIBLE
WAY
UNDER

We end the field g
learned, while pos
be in the field of ar

WE MAKE THE
WORKINGS OF
MACHINES
E TO US IN A
WE CAN
STAND?

WHAT KIND OF NEW
AESTHETIC HAVE
WE DEVELOPED BECAUSE
OF NEW TECHNOLOGIES?

The field guide first goes through 37 CASES on ways in which automation has created a different lookout on technology and also our world.

guide with our own EXPERIMENTS using what we have
ing the question what the impact of these new eyes can
chitecture.

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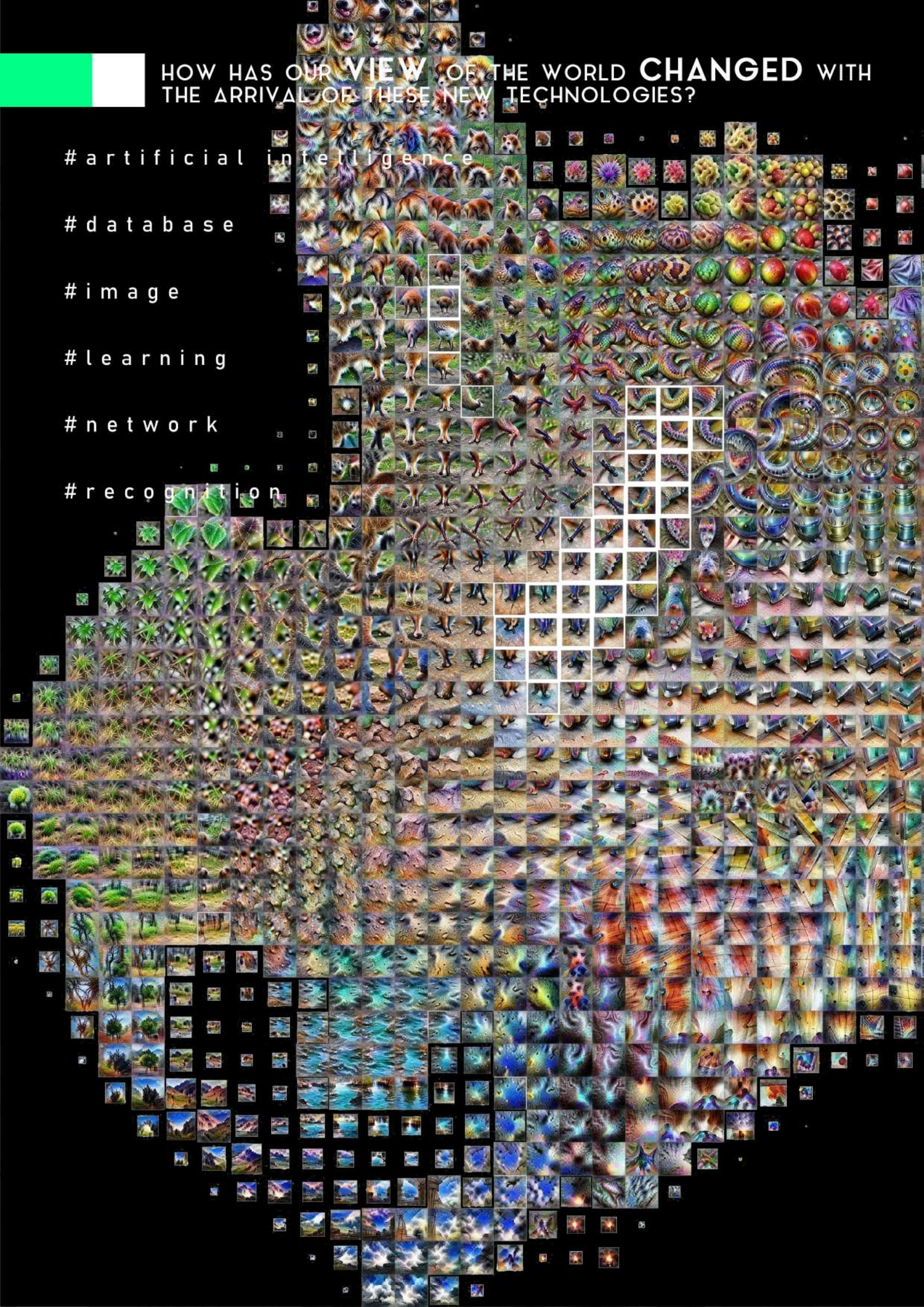
36 Drone strike Miranshah
38 Jazidi heritage

How has changed new auto

Automation gives us a new perspective. New angles to look at our world, our society, nature or architecture. Thanks to automated machines we can see things we knew in a new, fresh way.

our view of the world with the arrival of these omated technologies?


HOW HAS OUR VIEW OF THE WORLD CHANGED WITH THE ARRIVAL OF THESE NEW TECHNOLOGIES?
#artificial intelligence
#database
#image
#learning
#network
#recognition

A peek inside the black box of a neural network.

Carter and his team reverse-engineered the internal workings of a neural network. They trained the machine to recognise a wide variety of images, and then told the neural network to generate an image of for example a dog based on what it had learned. This way we can get a peek inside the internal workings, and see how a deep learning machine processes and distinguished images.

Activation atlas
Carter et al

HOW HAS OUR **VIEW** OF THE WORLD **CHANGED** WITH THE ARRIVAL OF THESE NEW TECHNOLOGIES?

#image

#pixel

#representation

#resolution

#view

Window Legras
Nicéphore Niépce

Photography takes an in-stant out of time, altering life by holding it still

This is the oldest surviving photograph. Previously, writing was used to describe a scene. This new form of technology offered a never before seen level of exactitude.

HOW HAS OUR **VIEW** OF THE WORLD **CHANGED** WITH THE ARRIVAL OF THESE NEW TECHNOLOGIES?

#image

#pixel

#recognition

#representation

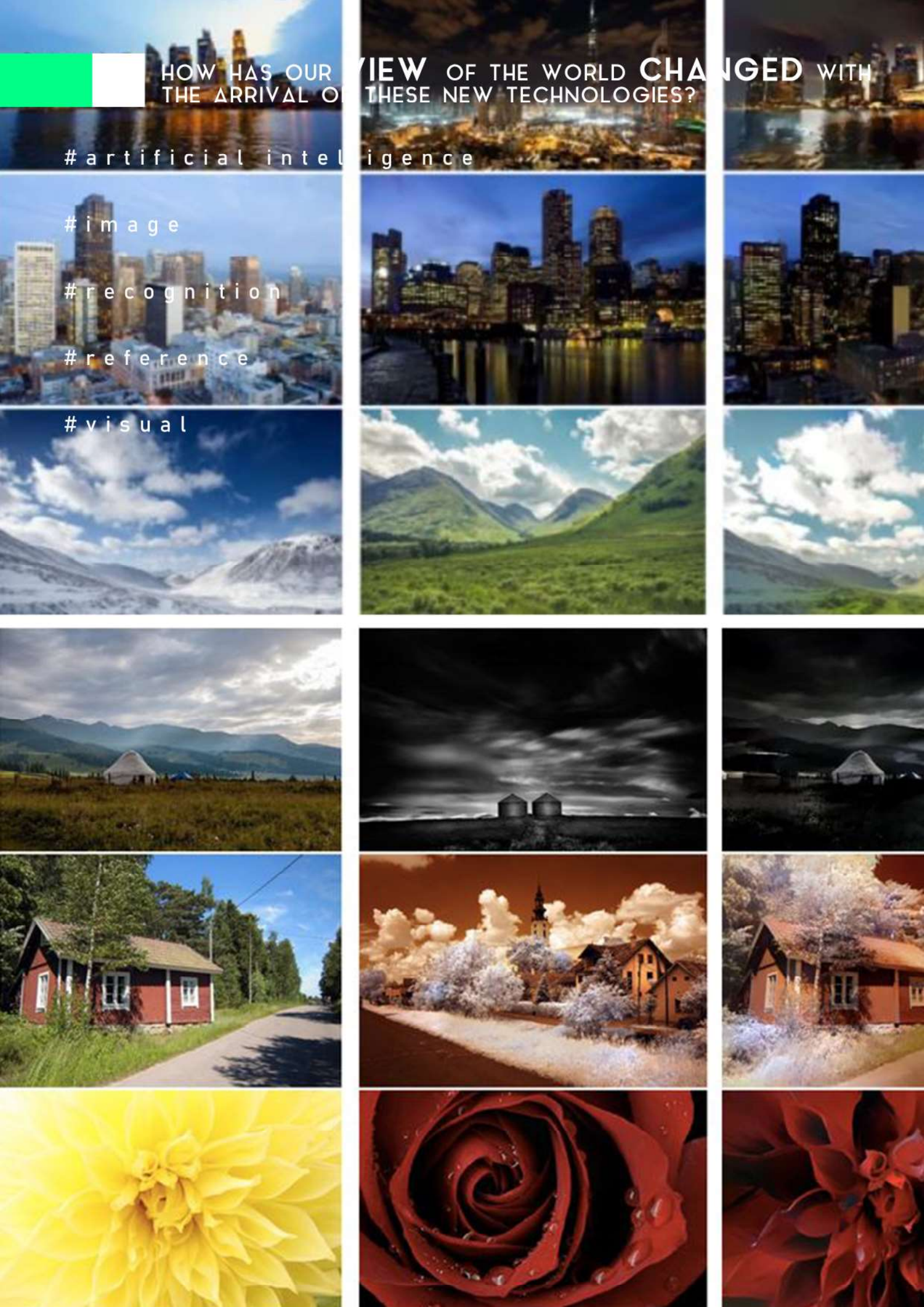
#resolution

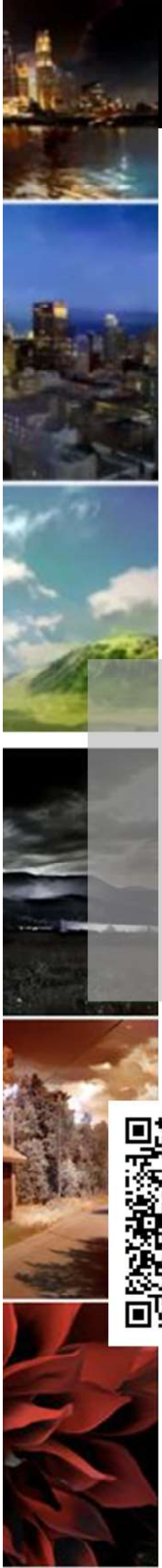
#visual

Amur leopard
WWF

Amur Leopard. Estimated about 60 remain

We, as humans, only recognise what's in a picture if the pixel count is high enough. This WWF project plays on that idea: The amount of pixels in the picture represent how amny of a species are left in the wild, thus giving us a powerful visual reminder.


HOW HAS OUR VIEW OF THE WORLD CHANGED WITH
THE ARRIVAL OF THESE NEW TECHNOLOGIES?
#artificial intelligence
#image
#recognition
#reference
#visual



PHOTOGRAPHY \ TECH \ ARTIFICIAL INTELLIGENCE \

Deep neural networks can now transfer the style of one photo onto another

And the results are impressive

By James Vincent | Mar 30, 2017, 1:53pm EDT

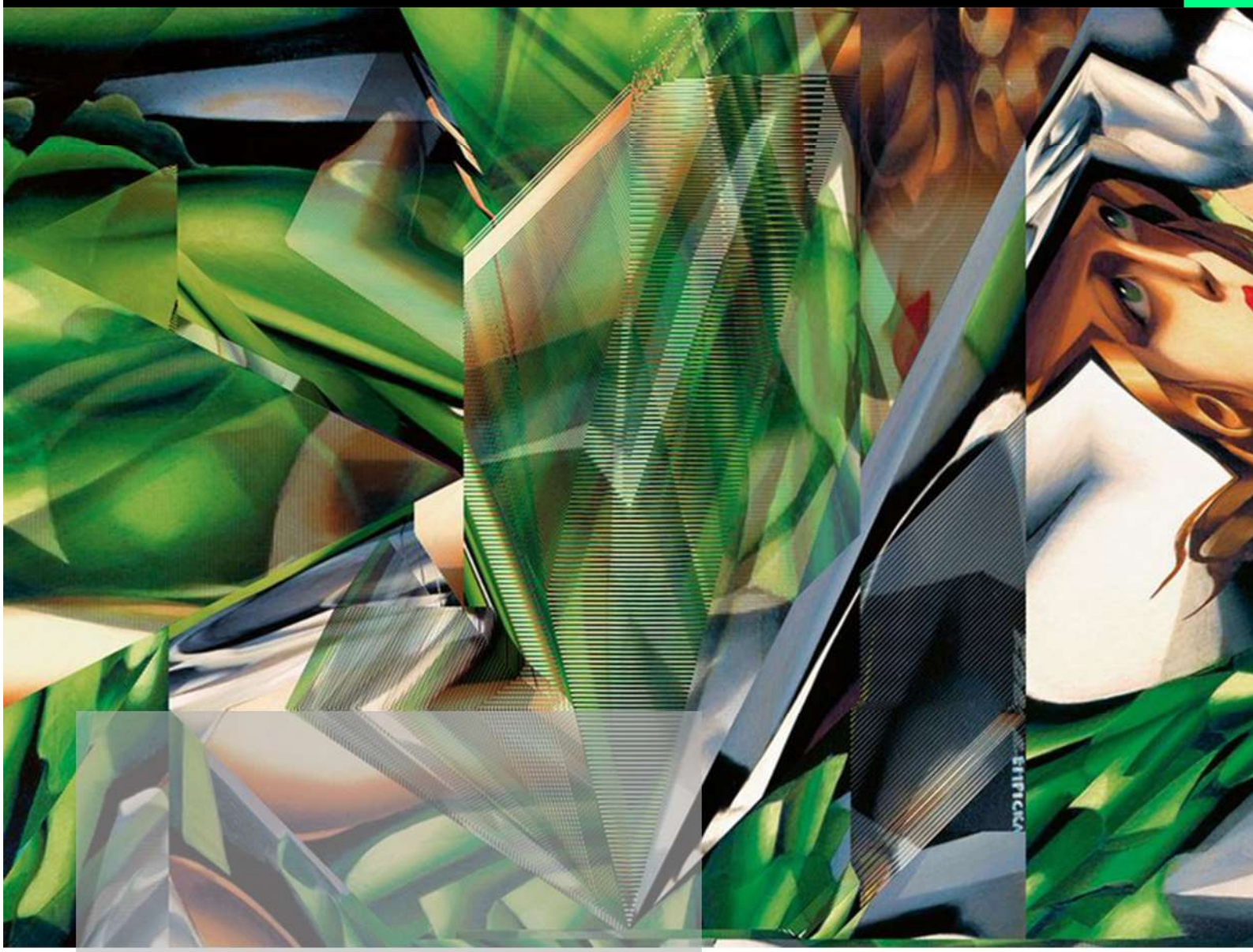
SHARE

How is AI changing photography?

This newly developed technique allows you to transfer a photo style from a reference onto your own photograph. It differs from a simple style transfer in that it takes into account the edges of objects in the pictures instead of blindly pasting a style. So the resulting image will look like a realisitic photograph rather than a painterly style.

Deep neural network photography
Fujun Luan

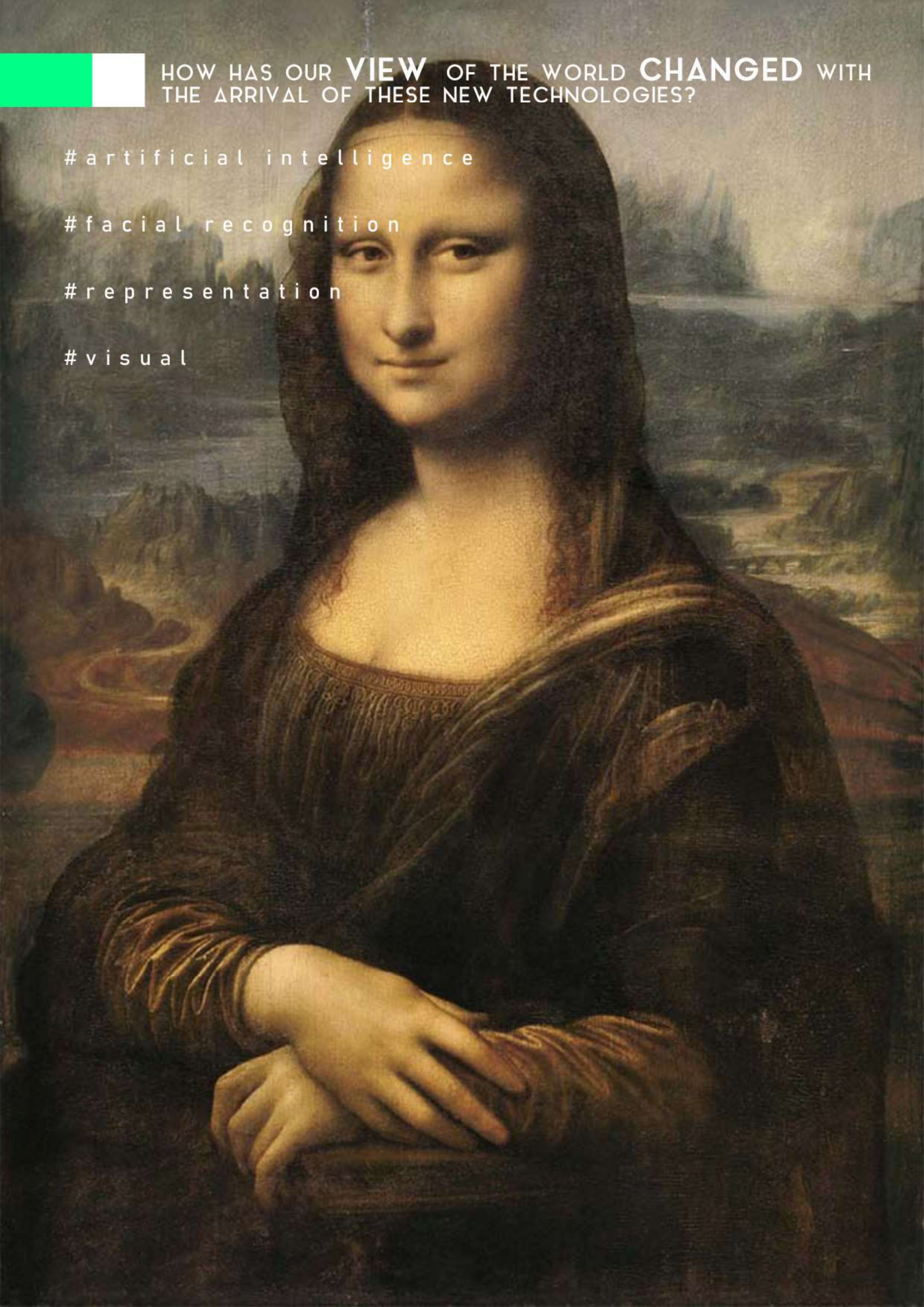
HOW HAS OUR VIEW OF THE WORLD CHANGED WITH THE ARRIVAL OF THESE NEW TECHNOLOGIES?
#artificial intelligence
#computational
#image
#learning
#pixel
#visual



Pixeldrifter
Dmitriy Krotevich

By default, each pixel tries to find the 'weakest' pixel among its closest neighbors and if one is found, they swap their positions

Also pixels with a higher 'power' value can do more 'swaps.' Put differently, the pixels are imbued with enough intelligence to behave autonomously, although Krotevich says, "an experienced user can predict a result."


HOW HAS OUR VIEW OF THE WORLD CHANGED WITH THE ARRIVAL OF THESE NEW TECHNOLOGIES?
#artificial intelligence
#facial recognition
#representation
#visual

talking Mona Lisa
Samsung

Imagine the lips forming the Mona Lisa's famous smile were to part, and she began "speaking" to you.

Researchers from Samsung AI lab and Skolkovo Institute of Science and Technology used adversarial learning to generate a photorealistic talking head model. The model finds face landmarks from video sequences in these datasets, based on the target person transforms them into a set of realistic photographs and then combines the images to create a video/gif with the target person animated as if in speech.

Using this technique on a person of Lisa Gherardini, the subject of Leonardo da Vinci's classic 16th century portrait, shows the impact of technology on extruded perception of art we already know.

HOW HAS OUR **VIEW** OF THE WORLD **CHANGED** WITH THE ARRIVAL OF THESE NEW TECHNOLOGIES?

#aerial

#aircraft

#drone

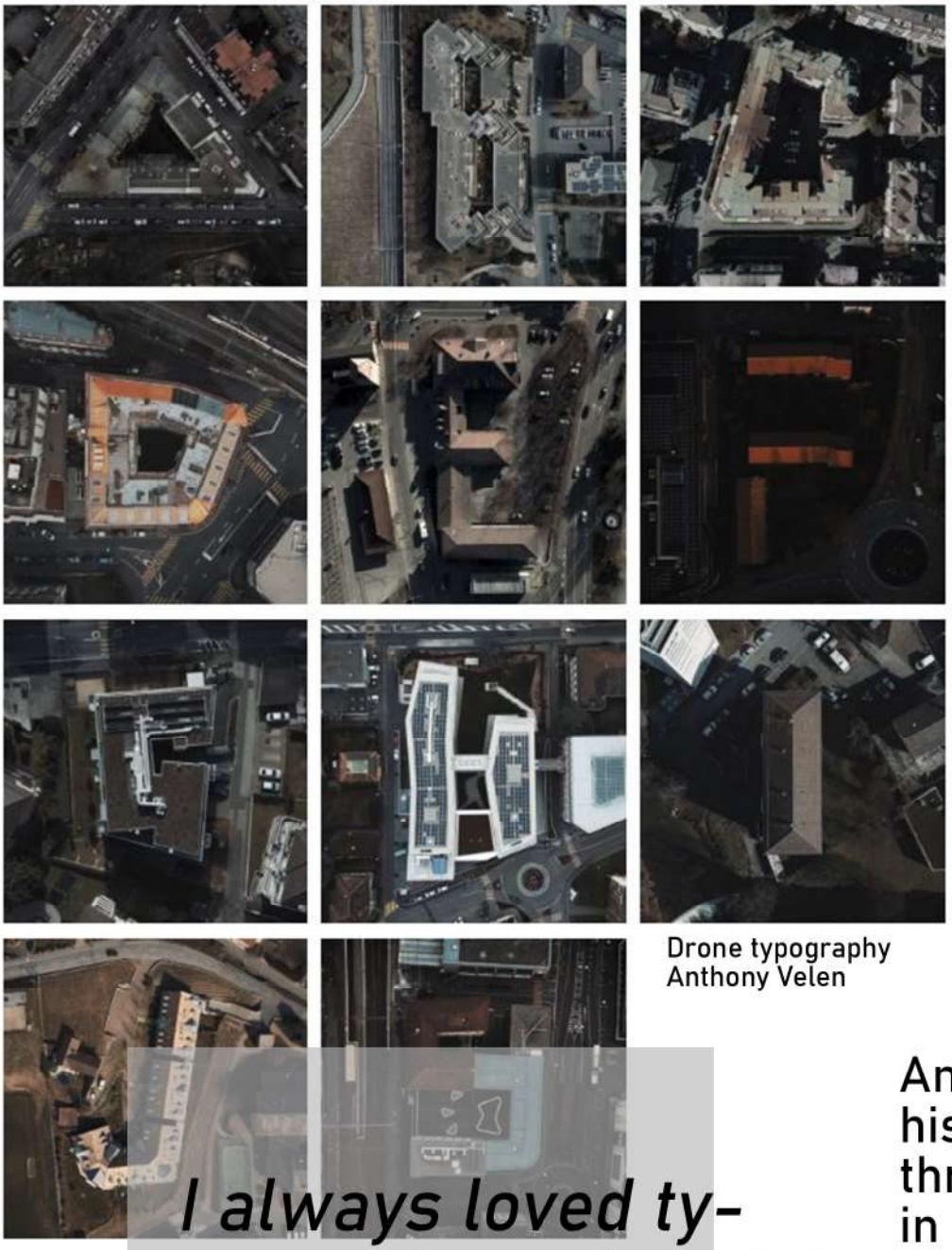
#image

#mapping

#representation

#surveying

#view



Drone typography
Anthony Velen

I always loved typography and aerial shots. So I decided to uses drones to build an alphabet from Swiss architecture. #workinprogress

Anthony Velen starts his projects by looking through Google Earth in search of buildings that resemble letters of the alphabet. Then, he launches a drone starting from his own home to visit the site and takes his own image looking down at the building.

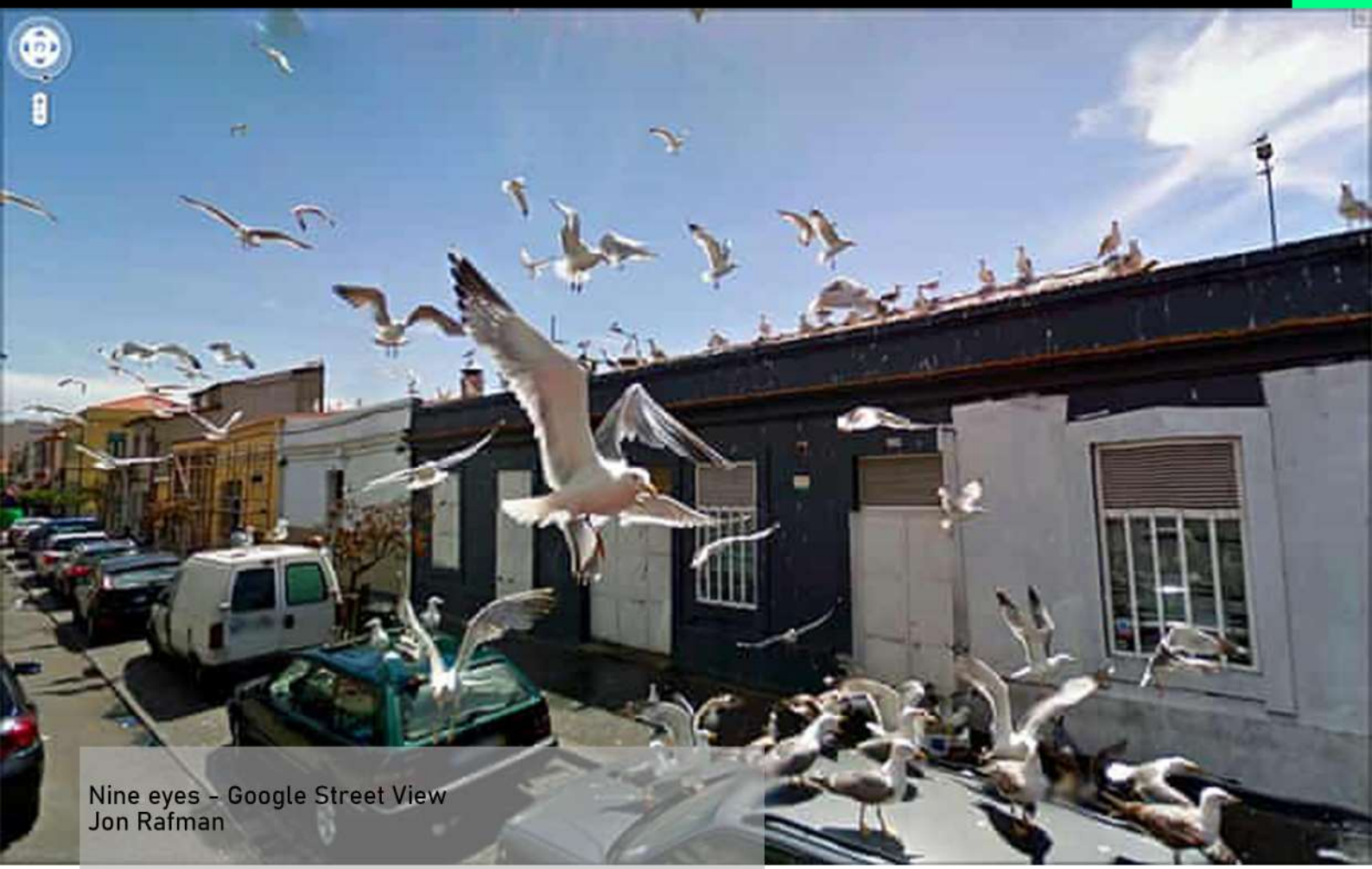
HOW HAS OUR **VIEW** OF THE WORLD **CHANGED** WITH THE ARRIVAL OF THESE NEW TECHNOLOGIES?

#database

#google

#image

#view



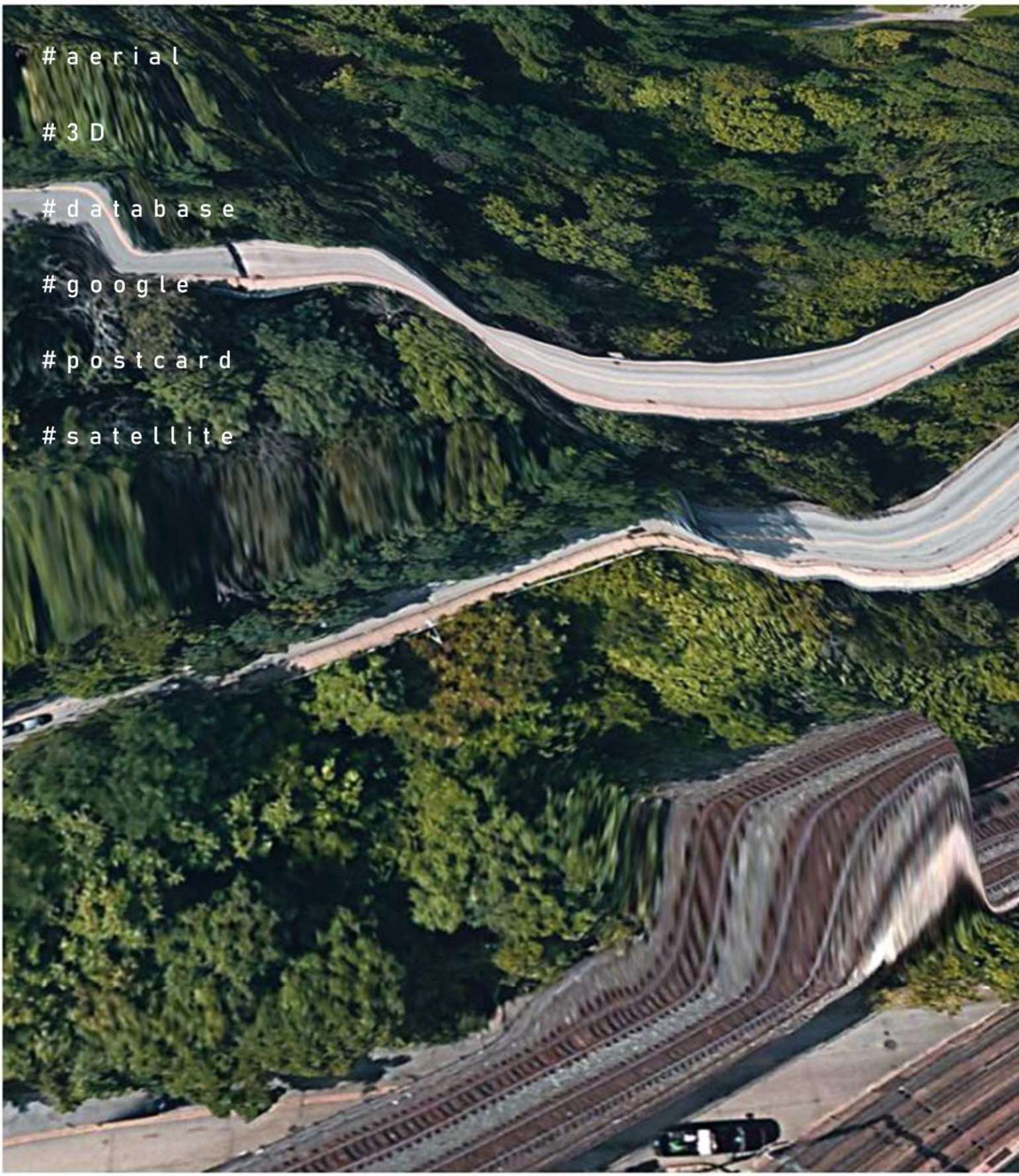
Nine eyes - Google Street View
Jon Rafman

Nine Eyes of Google Street View is both an archival project and a conceptual meditation on the state of photography in a time of automated image-making on a massive scale.

Here, the artist collects images from google street view. The technique itself is meant to blindly capture the environment with no regard towards aesthetics, but Jon Rafman manages to find beauty within it.

HOW HAS OUR **VIEW** OF THE WORLD **CHANGED** WITH THE ARRIVAL OF THESE NEW TECHNOLOGIES?

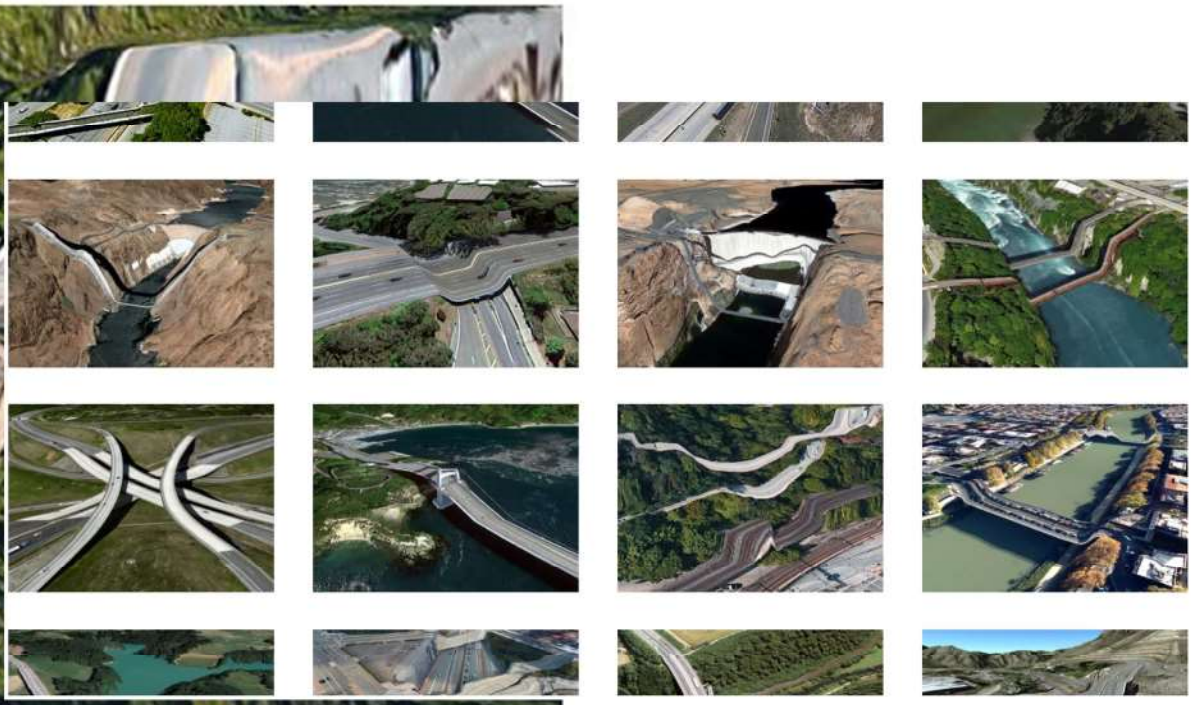
POSTCARDS FROM GOOGLE EARTH



Date of Satellite or Aerial Photos: **2017-07-09**

Date of Screenshot : **2019-01-23**

40.43059°,-80.00183°



Google Earth postcards
Clement Valla

Google Earth is a database disguised as a photographic representation.

The artist collects images where Google Earth shows us something strange that we might perceive as glitches. But in fact, they are not 'glitches' or mistakes but rather show us how Google Earth works: It uses a 3d model of the Earth and overlaps it with visual images from satellites. Sometimes these two forms of data don't match up and this creates interesting visuals.

HOW HAS OUR **VIEW** OF THE WORLD **CHANGED** WITH THE ARRIVAL OF THESE NEW TECHNOLOGIES?

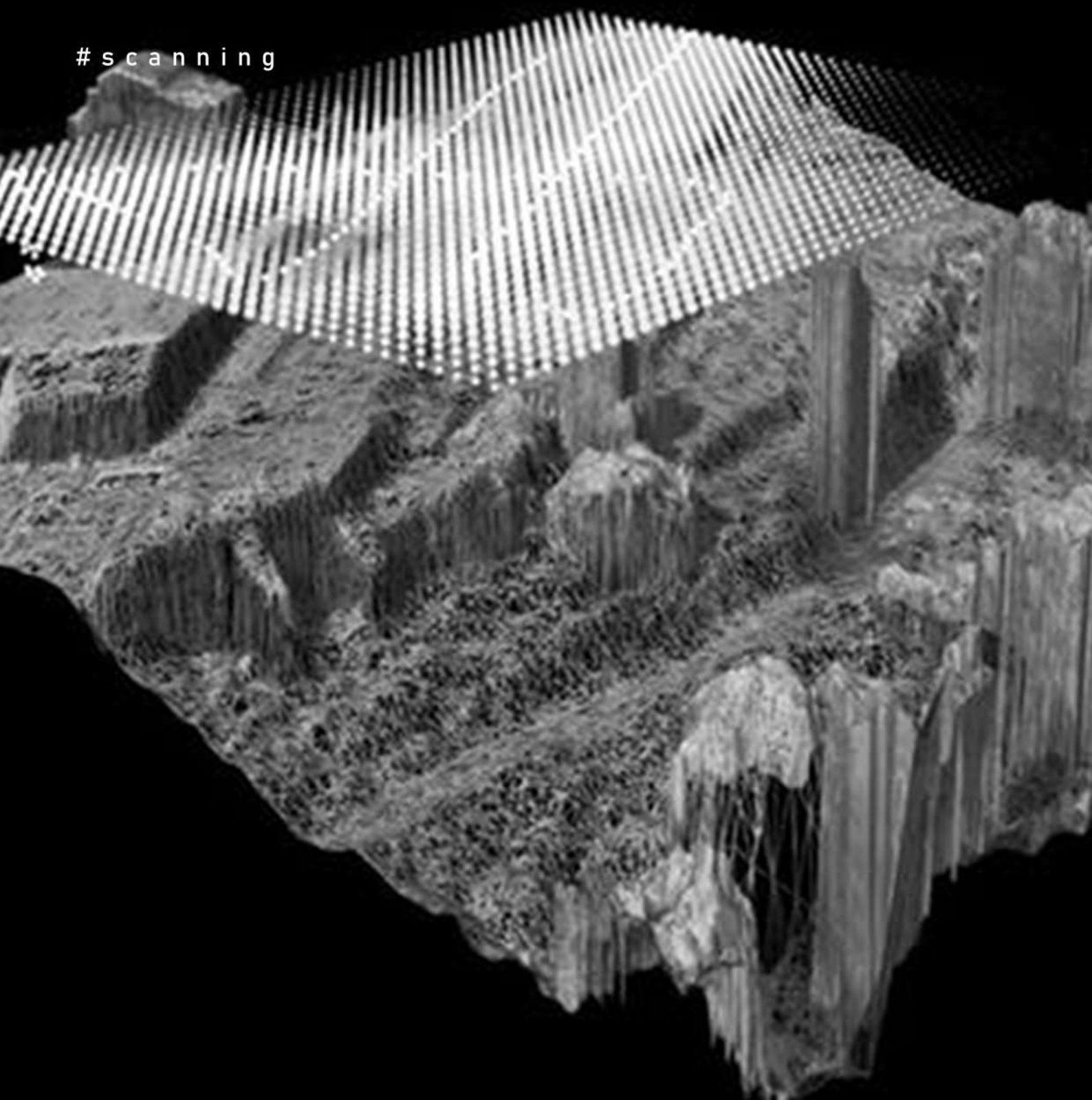
#aerial

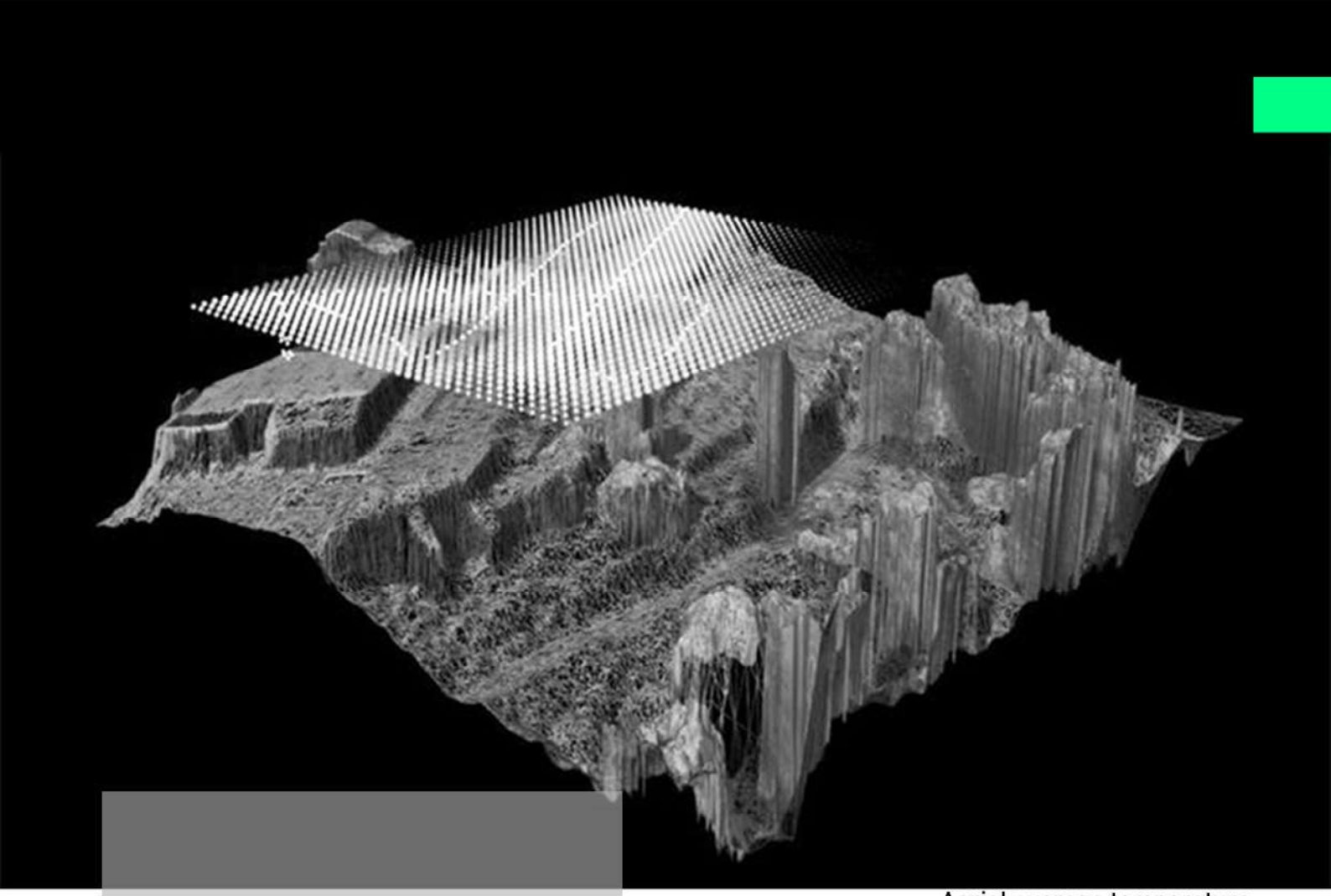
#database

#drone

#mapping

#scanning





Aerial average temperature
NERO/noumena

Drones, or 'aerial robots', as we prefer to say, offer us a new point of perspective, a holistic representation of the built and unbuilt environment"

Drones are equipped with multiple types of technology, ranging from photogrammetry software to all kinds of sensors. This extracted data is used to generate an exact mapping of the environment with all different layers: Relief, heat map, even how many pineapples are on site.

HOW HAS OUR **VIEW** OF THE WORLD **CHANGED** WITH THE ARRIVAL OF THESE NEW TECHNOLOGIES?

#anomaly

#3D

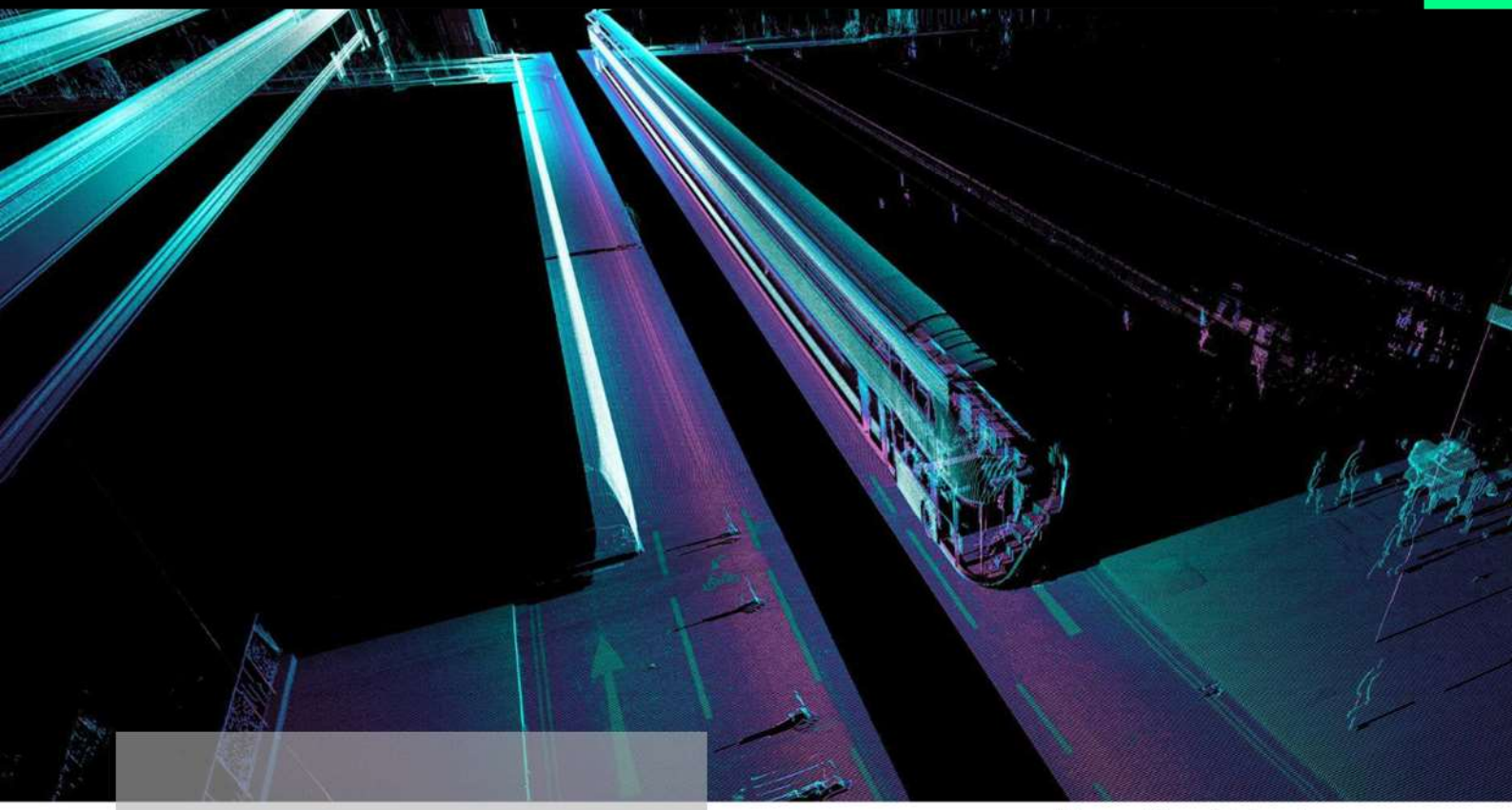
#lidar

#machine-readable

#recognition

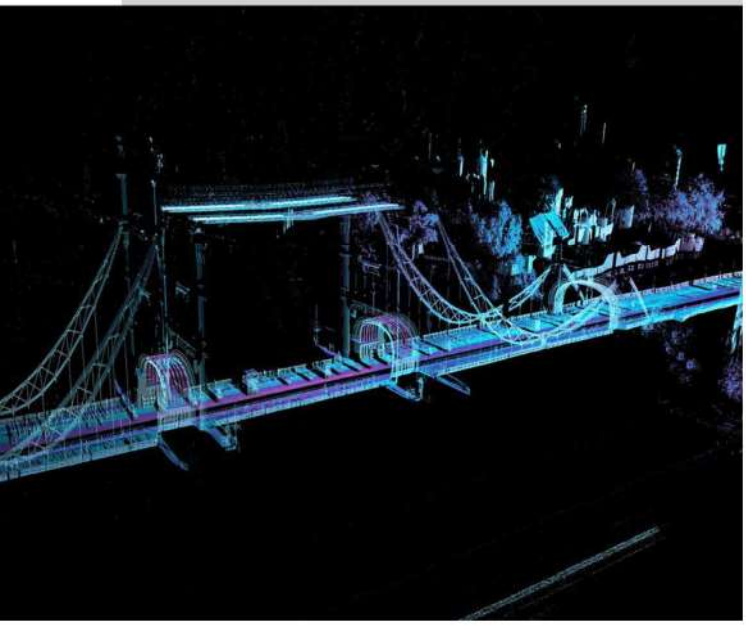
#scan

#sensor



Dreamlife of driverless cars
Scannlab

A 3d laser scanner moves through London and shows us how a driverless car would perceive - or misperceive - the world around us.



As the scanner moves through the city, slowing for speed bumps and stopping in traffic, the city map created warps and extends depending on the speed at which we move. Stuck in traffic a routemaster bus becomes an elongated, narrow corridor, broken only by the shadow of a passing cyclist. Turning the corner into parliament square duplicates Big Ben as we

HOW HAS OUR **VIEW** OF THE WORLD **CHANGED** WITH THE ARRIVAL OF THESE NEW TECHNOLOGIES?

#anomaly

#calibrate

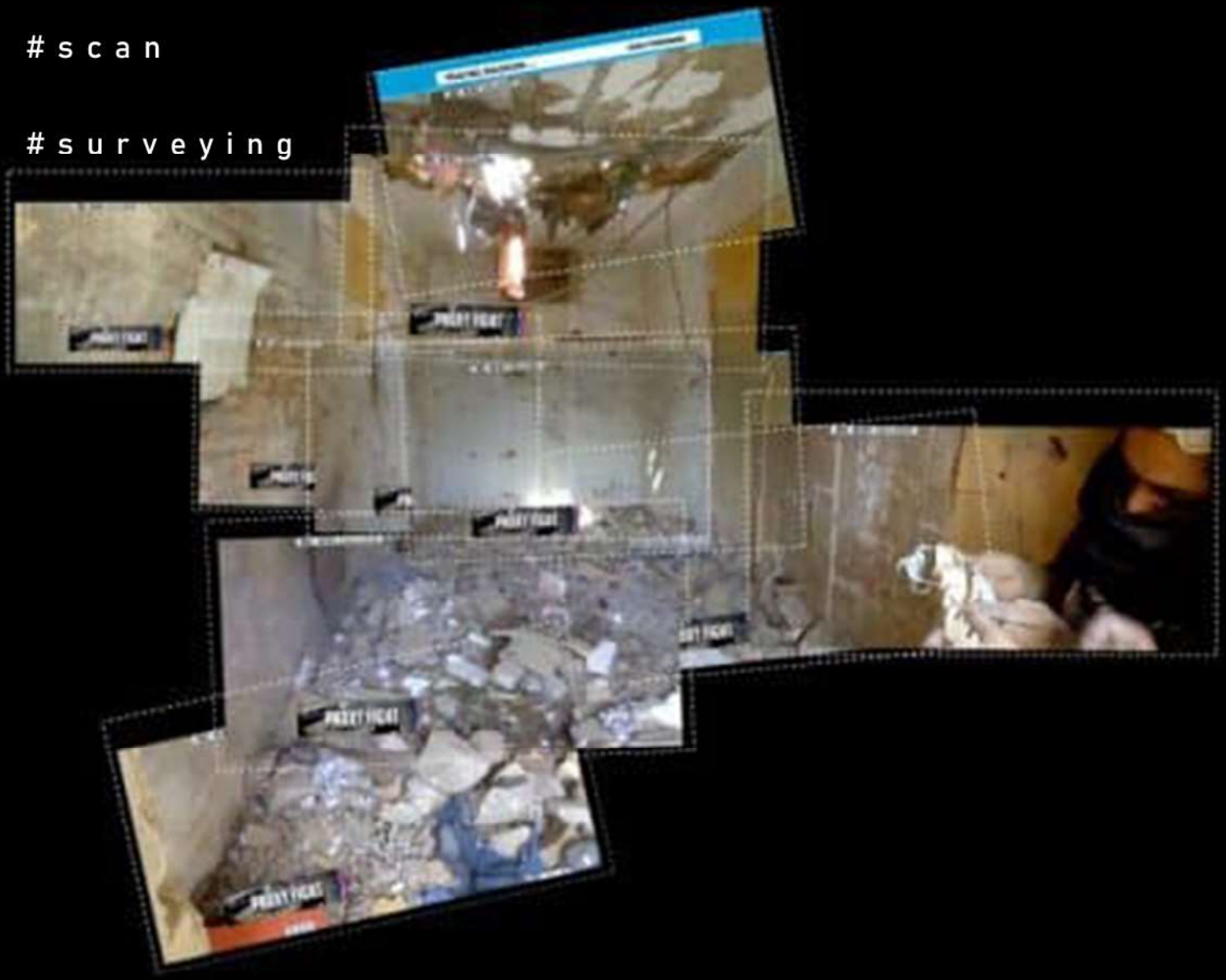
#3D

#drone

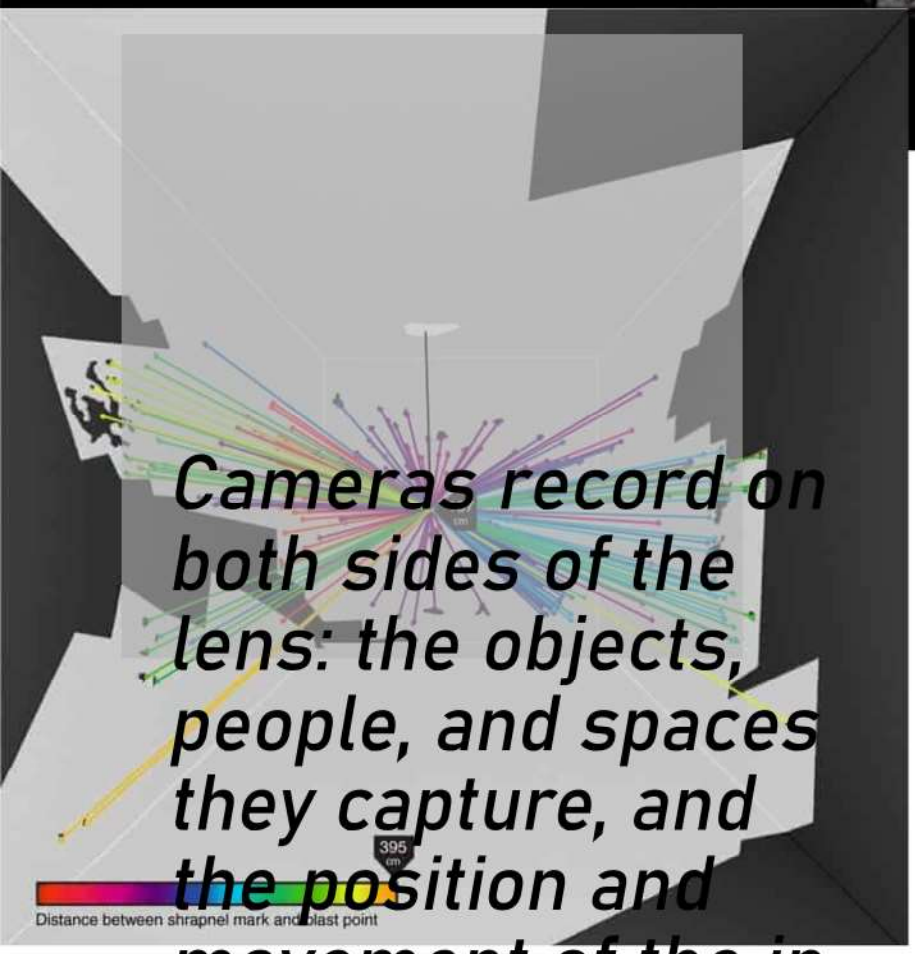
#photogrammetry

#scan

#surveying



Drone strike Miranshah
Forensci architecture



Cameras record on both sides of the lens: the objects, people, and spaces they capture, and the position and movement of the invisible photographer.

In this project we see how you can break down what is happening at a scene based on the movement of the invisible actor, the person filming. The fact that they started filming the window tells us that they perceived a danger coming from outside, and erratic momevent demonstrated a sense of danger. By analysing images in this way we get a better understanding of events.

HOW HAS OUR VIEW OF THE WORLD CHANGED WITH THE ARRIVAL OF THESE NEW TECHNOLOGIES?
#aircraft
#3D
#drone
#mapping
#photogrammetry
#scan
#surveying
#view

Jazidi heritage
Forensic architecture

detailed 'snapshot' of their current condition

Through a technique called photogrammetry, this company creates 3d models from 2d images. They focus the use of this technique mainly on reconstructing events, since it allows for details to be scanned that you could not get any other way. Here, they used drones and kites to investigate a potentially dangerous bombing site.

42 Ai-da robot artist
44 Robots understanding robots
46 Anti-lidar suit
48 Scarf + prototype + example
50 Salt circle trap

It is clear that auton
devices have their o
'eyes', much differen
ours. Their 'eyes' ha
different advantages
abilities but are als
to trick.

How do the
the images
they percei

mated
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nt than
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s and
o easy

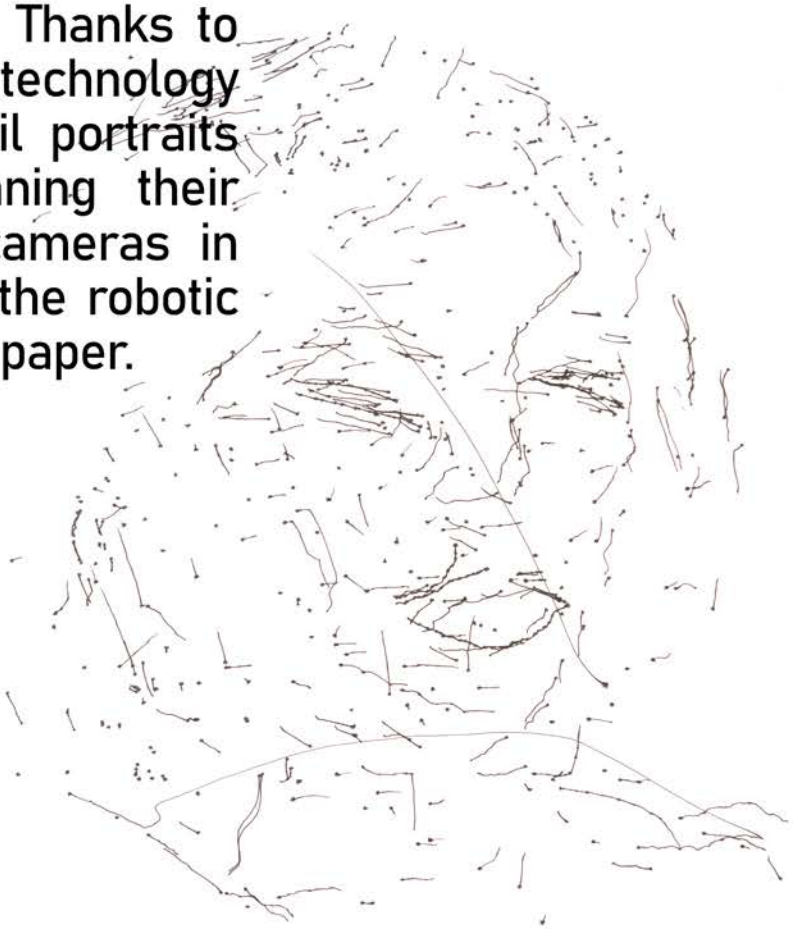
ese technologies process
s we feed them and how do
ive our world?

HOW DO THESE TECHNOLOGIES PROCESS THE IMAGES WE FEED THEM AND HOW DO THEY PERCIEVE OUR WORLD?
A I
a e s t h e t i c
r o b o t
a r t

"We're at the beginning of a new era of humanoid robots and it will be fascinating to see the effect on art."

Aidan Meller

Ai-Da is and AI robot able to walk, talk and hold a pencil or brush. She has been built with robotic drawing technology developed at the University of Leeds. Thanks to Facial-recognition technology she can draw pencil portraits of people by scanning their features with the cameras in her eyes and using the robotic arm to map them on paper.



Aidan Meller

Ai-Da: The robot artist

HOW DO THESE TECHNOLOGIES **PROCESS** THE IMAGES WE FEED THEM AND HOW DO THEY **PERCIEVE** OUR WORLD?

#robot

#AI

#images

#neural network

Please wait for a few seconds while a caption is being generated for the uploaded image.

Caption: a little girl is eating a piece of cake

Is it a good picture?

yes

Ordinary girl, ordinary cake

yes

A girl eating
a large slice
of cake

Made by Cris Valenzuela with Runway | Using AttnGAN | GPU hosting thanks to Paperspace

Robots understanding robots

Automated devices have their own language and perspective which are not readable for humans in any way. But our understanding of thier actions is not necessery while they're working with other automated devices - they can understand each other perfectly.

Janelle Shane known from her blog aiweirdness.com has put two AI bots against each other and the result of the experiment showed that things which are wrong and confusing for us, can be readable and right for automated devices.

HOW DO THESE TECHNOLOGIES PROCESS THE IMAGES WE FEED THEM AND HOW DO THEY PERCIEVE OUR WORLD?
#lidar
#scanning
#tricking AI

"*In the future, full of smart cities and homes, surveilled by all sorts of entities, there will be all kinds of eyes on us. And with those eyes will come new ways of hiding.*"

Rose Eveleth

Liam Young

Anti-lidar Suit

This suit scrambles the reflection used by Lidar-technology. This is because the suit is very reflective, and essentially makes it so the laser image that returns back to the Lidar-machine is distorted and warped.

HOW DO THESE TECHNOLOGIES PROCESS THE IMAGES WE FEED THEM AND HOW DO THEY PERCIEVE OUR WORLD?

#tricking AI

#facial recognition

#privacy

#glitch

"The whole reason we created all of this is to do scientific research. To see if we can increase exposure and decrease prejudice and bias."

Aguilar y Wedge

This is a scarf made to throw off facial recognition software. It's effectively a shield against the ever increasing presence of surveillance cameras. On the scarf there is a carefully plotted design that's recognised by facial recognition software as faces: There's such a huge amount of them on the scarf, that if a few people would wear it, they would overload the surveillance system making it useless.

Hyperface + hyphen lab

Hyperface Scarf

HOW DO THESE TECHNOLOGIES **PROCESS** THE IMAGES WE FEED THEM AND HOW DO THEY **PERCIEVE** OUR WORLD?

#tricking AI

#recognition

#self-driving cars

#adversary

#glitch

"Self-driving cars bring together a bunch of really interesting technologies—such as machine vision and intelligence—with crucial social issues such as the atomization and changing nature of labor, the shift of power to corporate elites and Silicon Valley, and the quasi-religious faith in computation as the only framework for the production of truth—and hence, ethics and social justice."

James Bridle

James Bridle shows us in this project how self-driving cars might get confused simply by drawing lines around them. It is a powerful reminder of how easily technology can be tricked by human ingenuity.

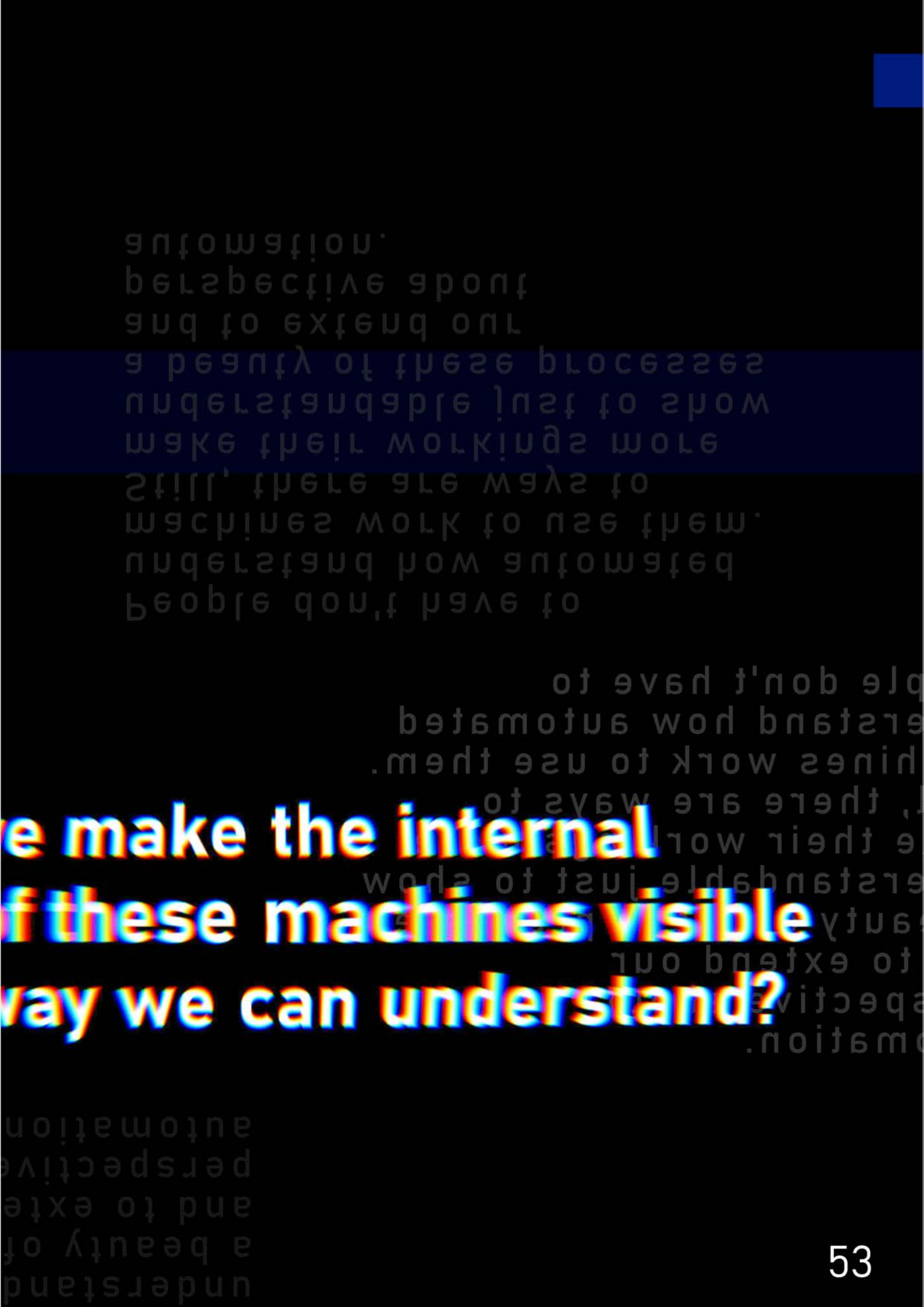
James Bridle

Salt cirlcle trap

54 Light painting WiFi
56 Satellite Lamps
58 Wif structure
60 Visualizing electromagnetic fields

People don't have to understand how automated machines work to use them. Still, there are ways to make their workings more understandable just to show a beauty of these processes and to extend our perspective about automation.

How can w
workings o
to us in a w


e make the internal
f these machines visible
way we can understand?

HOW CAN WE MAKE THE INTERNAL WORKINGS OF THESE MACHINES **VISIBLE** TO US IN A WAY WE CAN **UNDERSTAND**?

#mapping

#visualization

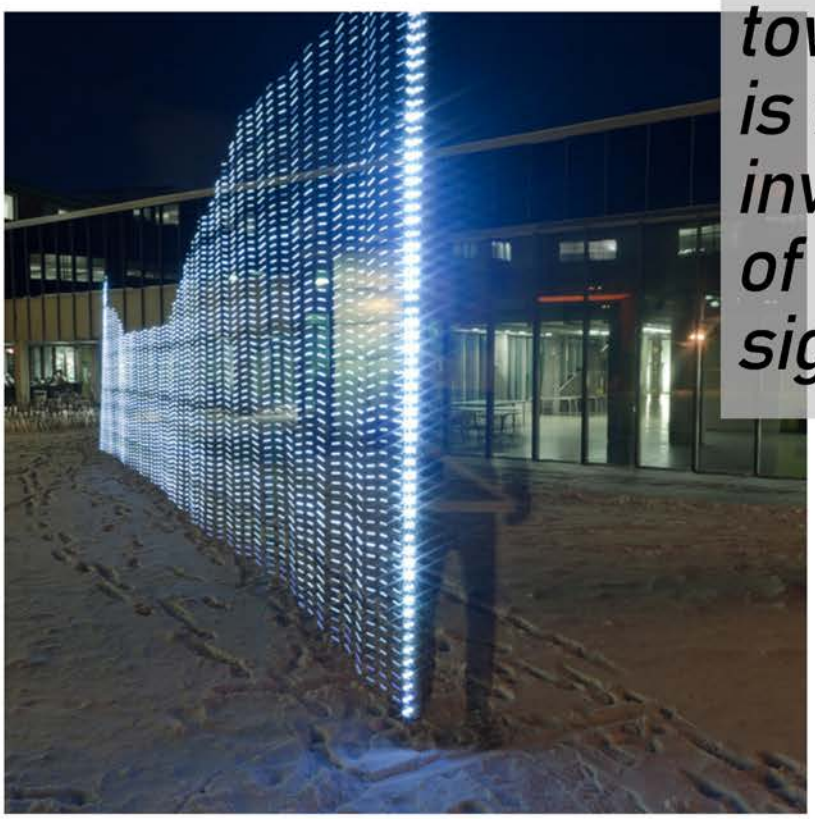
#scanning

#photography

#network

“Every city, every town, every home is filed with an invisible network of competing signals”

British Telecom
‘BT Smart Wireless Home Hub’

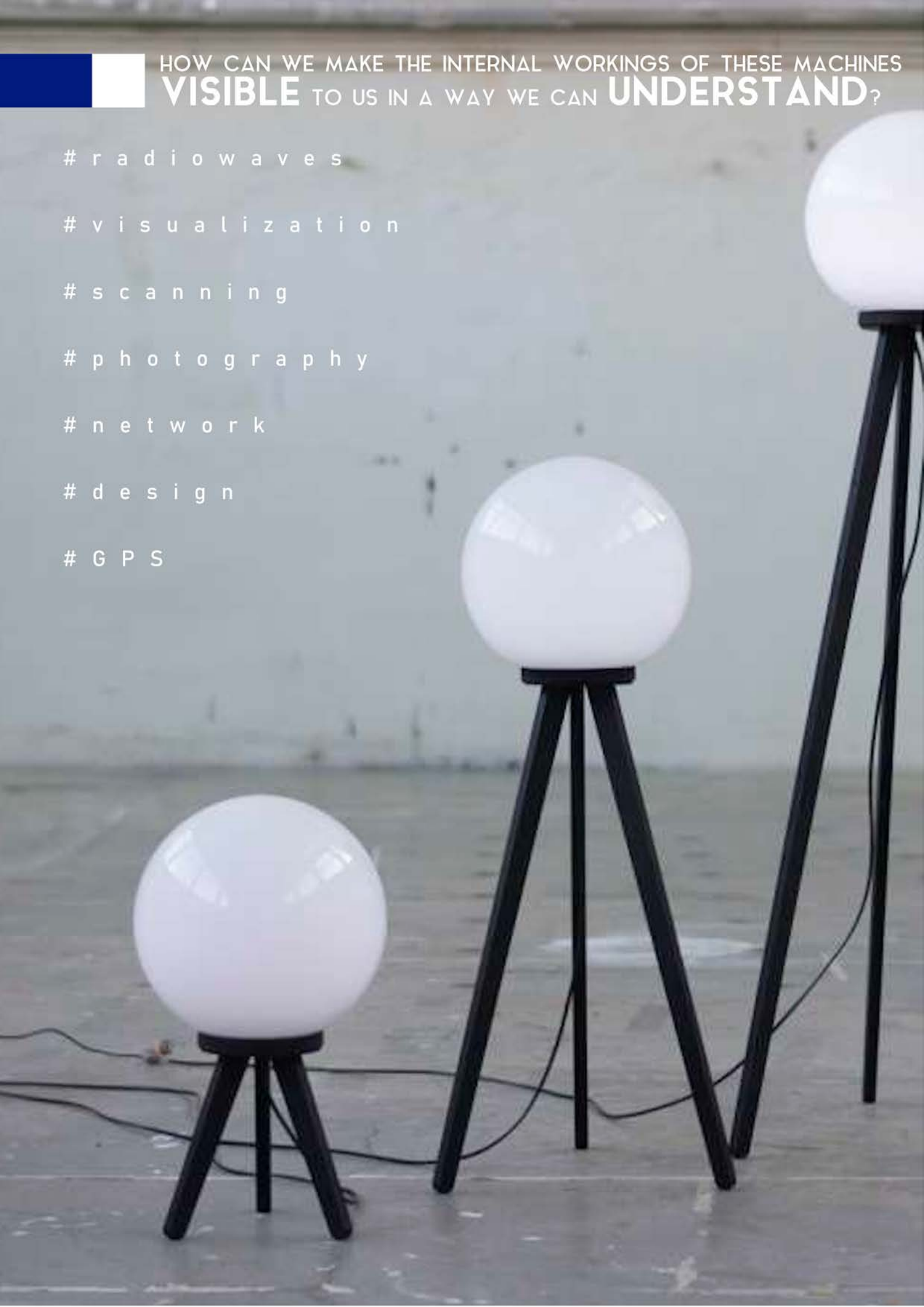


The project of Timo Arnall and its co-authors (Jørn Knutsen, Einar Sneve Martinussen) aims to illustrate invisible to the human eye wi-fi networks in urban spaces through the use of photographic technique called light-painting. We can see how WiFi network behaves and changes in urban space, how it is influenced by buildings, people and the structure of the city.

Timo Arnall
Einar Sneve Martinussen
Jørn Knutsen

A four-metre long measuring rod with 80 points of light creates cross-sections through WiFi networks by light painting signal strength in long-exposure photographs.

Immaterials: Light painting WiFi



HOW CAN WE MAKE THE INTERNAL WORKINGS OF THESE MACHINES **VISIBLE** TO US IN A WAY WE CAN **UNDERSTAND**?

#radiowaves

#visualization

#scanning

#photography

#network

#design

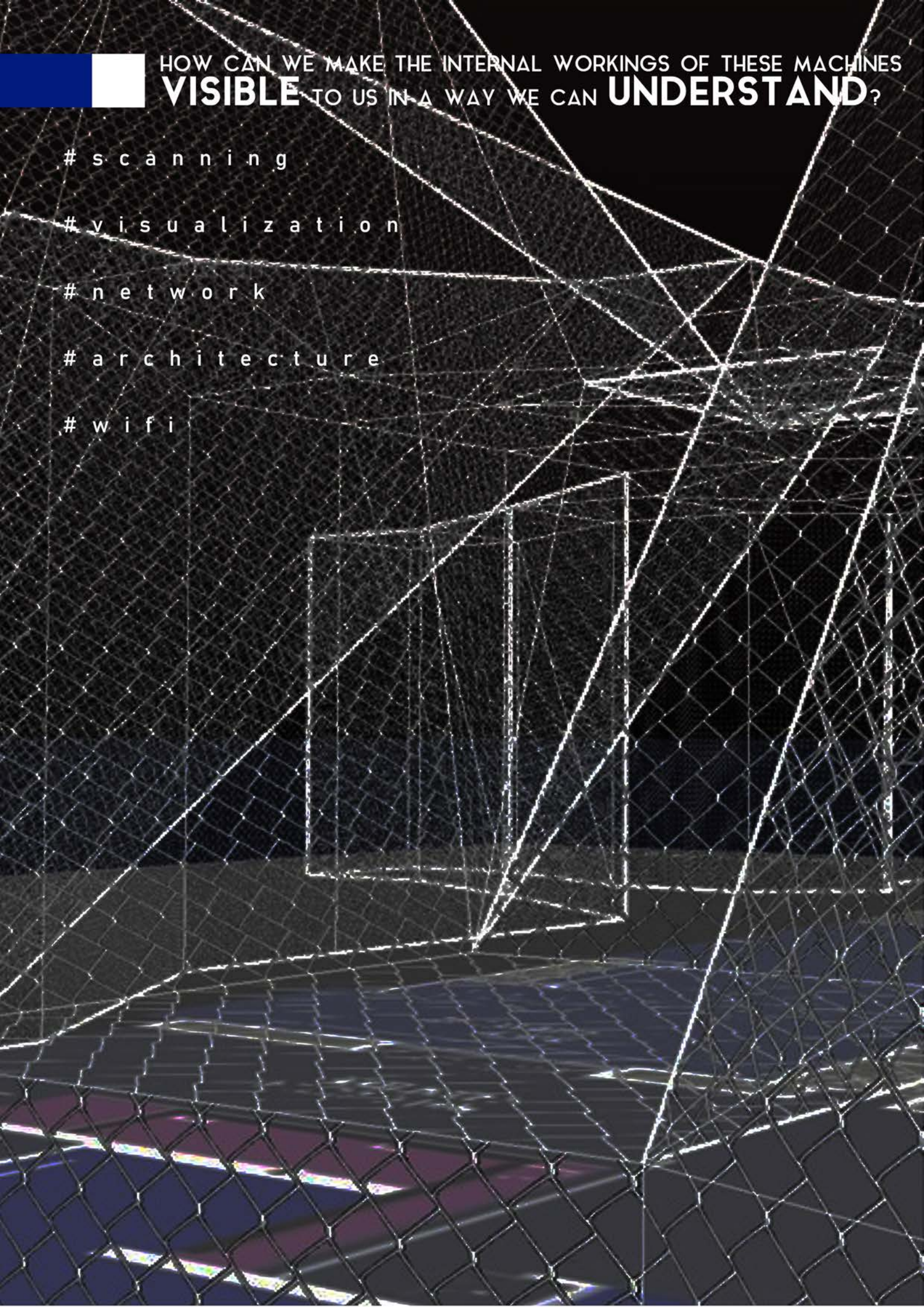
#GPS

"As urban life becomes intertwined with digital technologies, the invisible landscape of the networked city is taking shape—a terrain made up of radio waves, mobile devices, data streams and satellite signals."

Satellite Lamps is using design to discover and reveal one of the fundamental pillars of the networked city - the Global Positioning System (GPS). Satellite Lamps glow brighter when GPS signals are stronger, and thanks to timelapse photography we can see how GPS signals inhabit different everyday spaces.

Timo Arnall
Einar Sneve Martinussen
Jørn Knutsen

Satellite Lamps



HOW CAN WE MAKE THE INTERNAL WORKINGS OF THESE MACHINES **VISIBLE** TO US IN A WAY WE CAN **UNDERSTAND**?

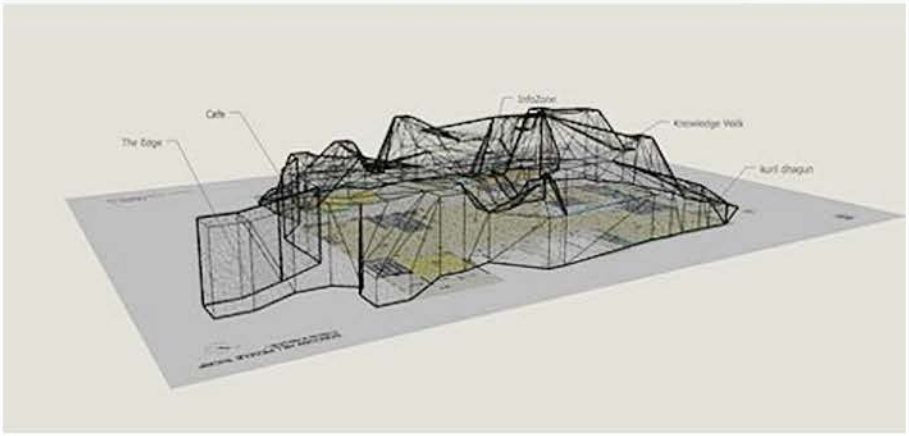
#scanning

#visualization

#network

#architecture

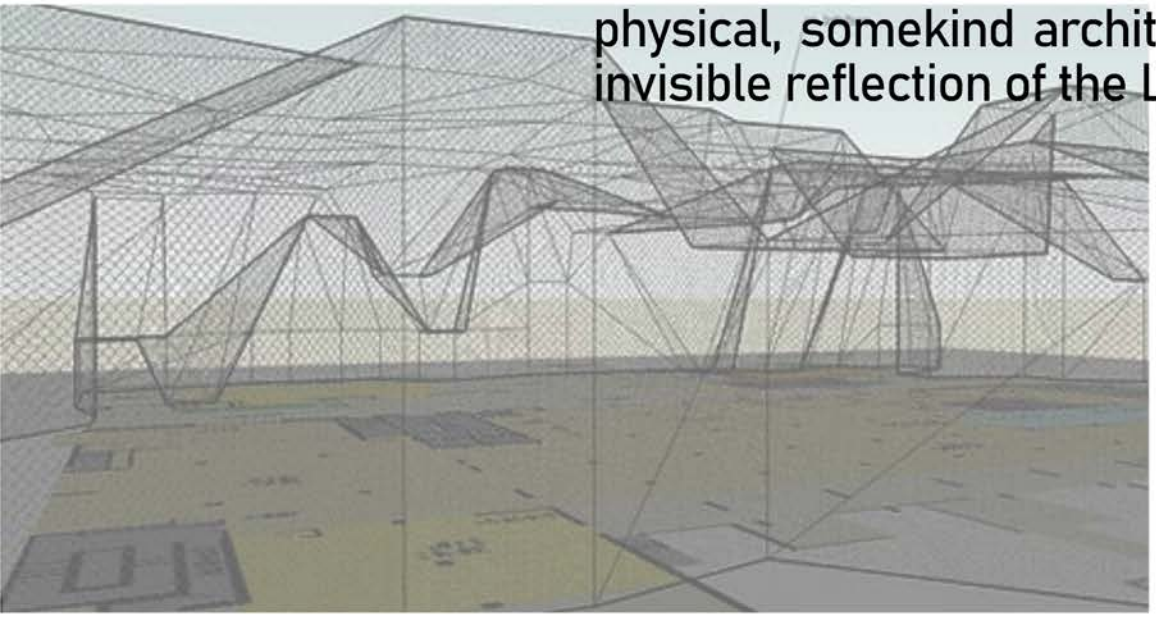
#wifi



D a n H i l l

Wi-Fi Structure

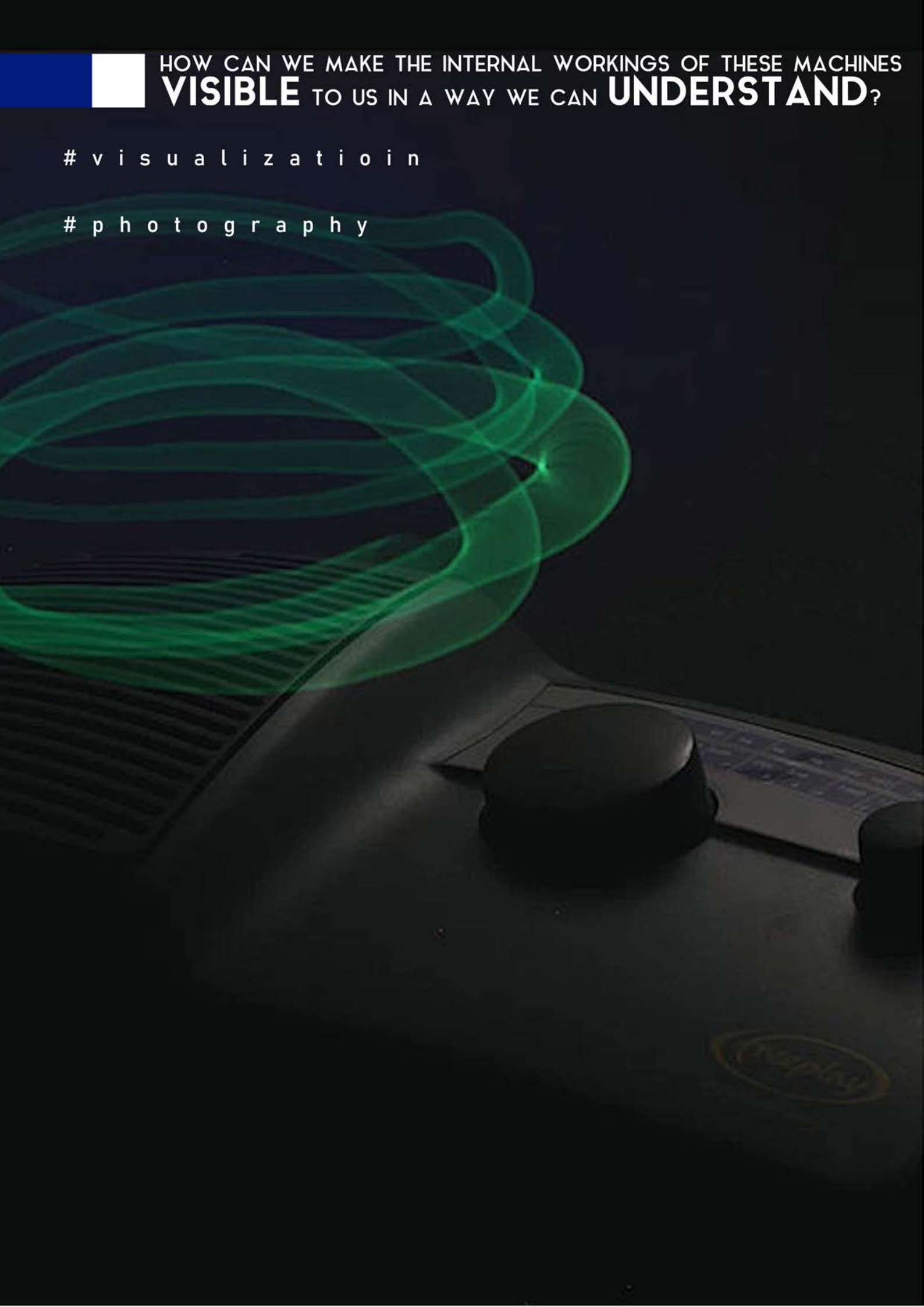
The author of this project, Dan Hill, has mapped a strenght of the WiFi signal across the primary WiFi using areas in the State Library of Queensland. construct a snapshot of the wi-fi signal strength across the Library. Then transforming this set of readings as a basic 3D model in SketchUp has gave a sense of the wi-fi as a shape, with a physical, somekind architectural form of invisible reflection of the Library.



HOW CAN WE MAKE THE INTERNAL WORKINGS OF THESE MACHINES **VISIBLE** TO US IN A WAY WE CAN **UNDERSTAND**?

#visualizatioin

#photography



Luke Sturgeon

Visualizing electromagnetic fields

There are forces called Electromagnetic Fields that are invisible for humans but are used by all electrical or magnetic devices. By using custom software, long exposure photography and stop-frame animation Luke Sturgeon captured and visualised these invisible forces around our everyday objects.

"Yet how can we be sure that our own mental model of these technologies is accurate and is a mental model shared by others, most importantly our target audience?"

Luke Sturgeon

64 Gobi desert satellite calibration targets
66 Dead pixel Google Earth
68 Scale model China
70 CLUI kite
72 Ground calibration patterns for sale
74 Space 360
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80 Driveway QR code
82 QR U
84 Russian pavilion
86 Milestone

Arriving of new technologies gave us new kind of language readable for automated devices only. It creates a new wave of aesthetic which we can experience everyday.

kind of new aesthetic
e developed because of
chnologies?

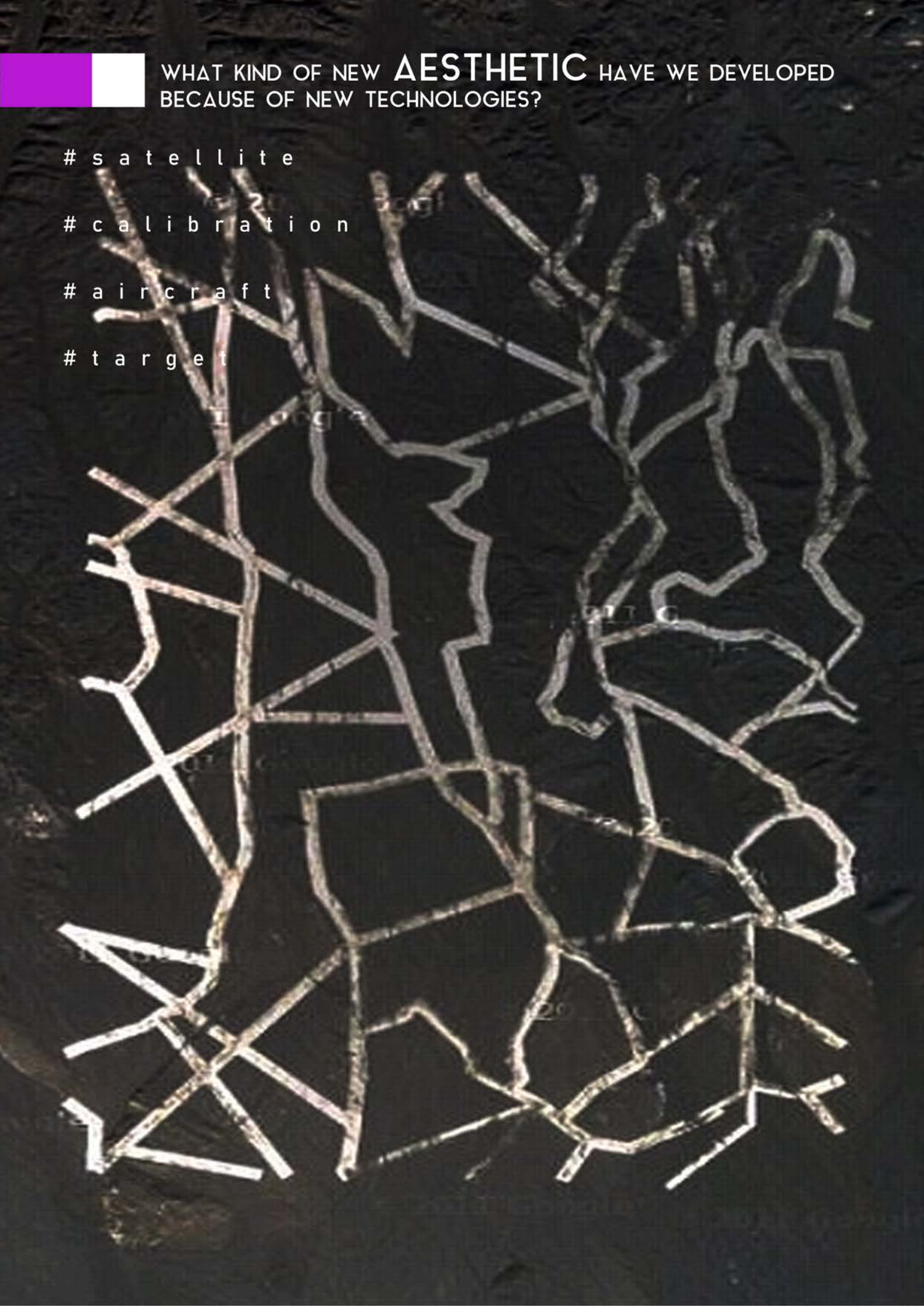
WHAT KIND OF NEW **AESTHETIC** HAVE WE DEVELOPED BECAUSE OF NEW TECHNOLOGIES?

#satellite

#calibration

#aircraft

#target



Landscapes are made for Satellite Eyes

This is an example of a satellite calibration target, wchich were built to give aircraft mounted cameras something on which to focus their lenses, allowing them to test their resolution and ability to take clear pictures at high speeds. The resulting properly calibrated satellites could then go on to do the work for which they were meant: spying.

The 20-meter-wide zigzagging white lines are calibration targets for spy satellites. The calibration targets are larger than might be expected — 1 by 1.8 kilometers — suggesting that the satellite cameras they are being used to calibrate have surprisingly poor ground resolution.

WHAT KIND OF NEW **AESTHETIC** HAVE WE DEVELOPED BECAUSE OF NEW TECHNOLOGIES?

#pixel

#google earth

#aircraft

A 32 x 32 inch square of dirt made by Helmut Smiths looks like one dead pixel from an altitude of 1 kilometer in Google Earth.

This “missing pixel” is an interesting way of placing emphasis on the seemingly immaterial nature of digitized information, such as the sattellite photography used to populate the data sphere of Google Earth. The virtual equivalent of this project might be to remove a single pixel from the website’s homepage just to see if anyone notices the deletion.

WHAT KIND OF NEW AESTHETIC HAVE WE DEVELOPED BECAUSE OF NEW TECHNOLOGIES?

#aerial

#aircraft

#drone

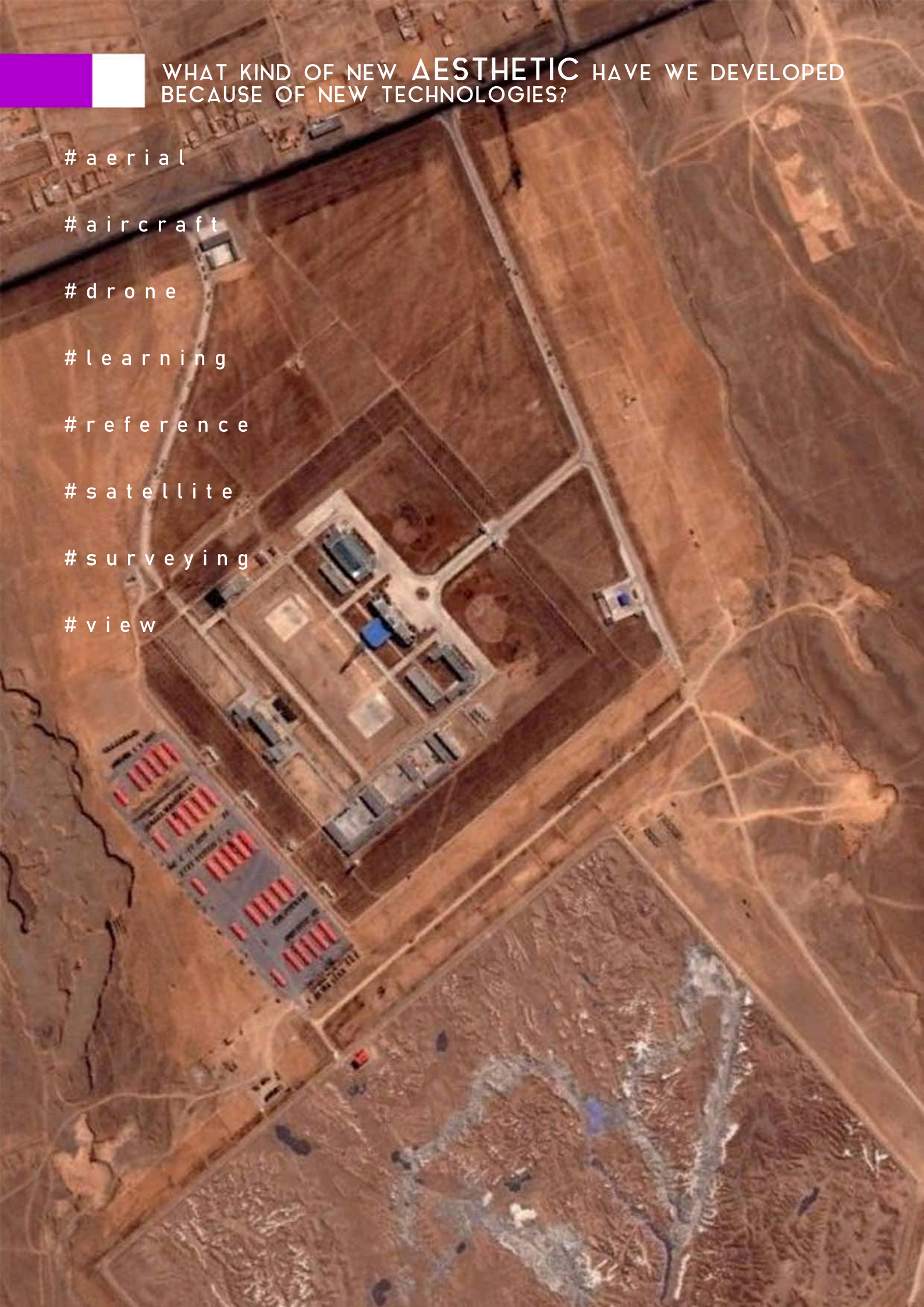
#learning

#reference

#satellite

#surveying

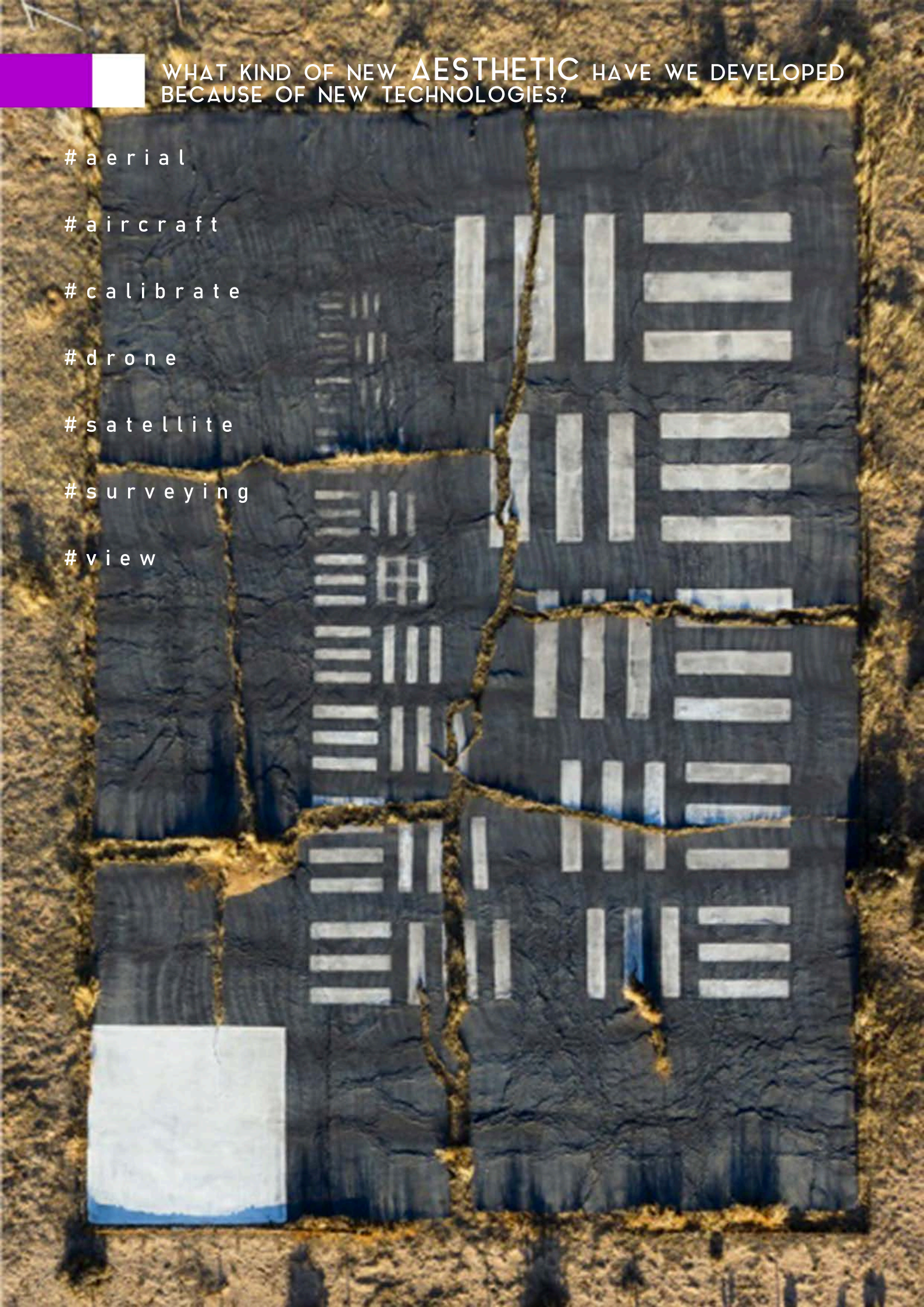
#view

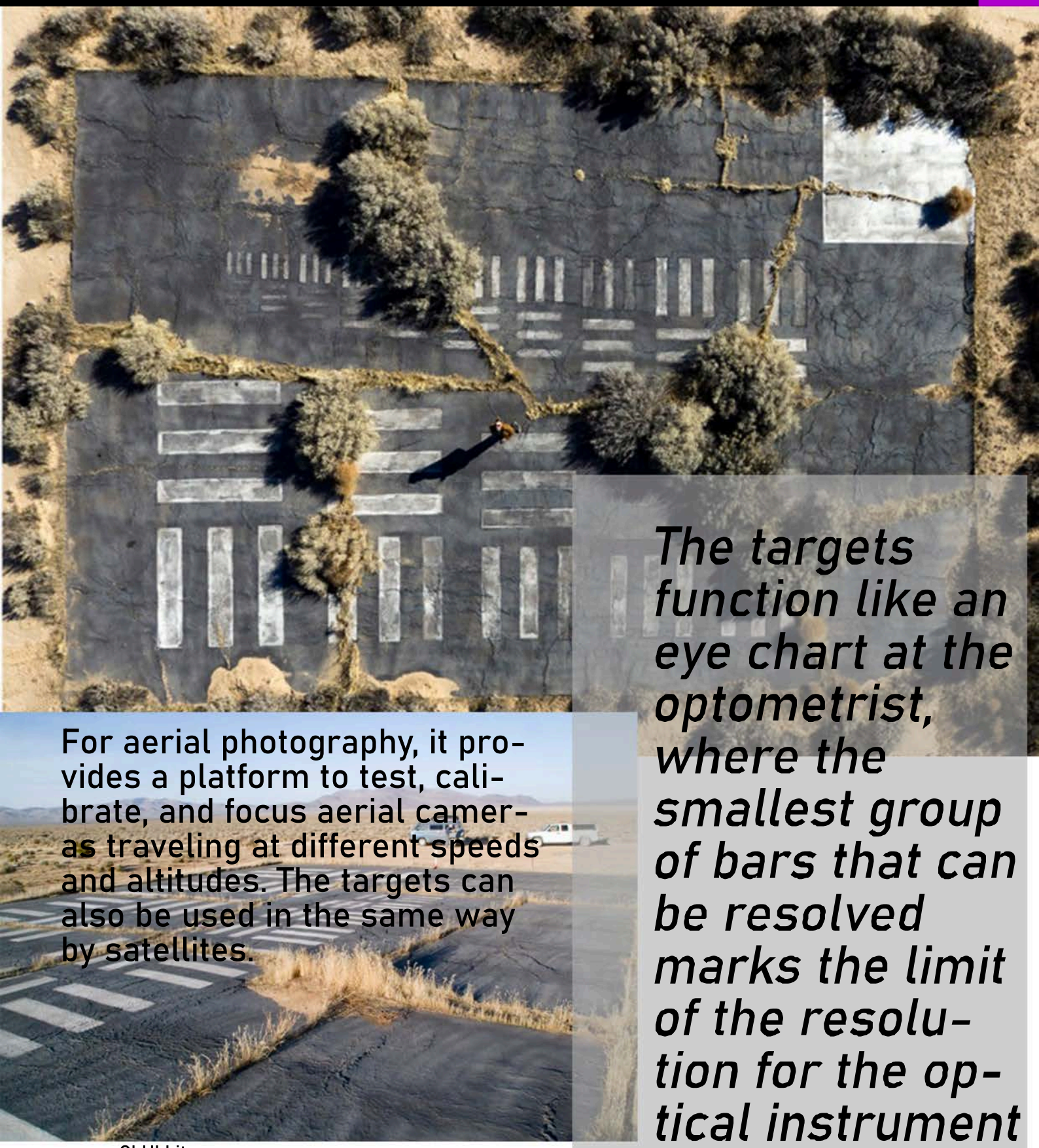


Why Is China Building These Gigantic Structures In the Middle of Nowhere?

Scale model China
Chinese government

The Chinese government made a 1:20 scale model in the desert of an area near the border that is being disputed.


WHAT KIND OF NEW AESTHETIC HAVE WE DEVELOPED BECAUSE OF NEW TECHNOLOGIES?
#aerial
#aircraft
#calibrate
#drone
#satellite
#surveying
#view



The targets function like an eye chart at the optometrist, where the smallest group of bars that can be resolved marks the limit of the resolution for the optical instrument that is being used.

For aerial photography, it provides a platform to test, calibrate, and focus aerial cameras traveling at different speeds and altitudes. The targets can also be used in the same way by satellites.

CLUI kite
Cris Benton

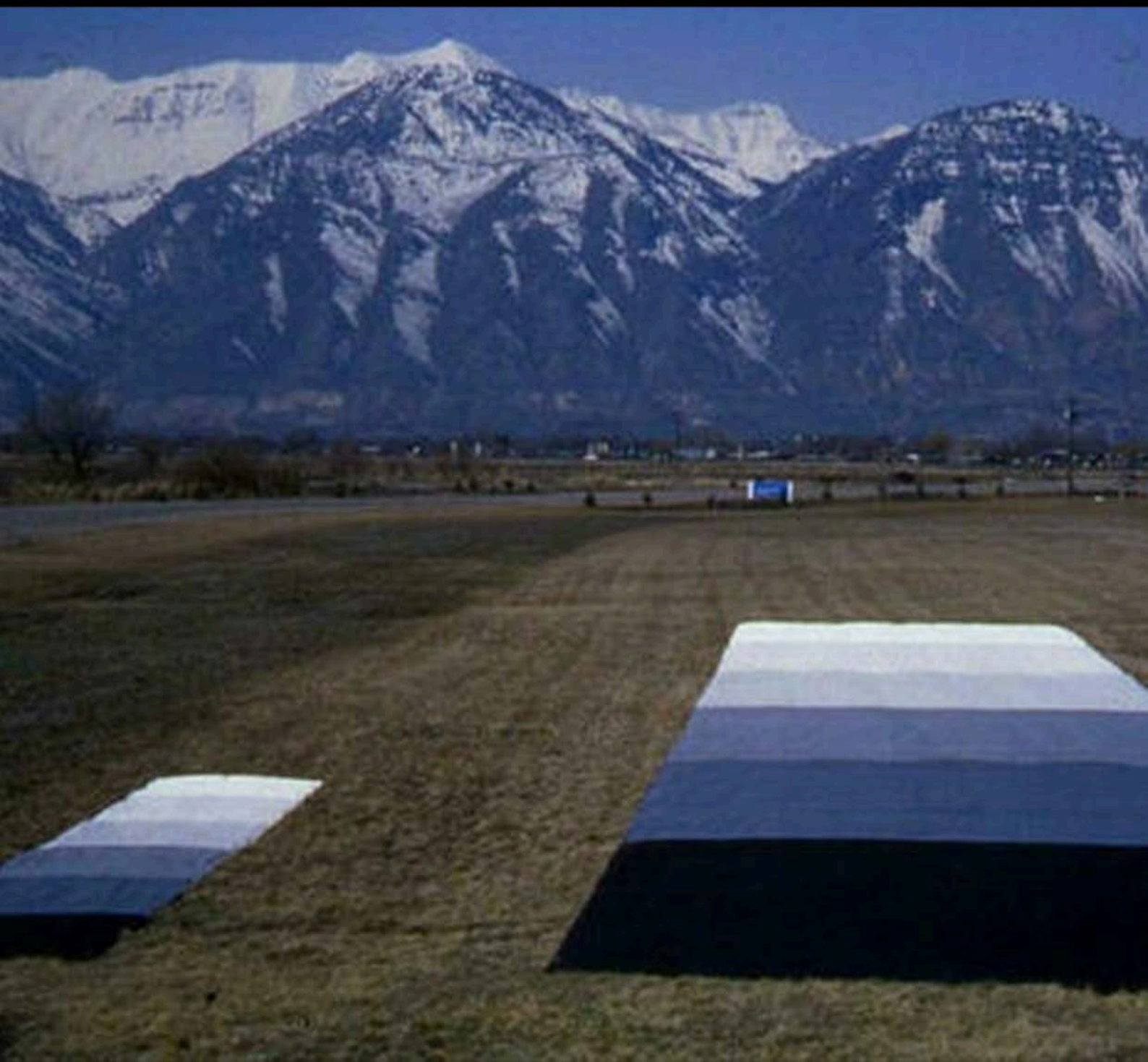
WHAT KIND OF NEW AESTHETIC HAVE WE DEVELOPED BECAUSE OF NEW TECHNOLOGIES?

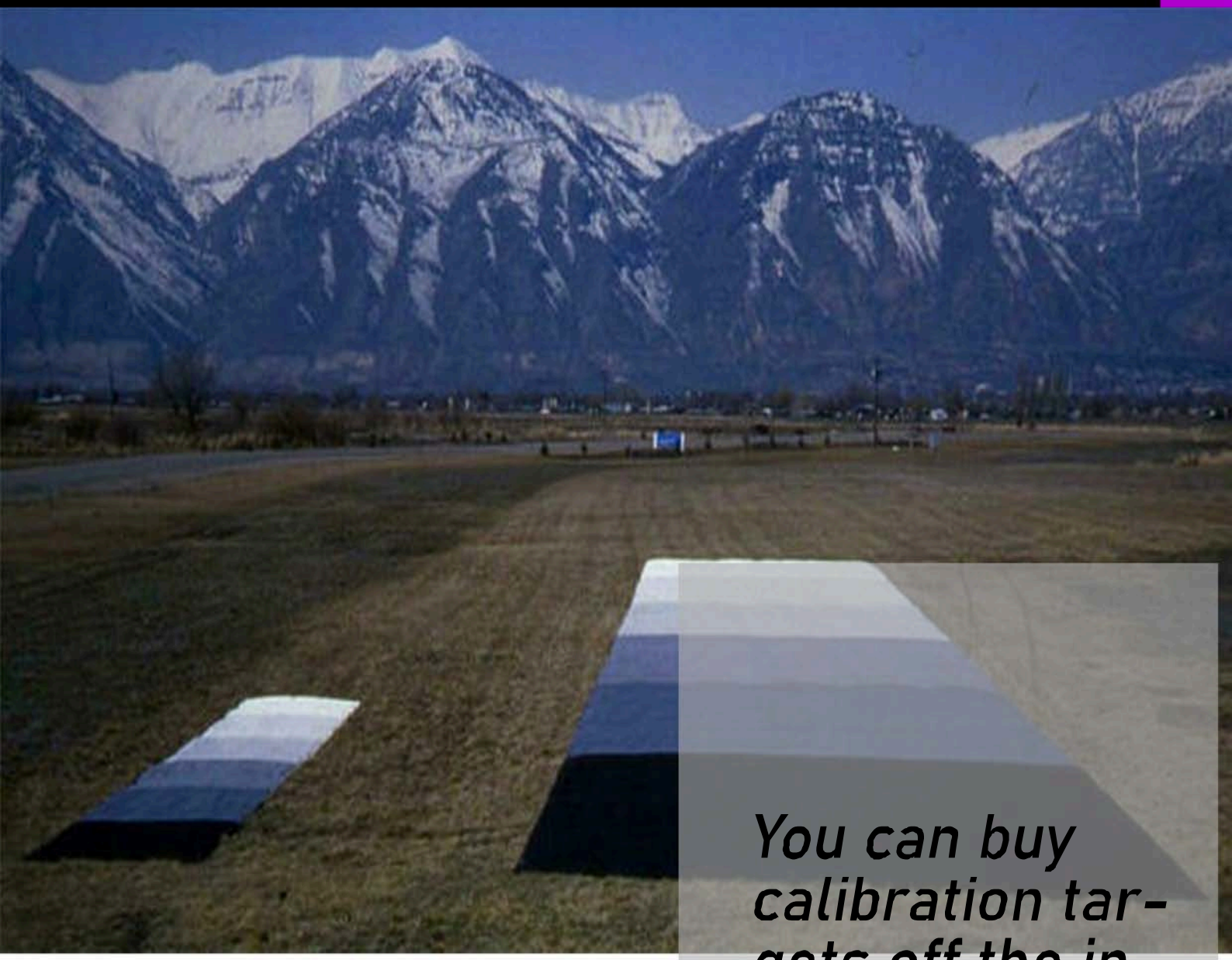
#aerial

#aircraft

#calibrate

#satellite





Ground calibration pattern
Tetracam inc.

You can buy calibration targets off the internet.

WHAT KIND OF NEW AESTHETIC HAVE WE DEVELOPED BECAUSE OF NEW TECHNOLOGIES?

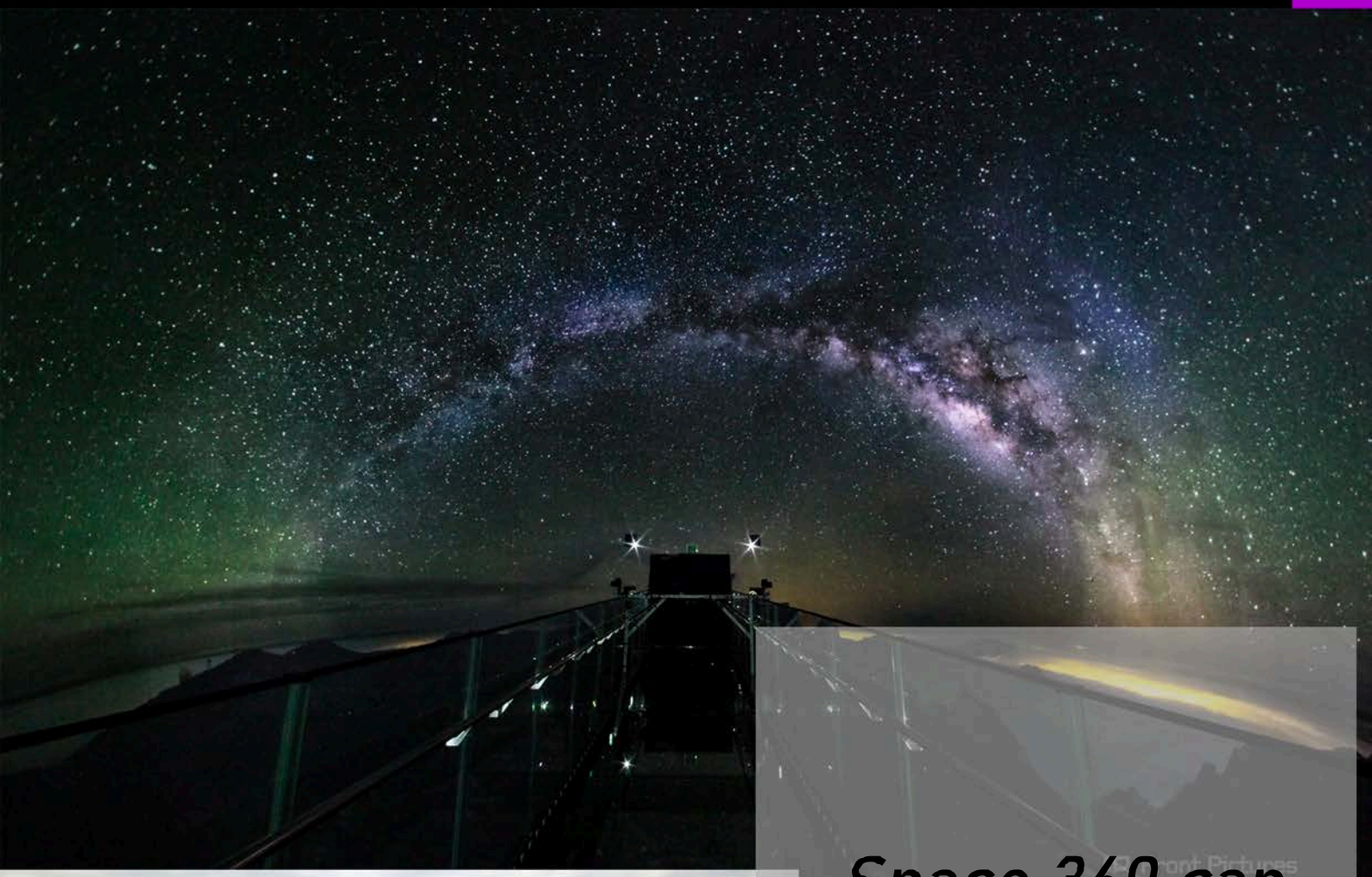
#application

#3D

#image

#representation

#visual



Space 360 can be considered a true VR theater of the future.

Space 360
Barco

A sphere building with a glass walking bridge was designed solely for projecting 360 movies on it.

WHAT KIND OF NEW AESTHETIC HAVE WE DEVELOPED BECAUSE OF NEW TECHNOLOGIES?

#3D

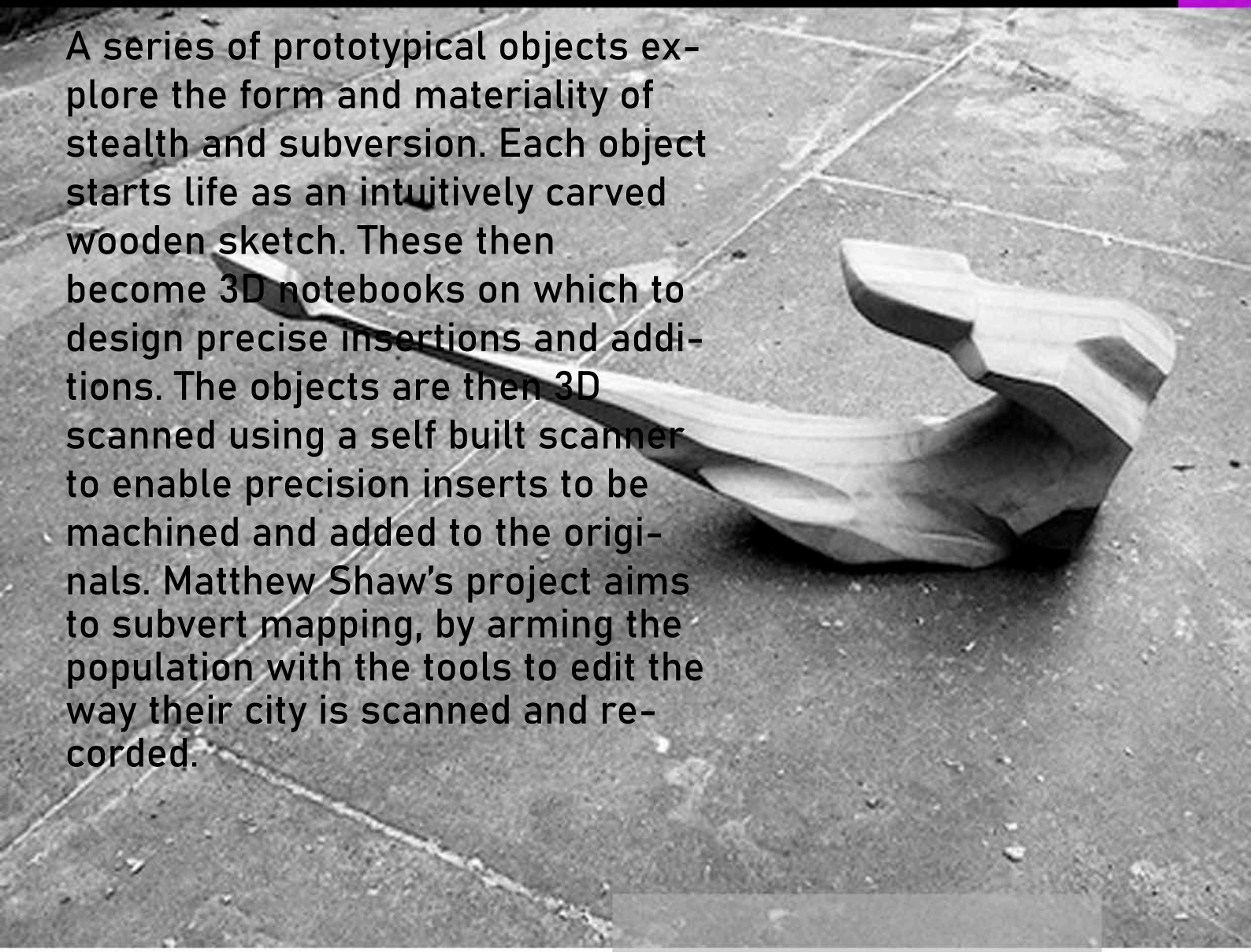
#glitch

#machine-readable

#photogrammetry

#recognition

#scan



A series of prototypical objects explore the form and materiality of stealth and subversion. Each object starts life as an intuitively carved wooden sketch. These then become 3D notebooks on which to design precise insertions and additions. The objects are then 3D scanned using a self built scanner to enable precision inserts to be machined and added to the originals. Matthew Shaw's project aims to subvert mapping, by arming the population with the tools to edit the way their city is scanned and recorded.

Prototype
Matthew Shaw

These tools are not digital hacks but physical interventions. They manipulate the scanning process and act as waypoints and markers linking the physical world to the digital.

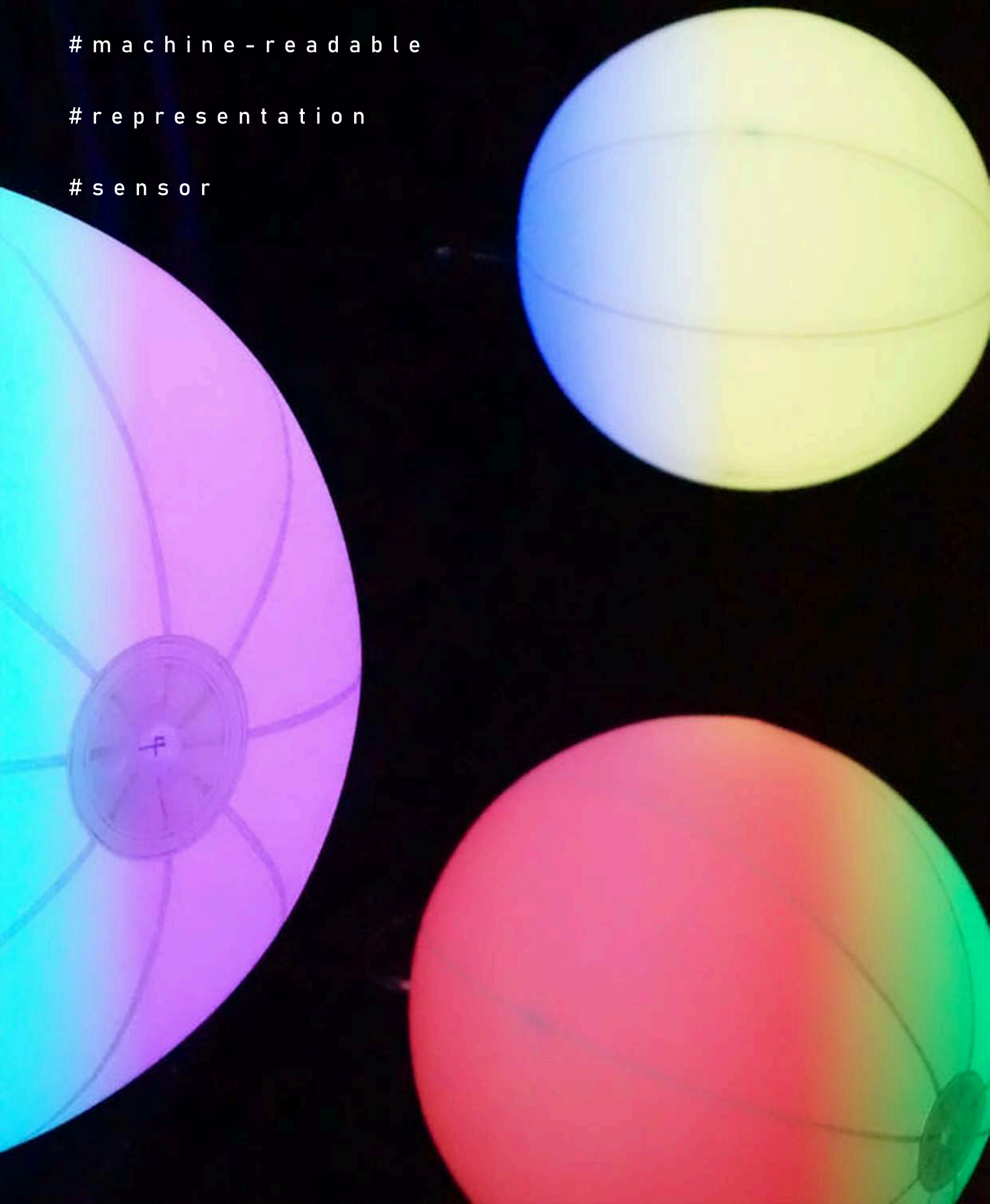
WHAT KIND OF NEW AESTHETIC HAVE WE DEVELOPED BECAUSE OF NEW TECHNOLOGIES?

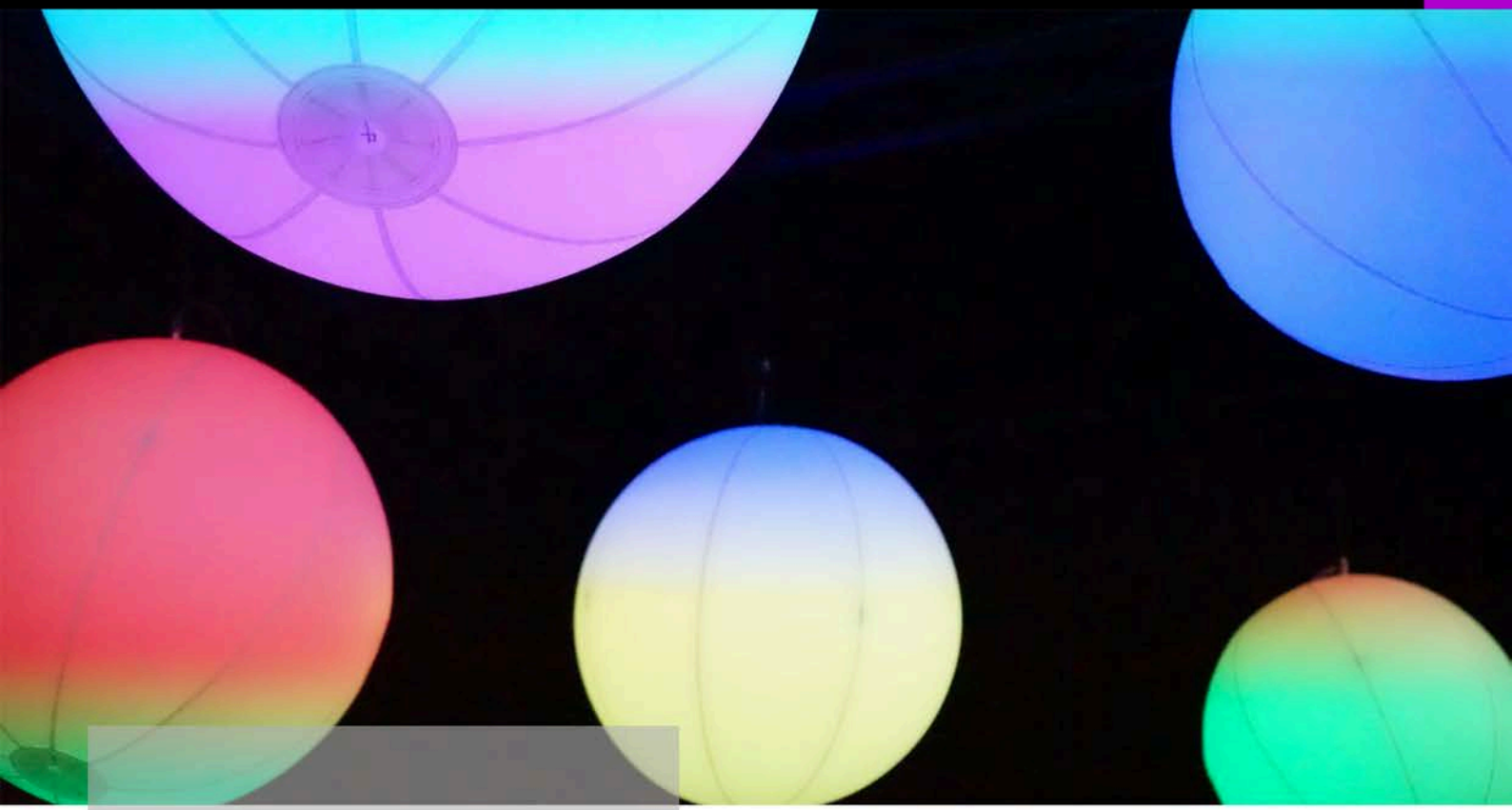
#image

#machine-readable

#representation

#sensor





Rate
Daito Manabe

"I do not think that the radio waves I discovered will have any practical application"
-Heinrich Hertz

In person, these hanging lanterns look like typical white lights. On camera, however, they appear to strobe with bands of color. We cannot see radio waves with the bare eye, but through a project like this the technology becomes something we can see.

WHAT KIND OF NEW AESTHETIC HAVE WE DEVELOPED BECAUSE OF NEW TECHNOLOGIES?

#aircraft

#database

#google

#QR code

#satellite

#surveying

Unfortunately, the QR code was not yet finished when Google Earth took this picture

Driveway QR code
Eric Rice

Eric Rice was the first person to build a QR code that was meant to be scanned through Google Earth. He made it on his driveway.

WHAT KIND OF NEW AESTHETIC HAVE WE DEVELOPED BECAUSE OF NEW TECHNOLOGIES?

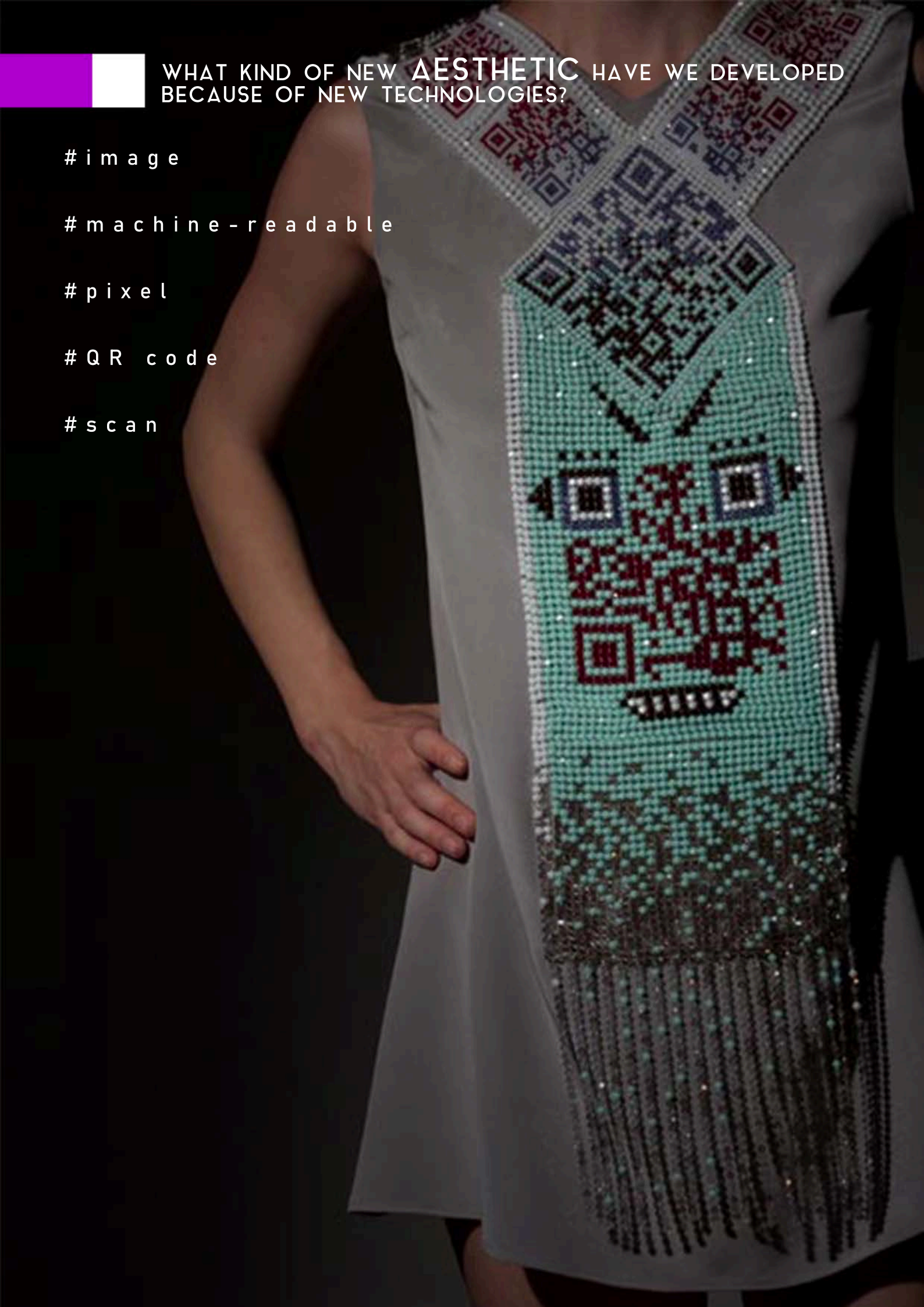
#image

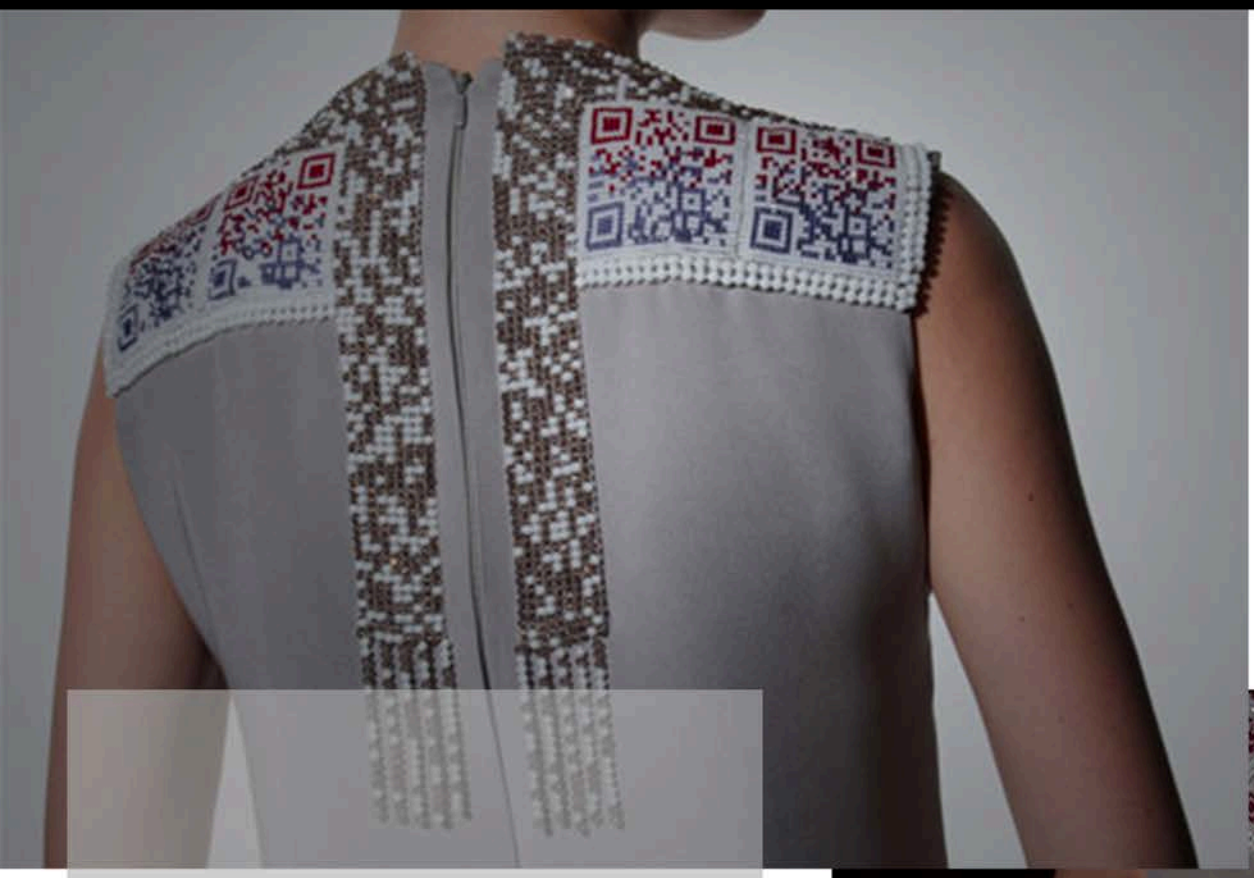
#machine-readable

#pixel

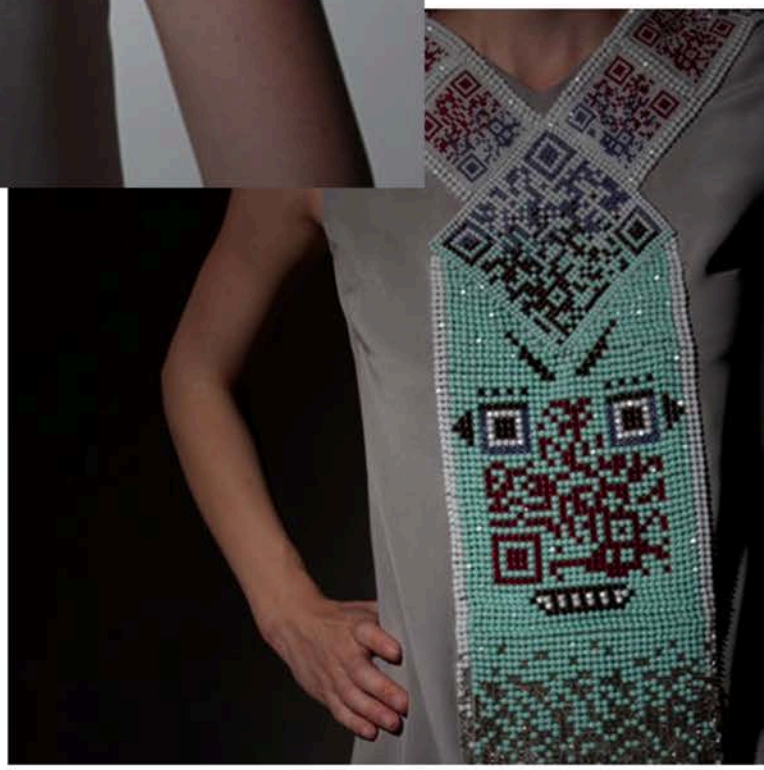
#QR code

#scan





The tribal styling references the way social networks are often described as online tribes.

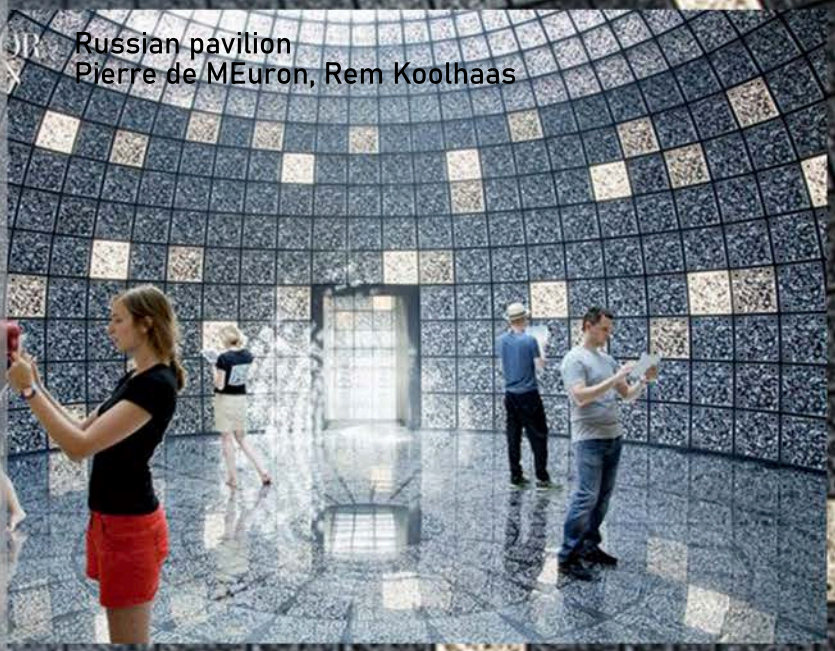


QR U?
Thorunn Arnadottir

The QR U? dress features graphic codes that a mobile app can recognise and translate into images, links to websites or text.

WHAT KIND OF NEW AESTHETIC HAVE WE DEVELOPED BECAUSE OF NEW TECHNOLOGIES?
#image
#machine-readable
#pixel
#QR code
#scan

Every surface inside the top floor of the Russian Pavilion at the Venice Architecture Biennale is covered in QR codes, which visitors decode using tablet computers to explore ideas for a new Russian city dedicated to science.



Russian pavilion
Pierre de MEuron, Rem Koolhaas

WHAT KIND OF NEW AESTHETIC HAVE WE DEVELOPED BECAUSE OF NEW TECHNOLOGIES?

#3D

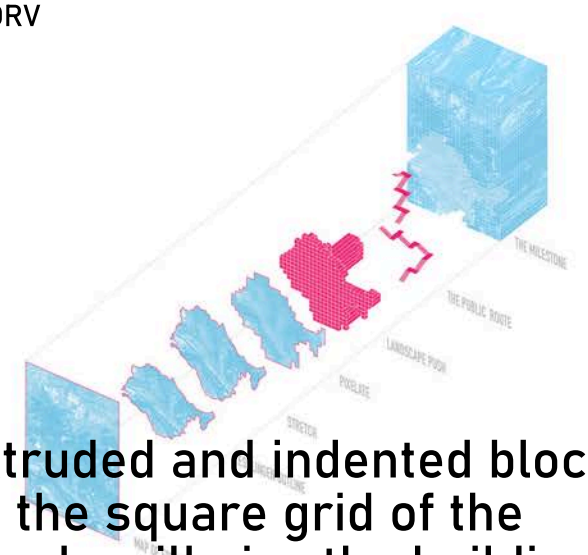
#machine-readable

#pixel

#QR code

#representation

The milestone
MVDRV



Extruded and indented blocks on the square grid of the facade will give the building a 3D profile that the architects describe as a "pixelated map". Passersby will be able to use their phones to interact with the facade, which will be printed with QR codes that reveal information about the city.

"Each pixel carries different information, featuring the stories of the city and its inhabitants. Accompanied by a smartphone app one can discover its richness, creating the public library of the town," MVRDV explained.

EXPERIMENTS

A lot of automated devices are already very common and accesable. We can check by ourselves how these tools work, how to use them and in which purpose they're the most effective.

VISUAL BOTS and PHOTOGRAMMETRY TECHINQUE gives us new opportunities in unerstanding and adapting visual perception of automated devices to our own sense of aesthetic.

EXPERIMENT WITH VISUAL CHATBOTS

This experiment is checking the ability of automated devices to recognize and rate aesthetics of the images made by other machines.

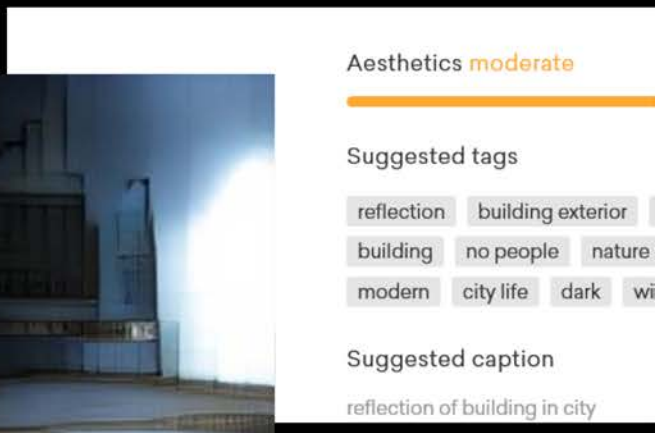
GENERATIVE ENGINE is a storytelling machine that automatically generates synthetic images as you write new words and sentences.

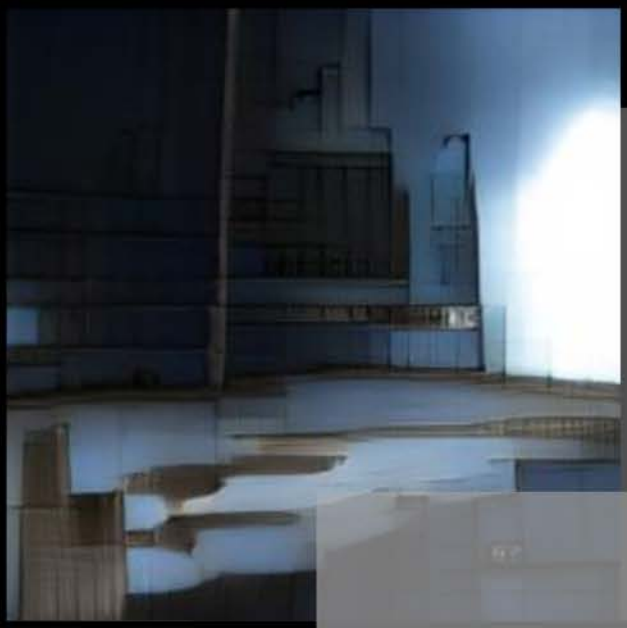
the bot autoamtically creates the image

aesthetic modern building

we're writing down what we want to see

The other visua
EVERYPIXEL) a
recognize the p
it aesthetic.





2.9%

chance that this image is awesome

SHARE RESULT WITH FRIENDS

Use tags for searching or copy them all

Architecture | Reflection | Urban Scene | Built Structure
Building Exterior | Modern | Office Building | Skyscraper
Blue | Business | Architecture And Buildings | Window
Futuristic | City | Glass - Material | Outdoors | Night
City Life | Tower | No People

l bots (... and
re trying to
icture and rate

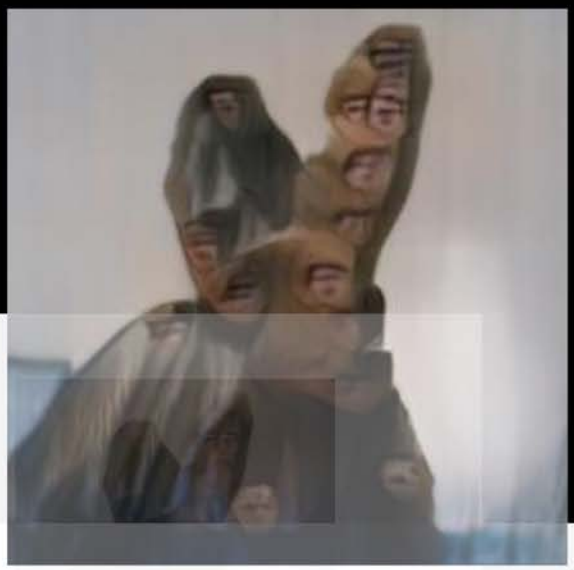
57%

architecture | city | built structure | water
day | sky | outdoors | business | office
ndow | copy space

Bots are recognizing the picture quite accurate but becouse of different data bases bots are rating it differently. None of them describes the picture as "aesthetic".

EXPERIMENT WITH
VISUAL CHATBOTS

Some of the examples are showing how weird and abstract perception of autmated devices can be.



beautiful lake

Aesthetics moderate 63%

Suggested tags

portrait | two people | adult | women | indoors | females | emotion | people | smiling | men | headshot | happiness | looking at camera | togetherness | mid adult | positive emotion | casual clothing | joy

92.2%

SHARE RESULT WITH FRIENDS

chance that this image is awesome

Use tags for searching or copy them all

Concepts And Ideas | People | Color Image | Statue

Thanks to creating images in real time we can see the way of thinking of autmated bot.

Busy street

Visualization o

Busy street in a city center

Visualization of invisible

Busy street in a city center full of yellow taxis

Visualization of invisible landscape

Busy street in a city center full of yellow taxis with gardens on the roof

EXPERIMENT WITH STYLE TRANSFER

+

=

Original photo + reference photo = result

We started experimenting with the style transfer technique, first on pictures. We wanted to see if it was possible to clean up a room, make it messy, change the style and much more using this technique.

+

=

EXPERIMENT WITH
STYLE TRANSFER

+

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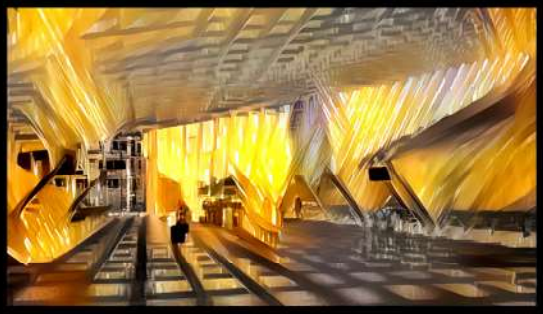

EXPERIMENT WITH STYLE TRANSFER

+

What if we could start transfer-ring rendered styles onto existing architecture?

=

EXPERIMENT with
STYLE TRANSFER

+

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EXPERIMENT WITH STYLE TRANSFER

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EXPERIMENT WITH STYLE TRANSFER

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=

CONCLUSION

The NEW EYES
looking at the wor
creating new stru
showing how auto

These new perspe
ARCHITECTURE. O
buildings in it?

that AUTOMATION has given us, brings us new ways of
rld. Other than just being an observer, humans have started
ctures for machines to look at, and for humans to look at while
mated technology works.

ectives can and should be considered while making
Our whole lookout on the world has changed, so why not the

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