

Computer Science

+

Creativity

+

Criticality

Dr Baden Pailthorpe
Lecturer, Hybrid Art Practice
ANU School of Art & Design

What does art/design
have to do with CS?

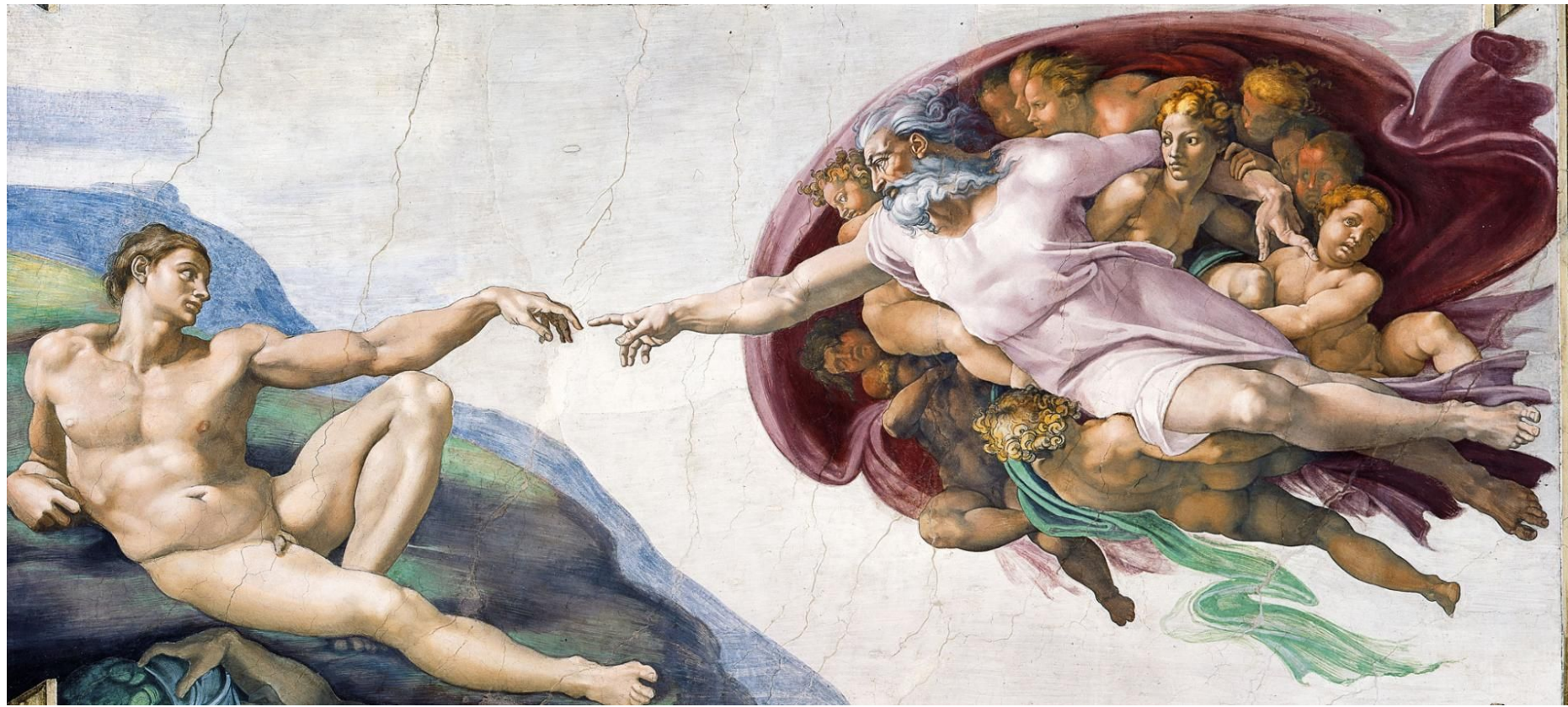
Technology augmenting human senses







Revealing the invisible







Caspar David Friedrich, *Wanderer above the Sea of Fog*, 1817.
Kunsthalle Hamburg.



Documentation from scuba expedition to
locate NSA choke point on undersea
communications cables,
Miami Coastline, U.S.

Trevor Paglen



Trevor Paglen, *Reaper Drone (Indian Springs, NV; Distance ~ 2 miles)*, 2010 C-print

Trevor Paglen



Trevor Paglen, *Untitled (Reaper Drone)*, 2010
C-print

Trevor Paglen

Thinking Machines

Art and Design in the Computer Age, 1959–1989

November 13, 2017–April 8, 2018
The Museum of Modern Art



Beryl Korot

[Text and Commentary, 1976-1977](#)

5-channel video (black and white, sound),
5 weavings, 5 drawings, and 6
pictographic video notations
30 min, loop
Dimensions variable

Art and AI - conceptual art

Sol LeWitt. *Wall Drawing #260*, 1975

Chromat SS15 FORMULA 15

Instruction based artworks, procedural and sequential in process and outcome.



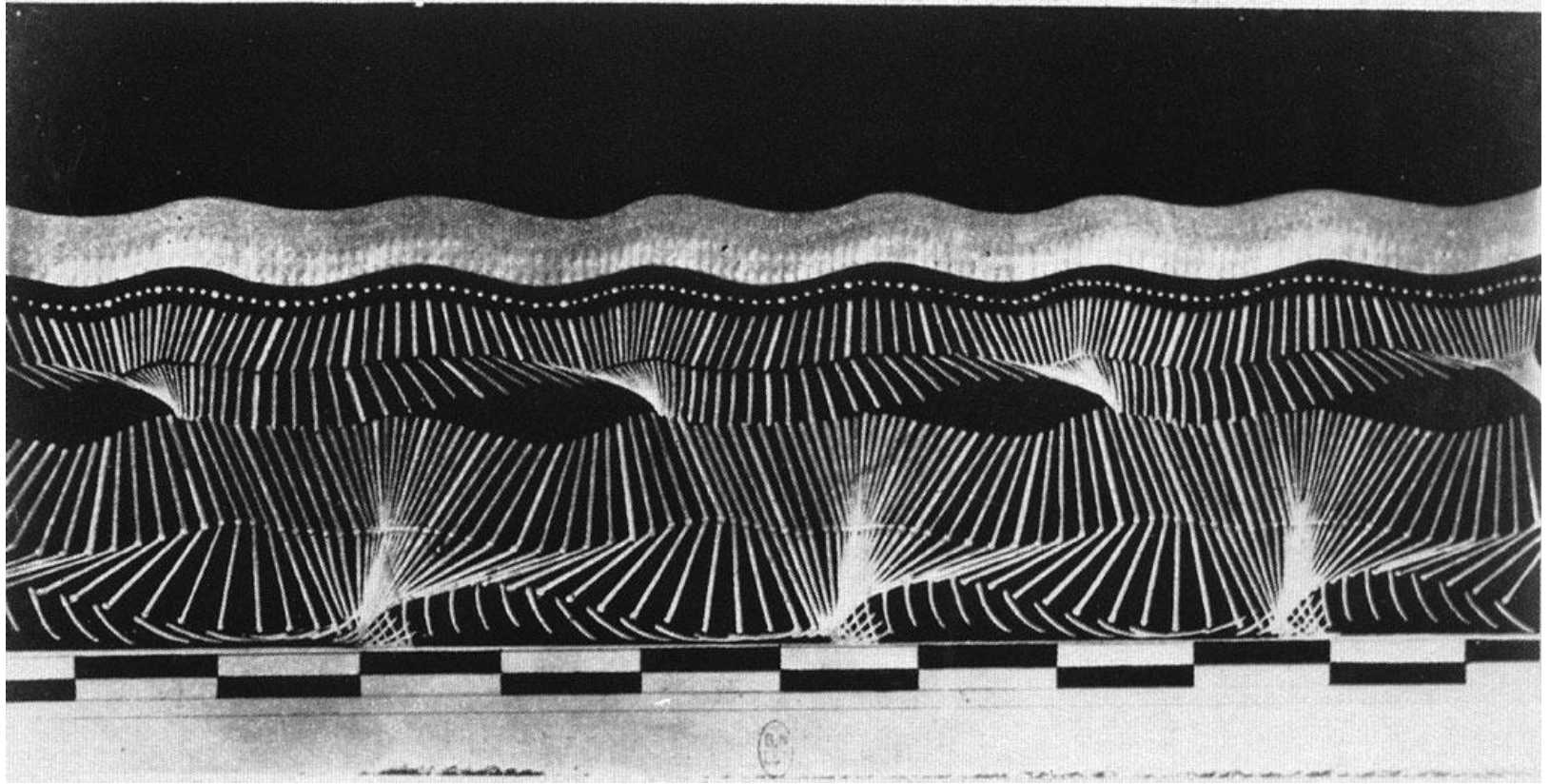
Can a machine create art?

camera

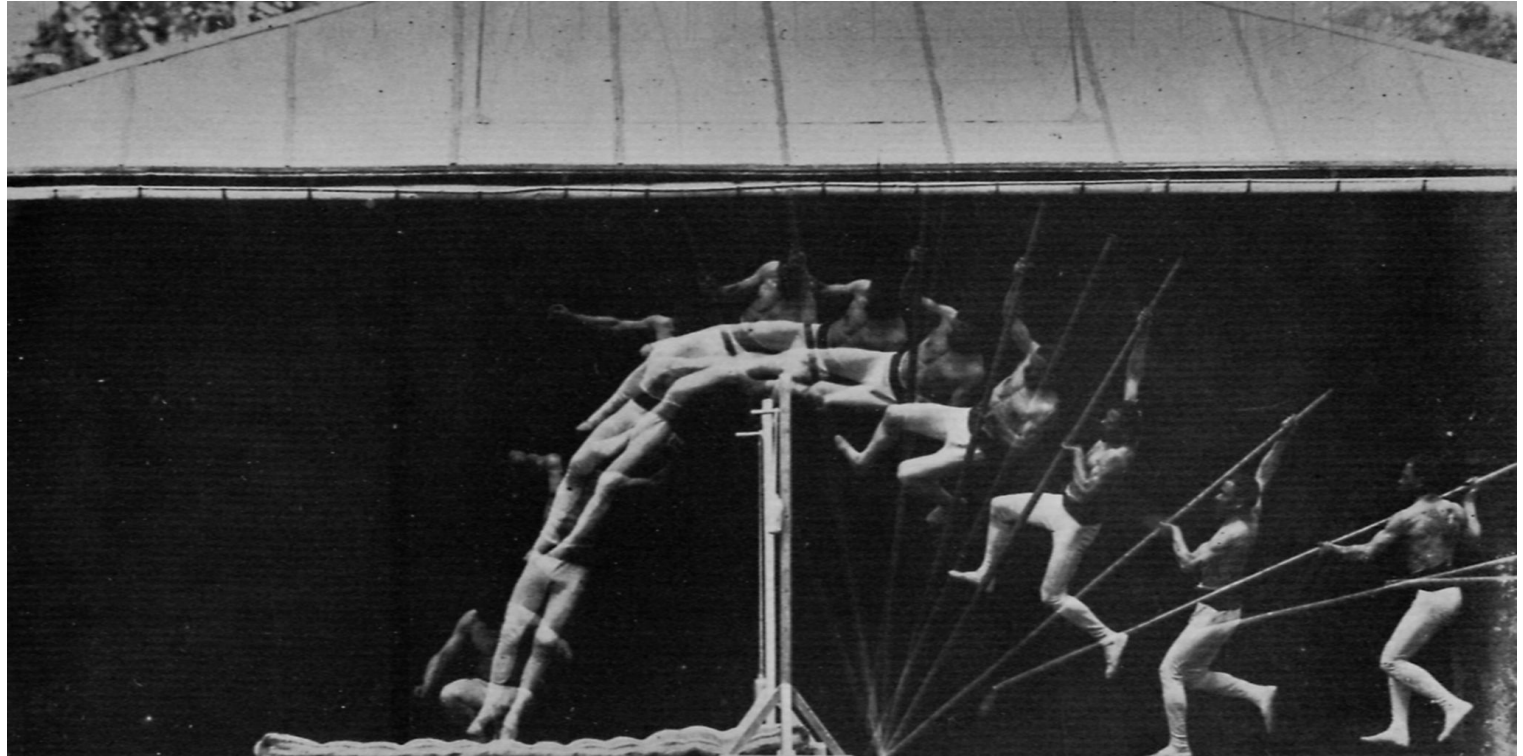
Can a ~~machine~~ create art?

“If photography is allowed to supplement art in some of its functions, it will soon supplant or corrupt it altogether, thanks to the stupidity of the multitude which is its natural ally.”

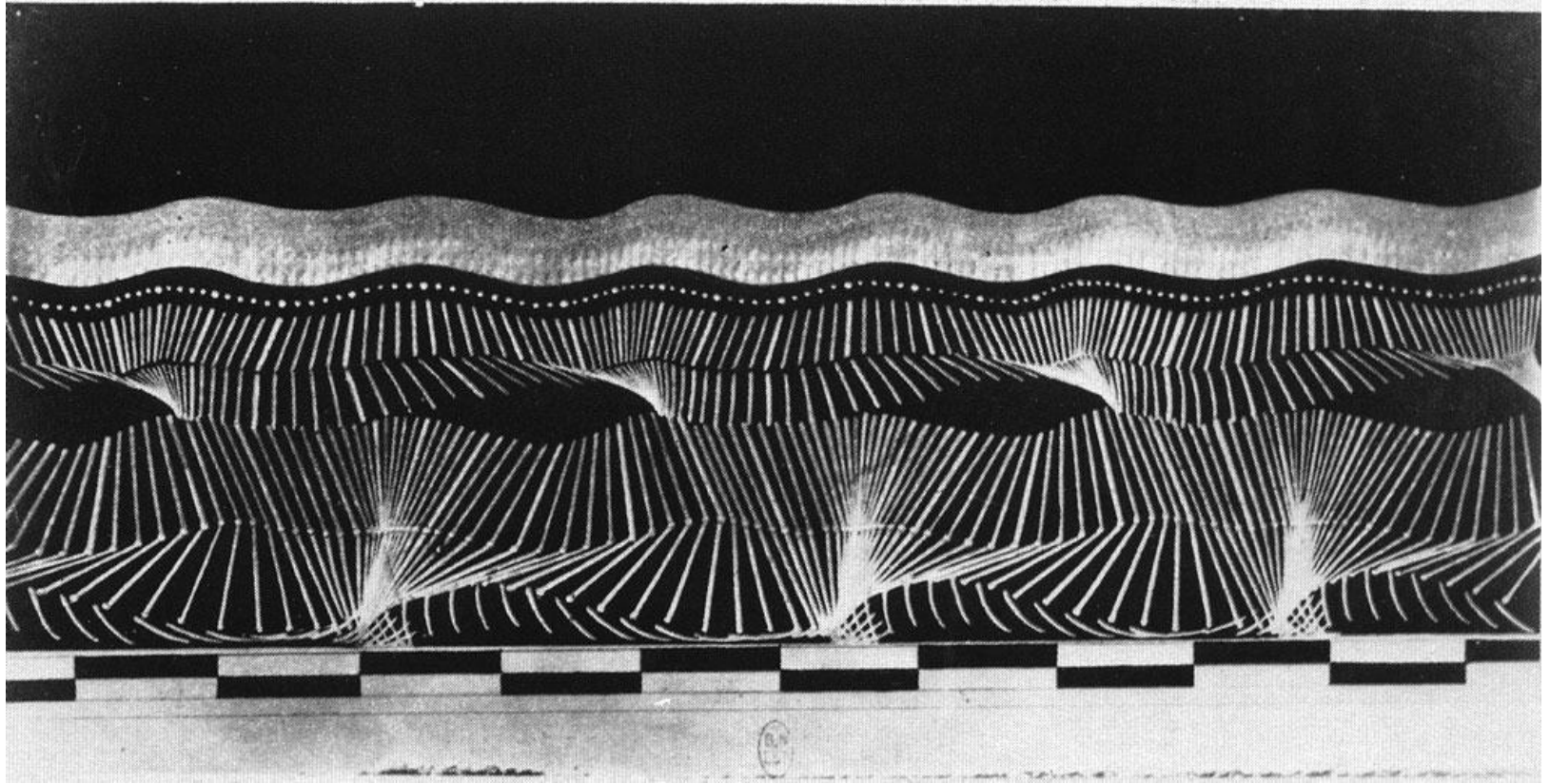
Charles Baudelaire, 1859



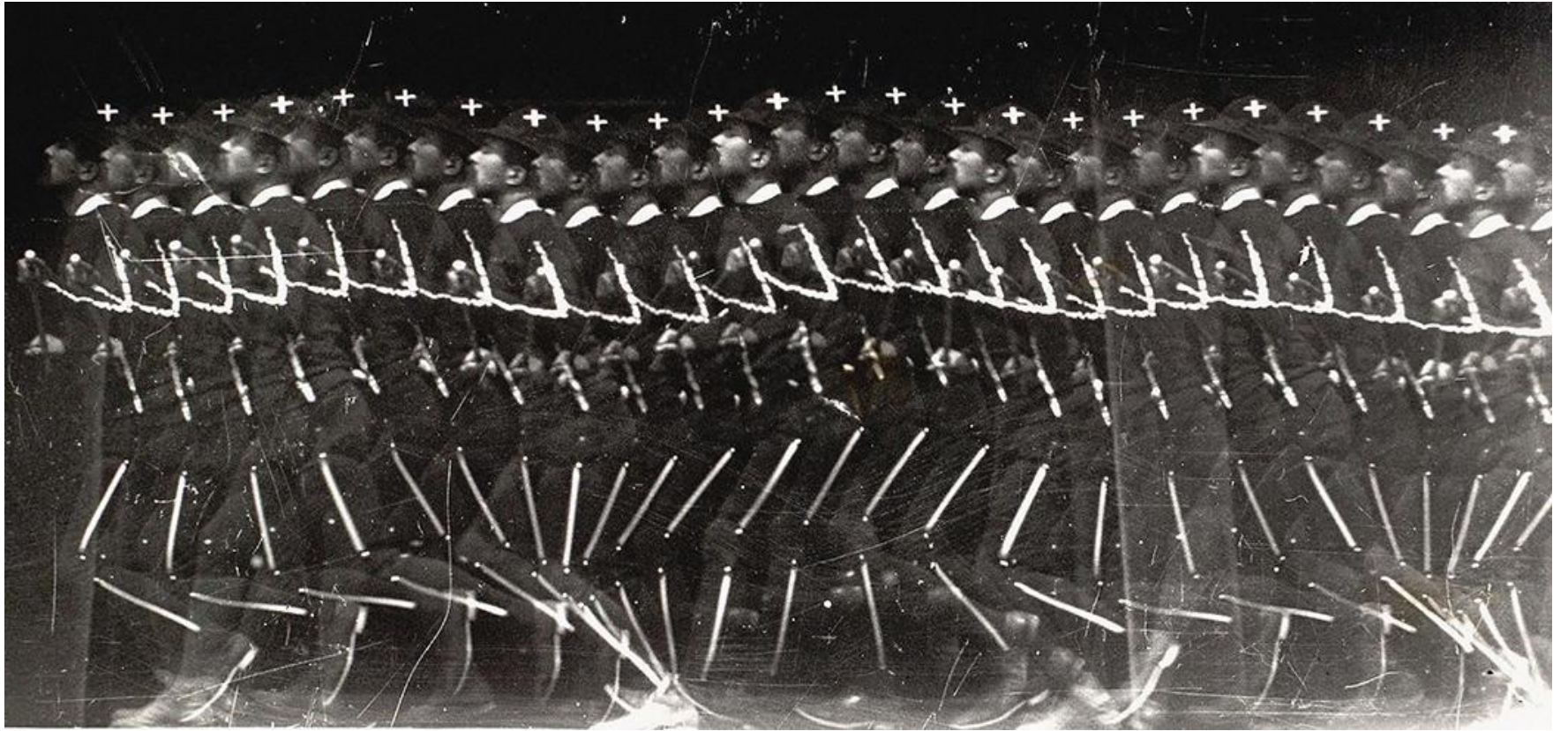
Étienne Jules-Maray, *Running*, 1884



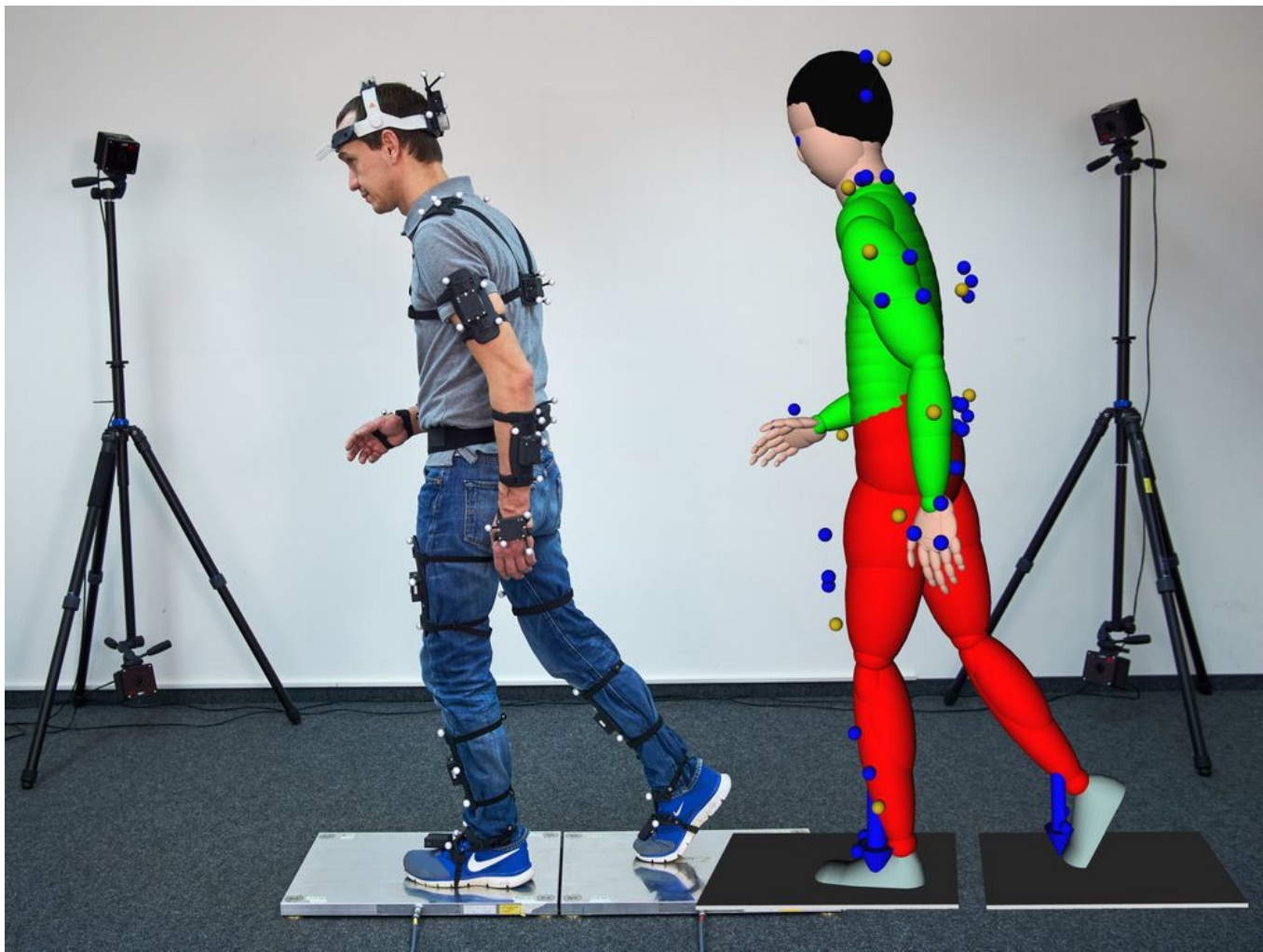
Etienne-Jules Marey, *Chronophotographic Study of Man Pole Vaulting* (1890-91)



Étienne Jules-Maray, *Running*, 1884



Étienne Jules-Maray



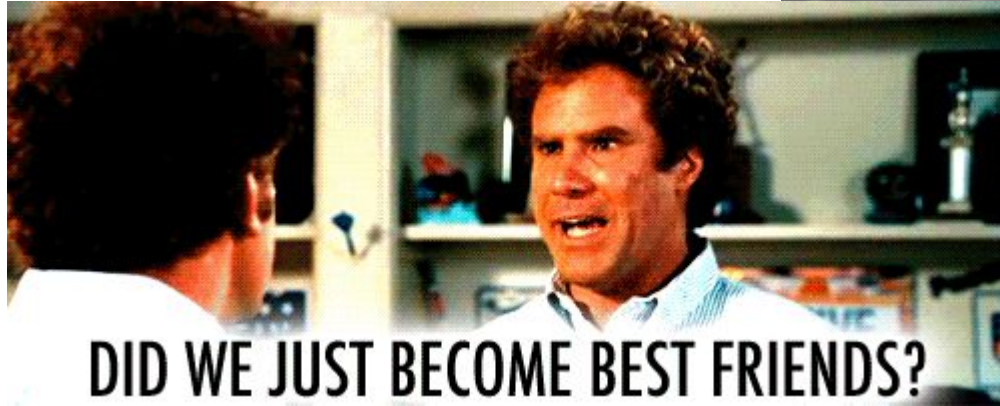


Thomas Richard Williams, *The Sands of Time*
(1855). Stereoscopic daguerreotype, 8 x 17 cm





Computation and art: Best friends!

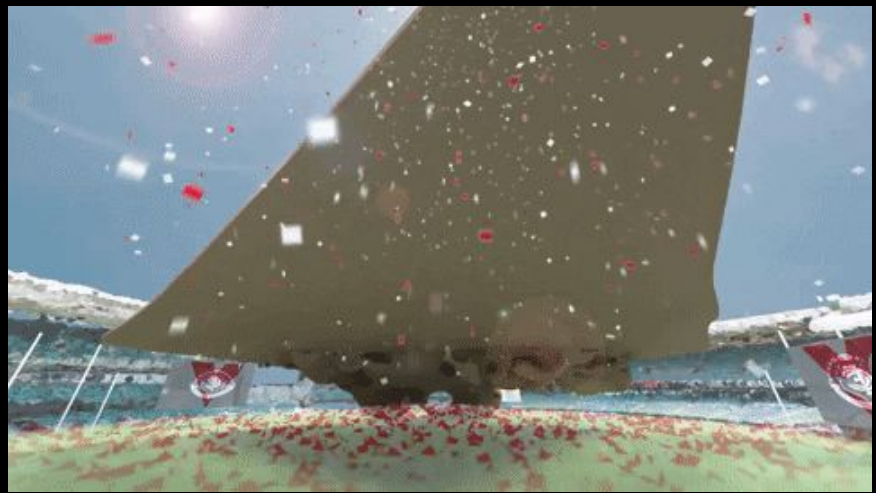
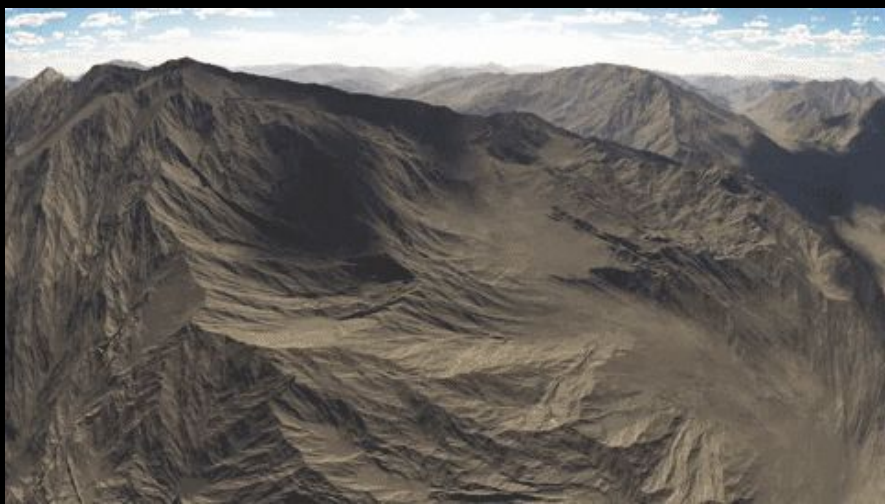


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4 84 66 91 132 116 138 136 129 116 127 125 145
   163 209 177 145
5 154 197 157 125 127 182 247 184 197 216 222
   234 236 234 141 175
6 255 255 254 227 255 209 229 234 225 255 219
   0 67 1 39 41
7 41 54 48 54 107 59 59 107 225 150 127 150
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What is a digital image? [Unravelling the JPEG](#)

Some examples of how I use computers





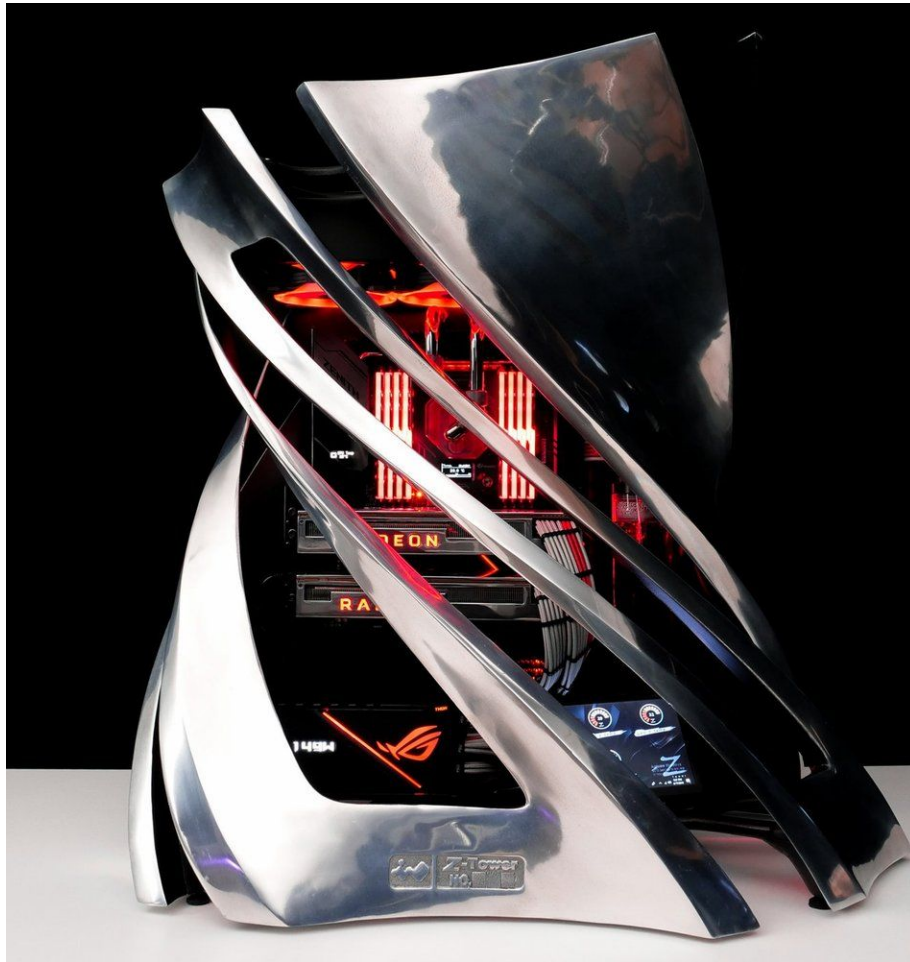
Baden Pailthorpe
One and Three
PCs, 2019
4A, Sydney

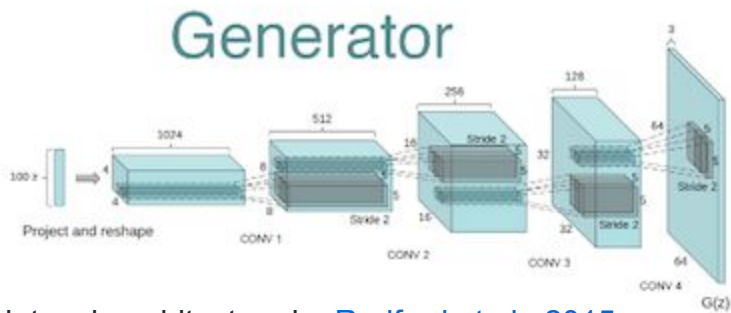
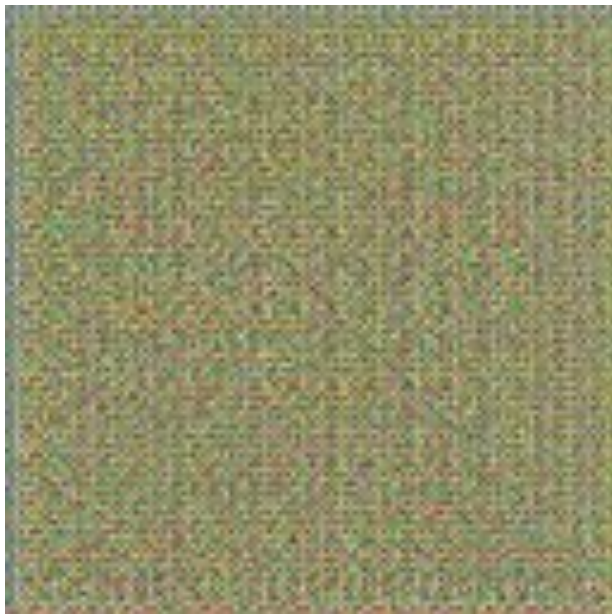


chair (châr), *n.* [OF. *chaire* (F. *chaire*), < L. *cathedra*: see *cathedra*.] A seat with a back, and often arms, usually for one person; a seat of office or authority, or the office itself; the person occupying the seat or office, esp. the chairman of a meeting; a sedan-chair, a chaise; a metal block or clutch to support and secure a rail in a railroad.



Joseph Kosuth
One and Three Chairs, 1965
MoMA





Network architecture by [Radford et al., 2015](https://arxiv.org/abs/1511.06434).
https://github.com/gsurma/image_generator





Baden Pailthorpe
Procedural Portrait, 2018
Lyon Foundation, Melbourne



Baden Pailthorpe, *Clanger (longitude, latitude, decibels)* 2018, Single channel video installation. Installation view, UTS Art, Sydney.

Player tracking in the AFL
Micro wearables
(GPS, Gyro, Accelerometer)
Focus on one match (Swans v Carlton)... because that's the data we could most likely get access to



File Home Insert Page Layout Formulas Data Review View Help Acrobat Tell me what you want to do Share

Calibri 11 A^ A^

General Normal Bad Good Neutral Calculation

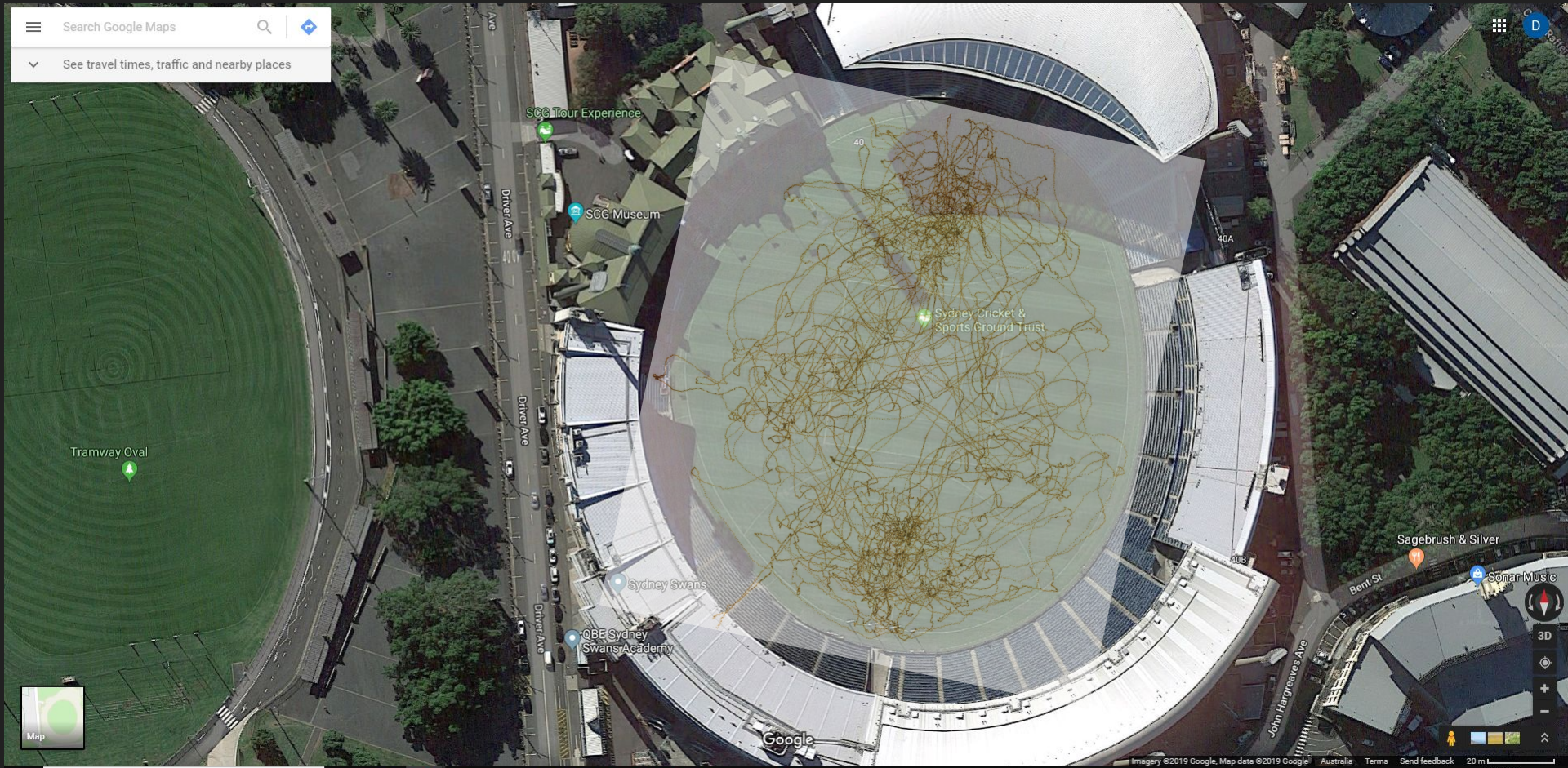
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Clipboard Font Alignment Number Styles Cells Editing

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1.5E+11	35:05.1	-33.8914	151.224	0.0005	-1.17E-05	0	88.13671	718.571	0	0	0	0.002322	0	0	0	0	0.002183	781.4727	FALSE	0	0	0	FromMun	0	-1		
1.5E+11	35:05.2	-33.8914	151.224	0.0005	-1.17E-05	0	88.1369	718.571	0	0	0	0.002322	0	0	0	0	0.002184	781.4727	FALSE	0	0	0	FromMun	0	-1		
1.5E+11	35:05.3	-33.8914	151.224	0.0005	-1.17E-05	0	88.13742	718.571	0	0	0	0.002322	0	0	0	0	0.002185	781.4727	FALSE	0	0	0	FromMun	0	-1		
1.5E+11	35:05.4	-33.8914	151.224	0.0005	-1.17E-05	0	88.1377	718.571	0	0	0	0.002322	0	0	0	0	0.002184	781.4727	FALSE	0	0	0	FromMun	0	-1		
1.5E+11	35:05.5	-33.8914	151.224	0.0005	-1.17E-05	0	88.13802	718.571	0	0	0	0.002322	0	0	0	0	0.002185	781.4727	FALSE	0	0	0	FromMun	0	-1		
1.5E+11	35:05.6	-33.8914	151.224	0.0005	-1.17E-05	0	88.13824	718.571	0	0	0	0.002322	0	0	0	0	0.002187	781.4727	FALSE	0	0	0	FromMun	0	-1		
1.5E+11	35:05.7	-33.8914	151.224	0.0005	-1.17E-05	0	88.13879	718.571	0	0	0	0.002322	0	0	0	0	0.002188	781.4727	FALSE	0	0	0	FromMun	0	-1		
1.5E+11	35:05.8	-33.8914	151.224	0.0005	-1.17E-05	0	88.13924	718.571	0	0	0	0.002322	0	0	0	0	0.002188	781.4727	FALSE	0	0	0	FromMun	0	-1		
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1.5E+11	35:06.0	-33.8914	151.224	0.0005	-1.17E-05	0	88.13986	718.571	0	0	0	0.002322	0	0	0	0	0.00219	781.4727	FALSE	0	0	0	FromMun	0	-1		
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1.5E+11	35:06.4	-33.8914	151.224	0.0005	-1.17E-05	0	88.14182	718.571	0	0	0	0.002322	0	0	0	0	0.00219	781.4727	FALSE	0	0	0	FromMun	0	-1		
1.5E+11	35:06.5	-33.8914	151.224	0.0005	-1.17E-05	0	88.1432	718.571	0	0	0	0.002322	0	0	0	0	0.002192	781.4727	FALSE	0	0	0	FromMun	0	-1		
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1.5E+11	35:06.7	-33.8914	151.224	0.0005	-1.17E-05	0	88.14433	718.571	0	0	0	0.002322	0	0	0	0	0.002191	781.4727	FALSE	0	0	0	FromMun	0	-1		
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1.5E+11	35:07.6	-33.8914	151.224	0.0005	-1.17E-05	0	88.1496	718.571	0	0	0	0.002322	0	0	0	0	0.002189	781.4727	FALSE	0	0	0	FromMun	0	-1		
1.5E+11	35:07.7	-33.8914	151.224	0.0005	-1.17E-05	0	88.14983	718.571	0	0	0	0.002322	0	0	0	0	0.002191	781.4727	FALSE	0	0	0	FromMun	0	-1		
1.5E+11	35:07.8	-33.8914	151.224	0.0005	-1.17E-05	0	88.15017	718.571	0	0	0	0.002322	0	0	0	0	0.002192	781.4727	FALSE	0	0	0	FromMun	0	-1		
1.5E+11	35:07.9	-33.8914	151.224	0.0005	-1.17E-05	0	88.15031	718.571	0	0	0	0.002322	0	0	0	0	0.002191	781.4727	FALSE	0	0	0	FromMun	0	-1		
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1.5E+11	35:08.1	-33.8914	151.224	0.0005	-1.17E-05	0	88.15151	718.571	0	0	0	0.002322	0	0	0	0	0.002189	781.4727	FALSE	0	0	0	FromMun	0	-1		
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1.5E+11	35:08.3	-33.8914	151.224	0.0005	-1.17E-05	0	88.1522	718.571	0	0	0	0.002322	0	0	0	0	0.002192	781.4727	FALSE	0	0	0	FromMun	0	-1		
1.5E+11	35:08.4	-33.8914	151.224	0.0005	-1.17E-05	0	88.15258	718.571	0	0	0	0.002322	0	0	0	0	0.002191	781.4727	FALSE	0	0	0	FromMun	0	-1		



Search Google Maps
See travel times, traffic and nearby places



Google

Software/techniques:

Excel

notepad

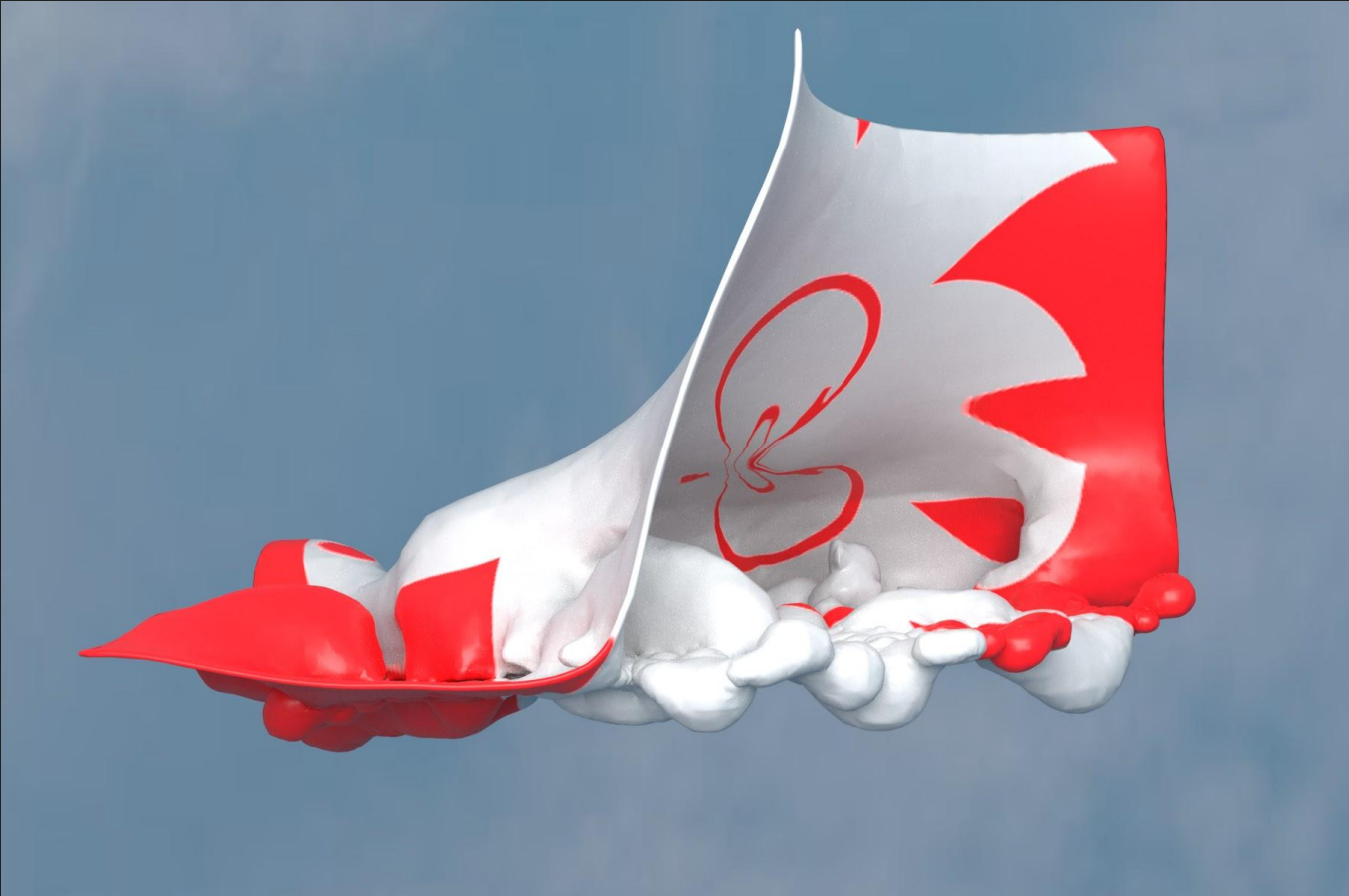
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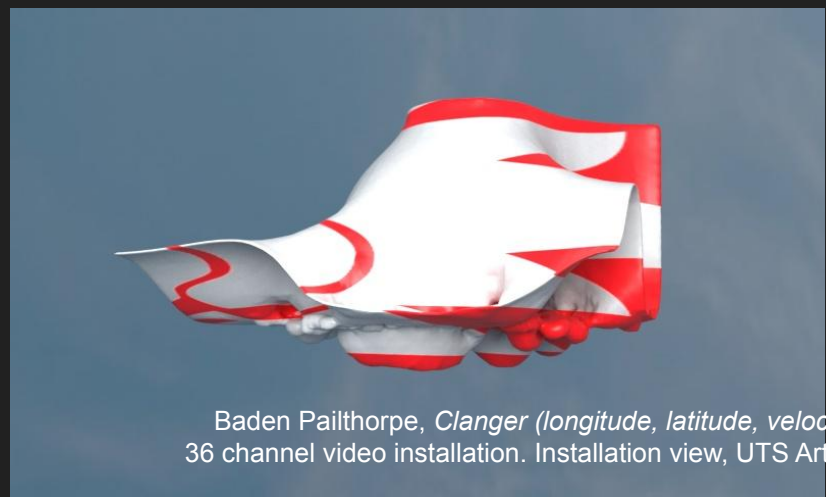
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Photoshop

3DsMax

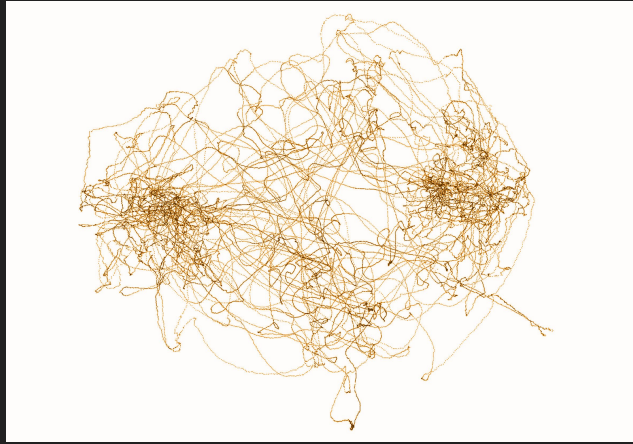
After Effects





Baden Pailthorpe, *Clanger (longitude, latitude, velocity)* 2018, 36 channel video installation. Installation view, UTS Art, Sydney.





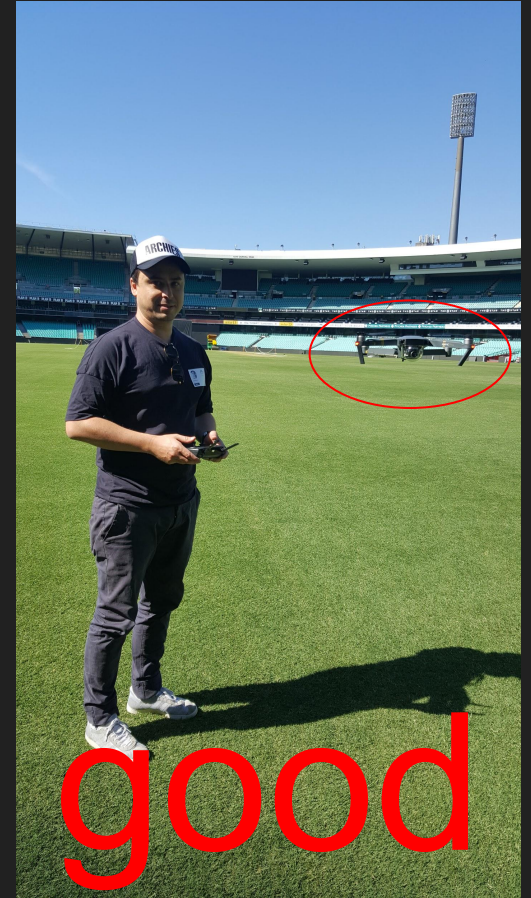
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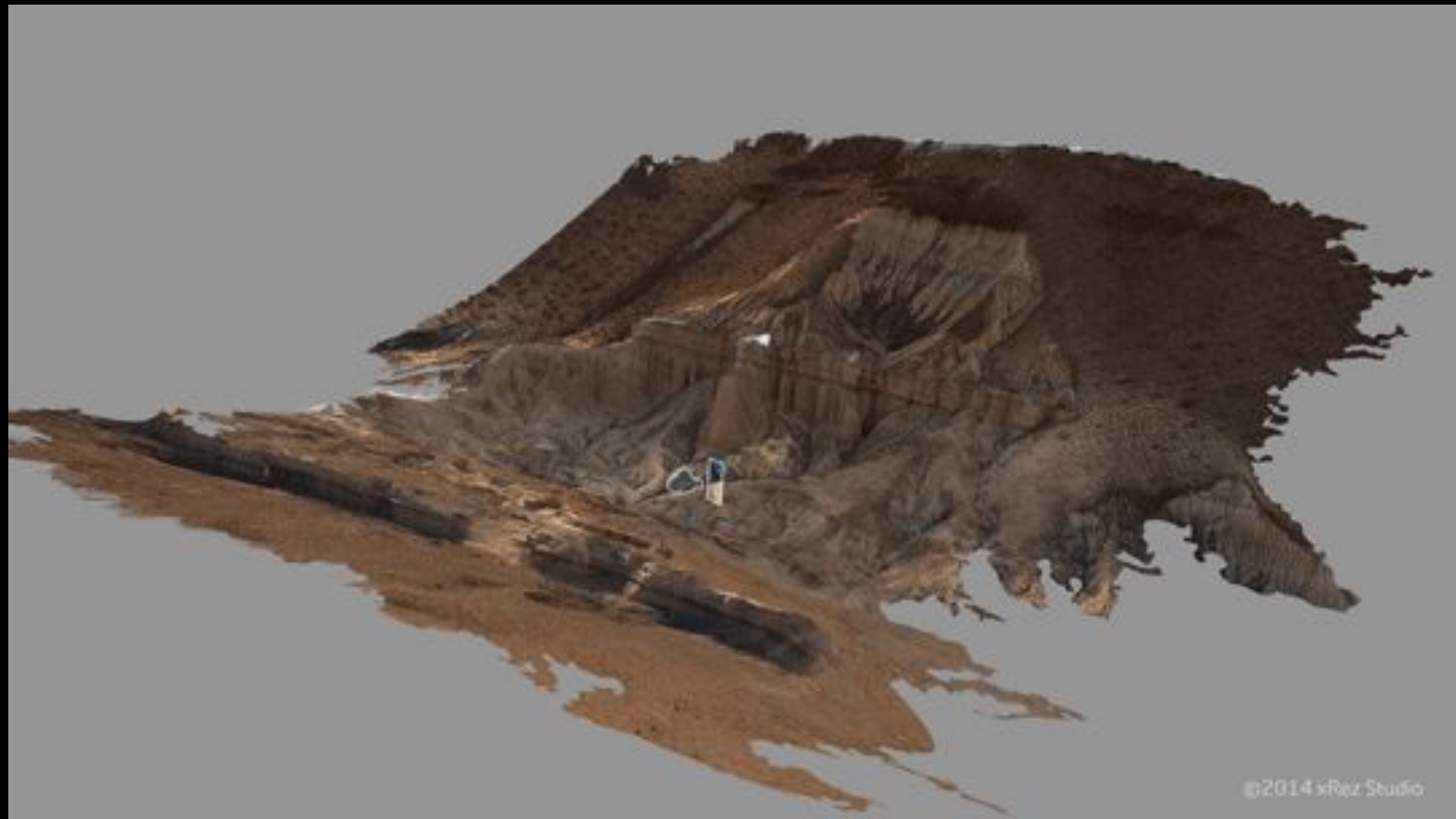


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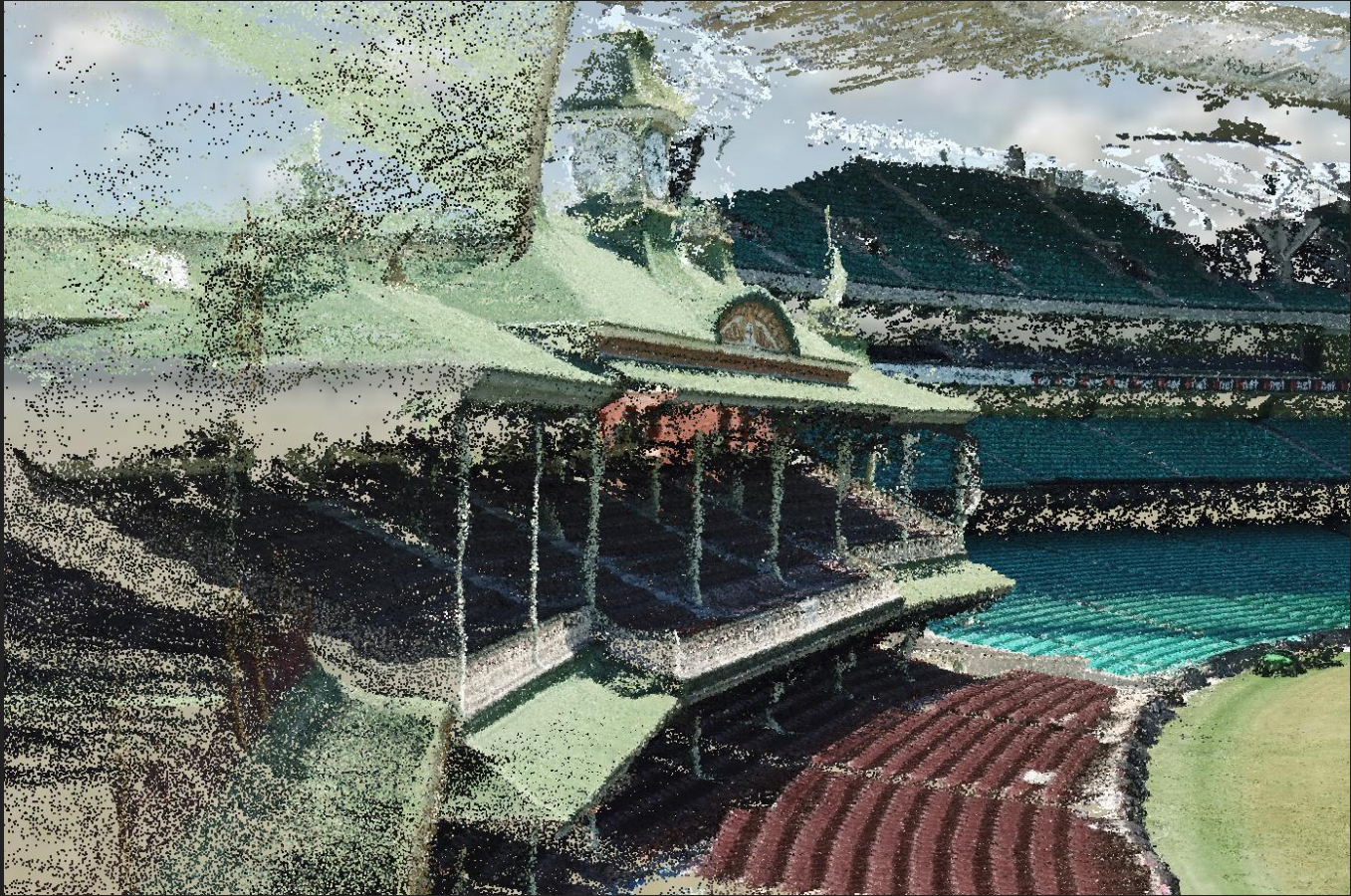


Simulating the stadium environment...
Photogrammetry (making 3D models from photos)



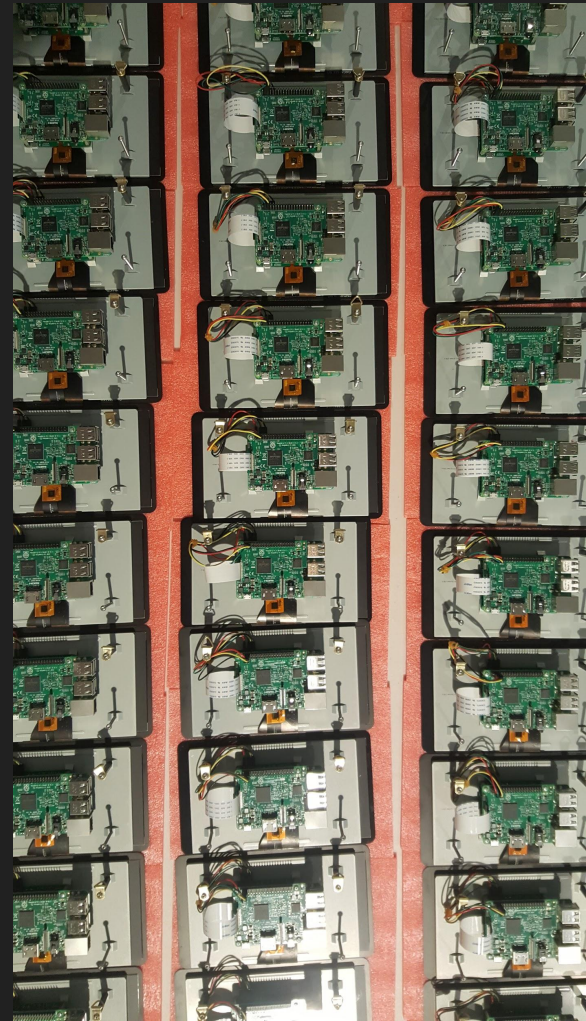
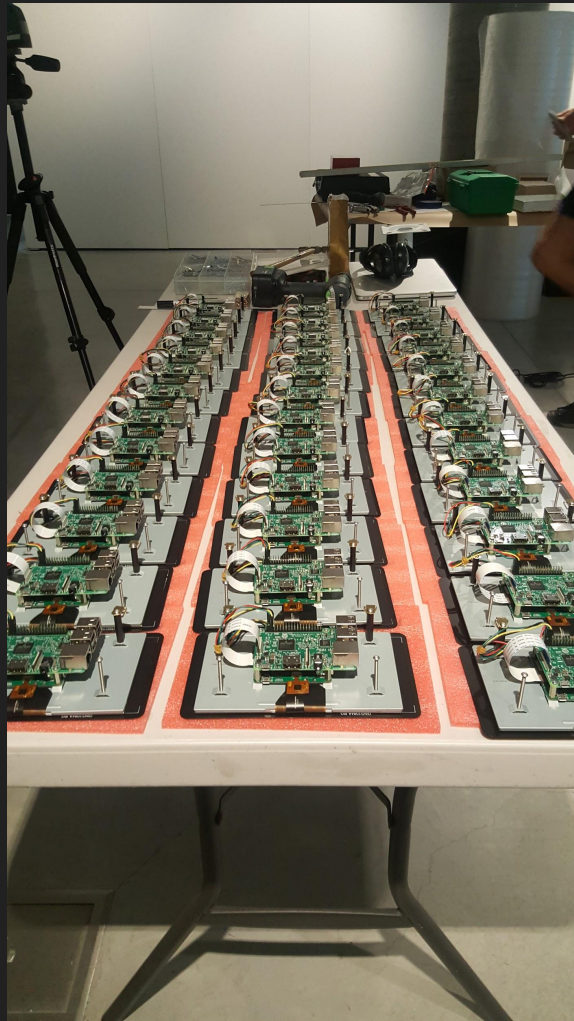
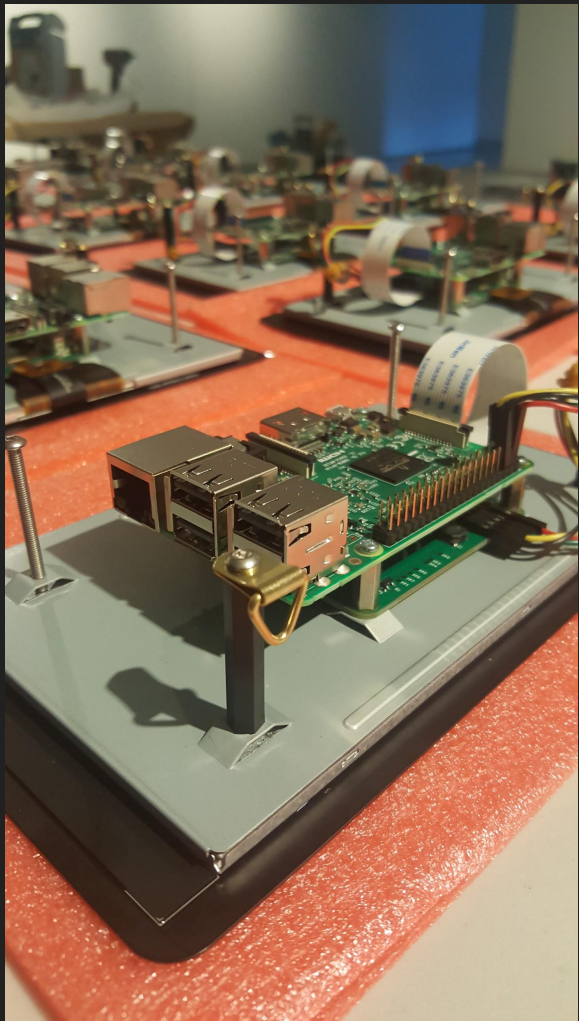


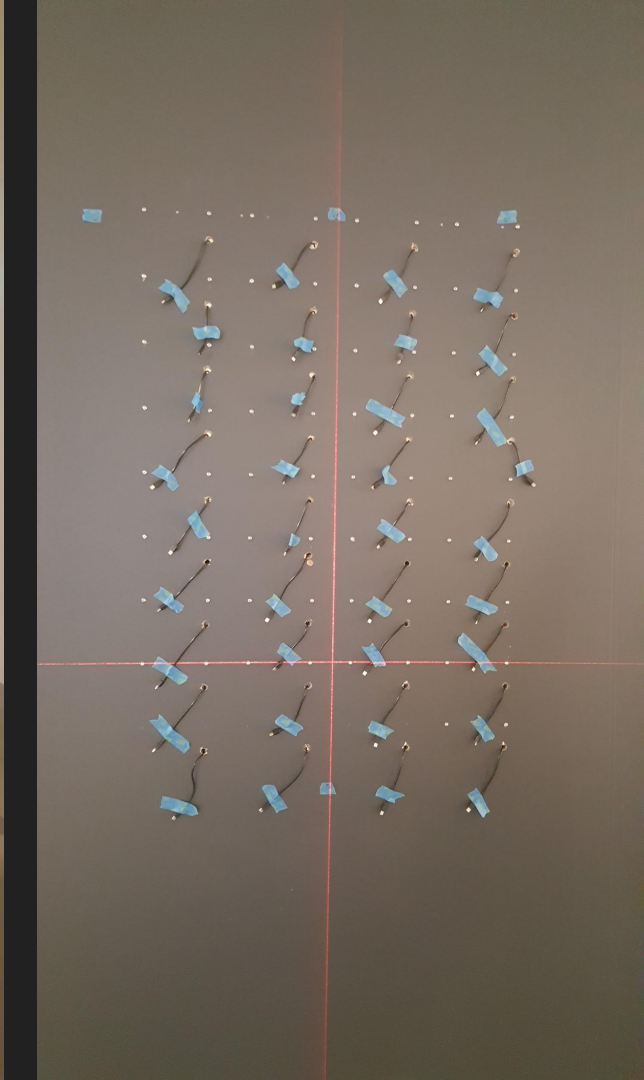
©2014 xRez Studio

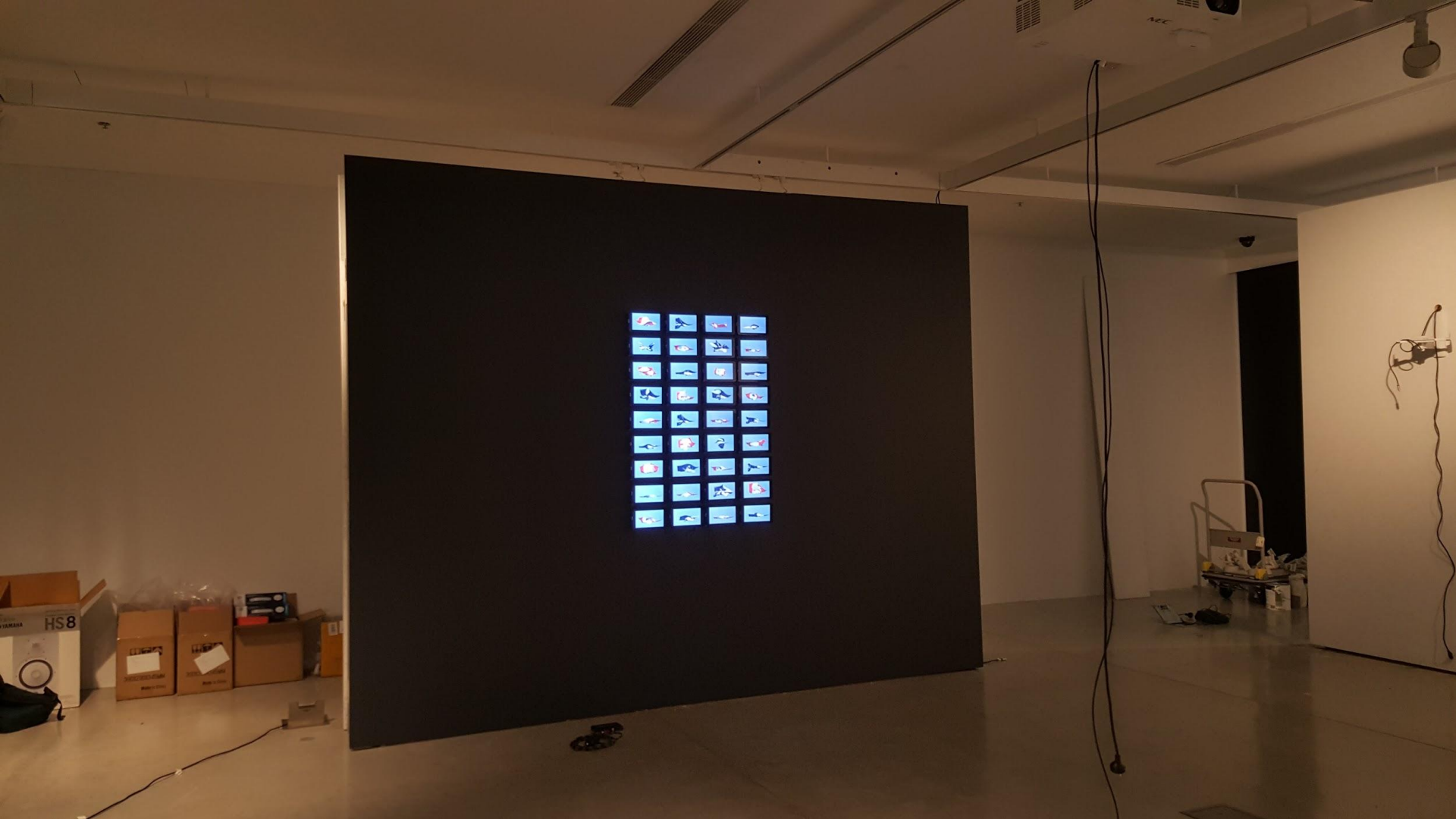






















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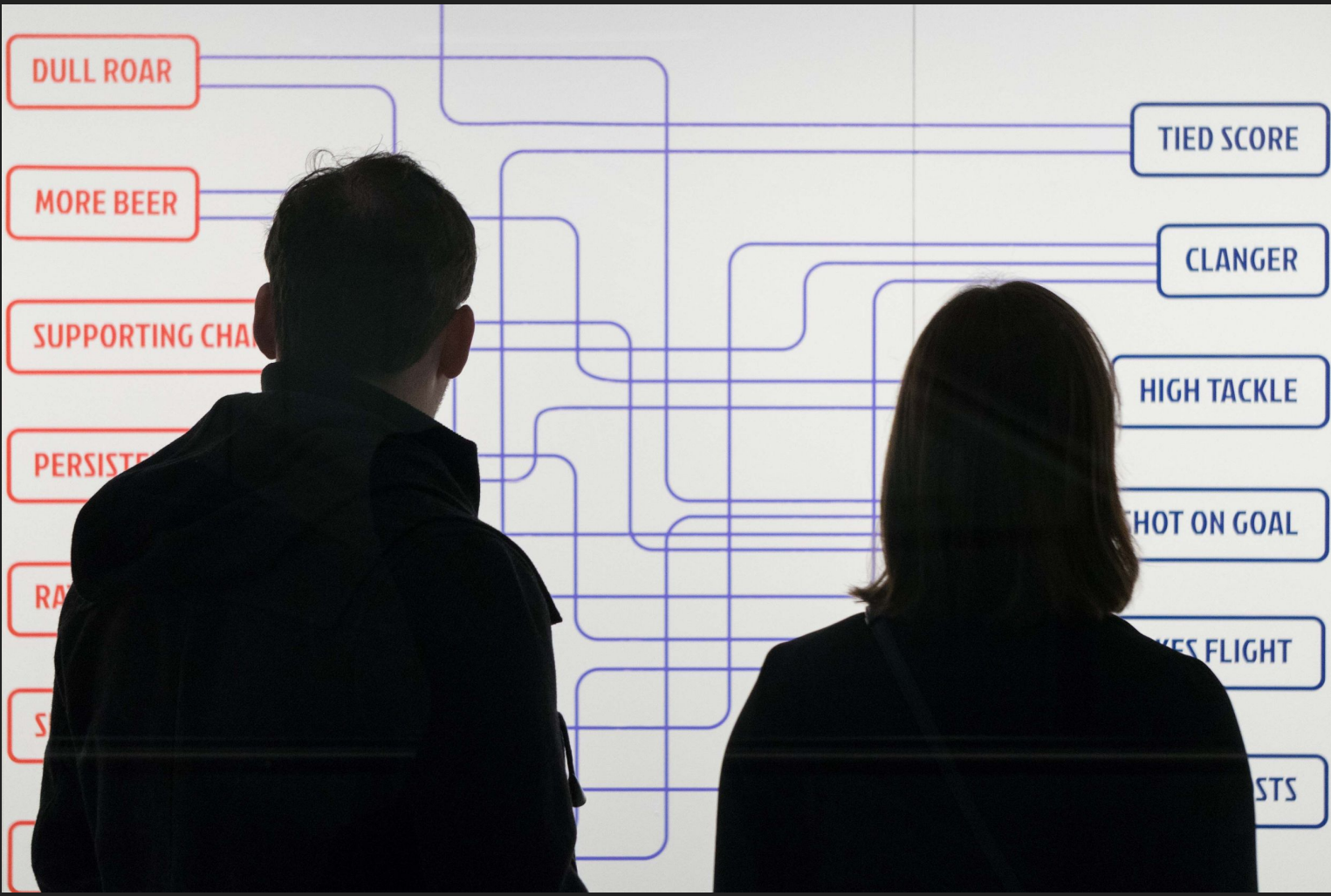
CLANGER

HIGH TACKLE

HOT ON GOAL

WES FLIGHT

STS





Key Challenges for Computer
Scientists (and other
humans/more than humans)



Paul Virilio (1932 - 2018)

The invention of the plane was also the invention of the air disaster

....So what is the AI equivalent?

Ethics and AI

Facial Recognition

Predictive Policing

Robo Debt

Employment and Automation

Think Critically

STEEP

Social / Technical / Economic
/ Ecological / Political


Question assumptions

Think about context

Think about ideology

Think about culture

Examples:



Critical Engineering:
Julian Oliver



Forensic Architecture