LACMA
Art + Technology LAB
Post-lenticular Landscapes

ScanLAB Projects
scanlabprojects.co.uk

Name of project:

Post-lenticular Landscapes

Post-lenticular Landscapes will replicate the early photographic expeditions of Eadweard Muybridge and Ansel Adams into Yosemite National Park but equipped not with cameras but the latest terrestrial laser scanning equipment.

Project Description:

In the 1870's Eadweard Muybridge looked to Yosemite as a setting to test his pioneering photographic techniques. These early expeditions have been replicated throughout history, most famously by Ansel Adams, but more recently by thousands of digital enabled adventures with comparatively tiny cameras tucked into their pockets.

It is for the vast solidity and scale of Yosemite and the associations with the pioneers of early photography that we are drawn to Yosemite. We propose a new expedition, equipped with the very latest in terrestrial laser scanning technology in combination with cutting edge aerial drone photogrammetry. This expedition will unearth the three dimensional facts of the landscape allowing the photographic experience of Muybridge, Adams and a thousand other visitors to be digital replicated and realizing Muybridge's original endeavour to capture the scenes in three dimensions as stereograms. We are particularly drawn to Vernal Falls, a site visited by both Adams and Muybridge, and a formation of a practical scale to 3D scan.

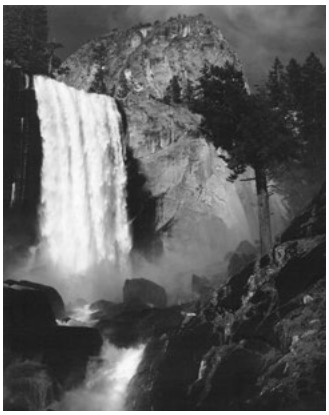
In the age of the iphone camera and the selfie we will be comparatively heavily laden (our laser scanning equipment will take at least 5 people to carry. The logistics of taking such high tech equipment into a comparatively inaccessible environment will form a major part of the re-enactment, mirroring the epic nature of the early pioneer photographers.

Upon returning to LACMA we will, in the tradition of 19th century fabricated spectacles, create a mobile diorama as an accessible physical scale replica of this landscape. Using the 3D data collected to guide digital tools in it's creation this scale replica landscape will be inhabited with digital artefacts from our journey and digital recreations of both Adams and Muybridge's original photographic setup. The public will be able to inhabit this scale replica, constructing and framing their own digital views.

This interactive landscape will be accompanied by an exhibition documenting the expedition itself, containing film and images taken from the 3D scan data. We believe Muybridge was using his camera for dual purposes - scientific discovery and a sense of duty to capture and present the wonders of the world. We see the expedition and opportunity to exhibit at LACMA in a similar light, pushing modern technology to its limit and commenting on the wonder of new modes of seeing.

KEYWORDS: Re-enactment, Replica, 3D laser scanning

Eadweard Muybridge
Pi-Wi-Ack (Shower of Stars)
1872



Ansel Adams
Vernal Fall
1948

Eadweard Muybridge
Upper Fall, Stereogram
1868

Artist CV:

ScanLAB Projects is a London based design studio experimenting with the potentials of large scale 3D scanning. The practice explore the world through the eyes of this post lenticular technology, creating animations, images, objects and installations in response to the data they capture.

ScanLAB Projects CV Attached

Creative Merit:

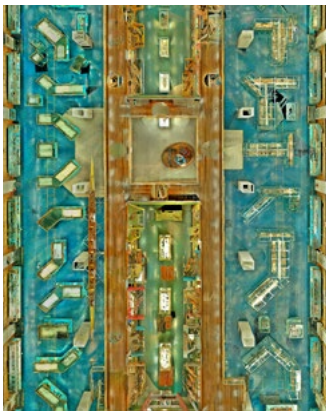
This project explores the boundaries of technology and art, where mastering the use of emerging tools creates new and unexpected results. While parts of the process can be well planned and predicted the results can never be fully foreseen. It is this sense of technological exploration that guides the process.

Exploring the digital versions of Yosemite this project will capture begins to inhabits them in a new manner. As the first visitors to this digital replica we experience a new sense of discovery, the possibility for moments of wonder is reawakened.

These moments of digital wonder are beautiful and unfathomable. Forensic in their accuracy, they are a true replica of a place and yet they sit just beyond your grasp and understanding. Translucent, skeletal, xray views of a landscape from a point of view impossible in the physical world. Fragments of the inside of tree blur with the tumbling cloud-like waterfall, captured in frozen three dimensional time.

The projects aims to take landscape photography back into the realm of the specialist, framing views which have never been seen before. This specialism will then be opened into a world where everyone can experience a new act of image making.

3D Scanning
Arctic Ice Floe



Science Museum, London
Complete digital version
of the entire Shipping Gallery

Emerging Technology:

3D scanning is emerging as a new tool for design and scientific discovery. The inherent beauty of the data it collects is often overlooked or at best given second place to the accuracy of its findings. While the tools accuracy cannot be denied there is a wealth of creative potential look within this new mechanism for staging, framing and capturing the world.

By choosing sites of historic, photographic importance we pitch this new tool against the masters of more traditional techniques, masters who used the pioneering tools of their time. While forming an artwork of its own artistic merit we strongly believe our work will contribute to an ongoing debate about the role large scale 3D scanning has in the creative industries.

Technology + Culture:

Digital technologies are having a profound effect on the way audiences experience artwork. Be this through interactive artworks themselves or through digital replicas which now take the place of original artworks in many peoples experience. 3D scanning is at the forefront of this transformation in genuine experience. It acts as a technique for reproduction and digitisation. The role of the replica and the role of the original are becoming blurred, the importance of originality perhaps questioned. This debate is a key motivation for this project and many of the works we undertake. We aim to critique this relationship and stage the resultant replicas in a manner which provokes this discussion.

Public Engagement:

The final piece, a mobile diorama is to be placed in the public space surrounding the LACMA. It is intended to be interactive and audience involved. The design of the final installation will therefore provoke audience discussion and engagement. We also imagine this will result in an online or take home moment from the exhibition.

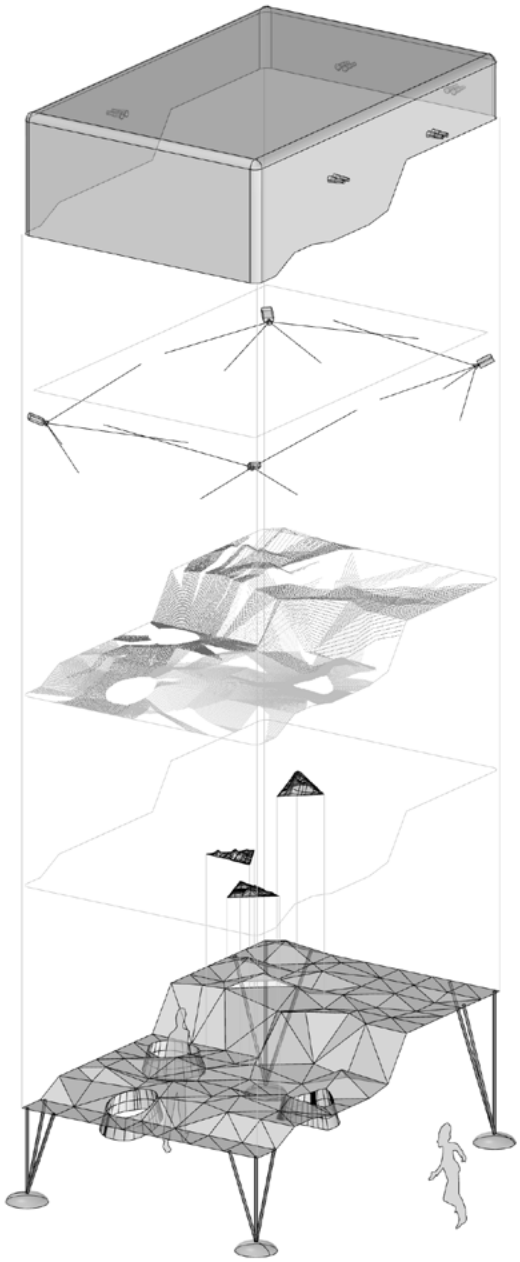
We would also like the opportunity to publicly demonstrate the tools from our expedition. This would be done through talks and staged ‘‘photographs’ within and around LACMA using our technology in the place of traditional cameras. We are actively involved in teaching at one of the UK’s leading school of architecture and have run a series of similar public workshops with Kielder Art and Architecture foundation in the past.

ScanLAB Projects
Public workshop
Frozen Relic Exhibition

Available shared data + products:

It is the intention to allow the entire digital dataset we collect to be available for any other non-commercial uses. Not only does this represent a vast sum of normally expensive data (we would argue this would be worth USD 50.000 plus) it encourages an open source publishing and use of big data. We are fascinated to see other peoples uses of this information.

Rock Outcrop,
Joshua Tree National Park
LA Skin Deep

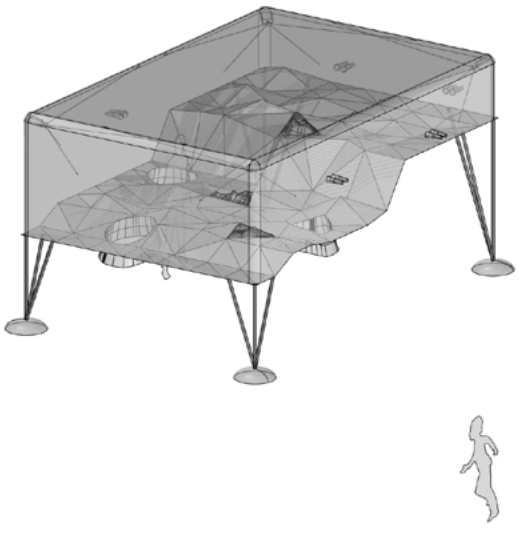


Projectors mapping point clouds and aerial data

Projected or printed point clouds, scanned from the original Muybrige and Adams positions

Highly detailed, 3D printed replicas details, embedded in the landscape

Landscape diorama, allowing access at scanner origins / original camera positions



ScanLAB Projects

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Other funding:

In kind support from FARO Technologies: Laser Scanning
Use of the latest 3D scanning equipment - approximate hire value [redacted]

In kind support from Bentley Pointools: Software
Use of pointcloud processing software - approximate value [redacted]

Project budget:

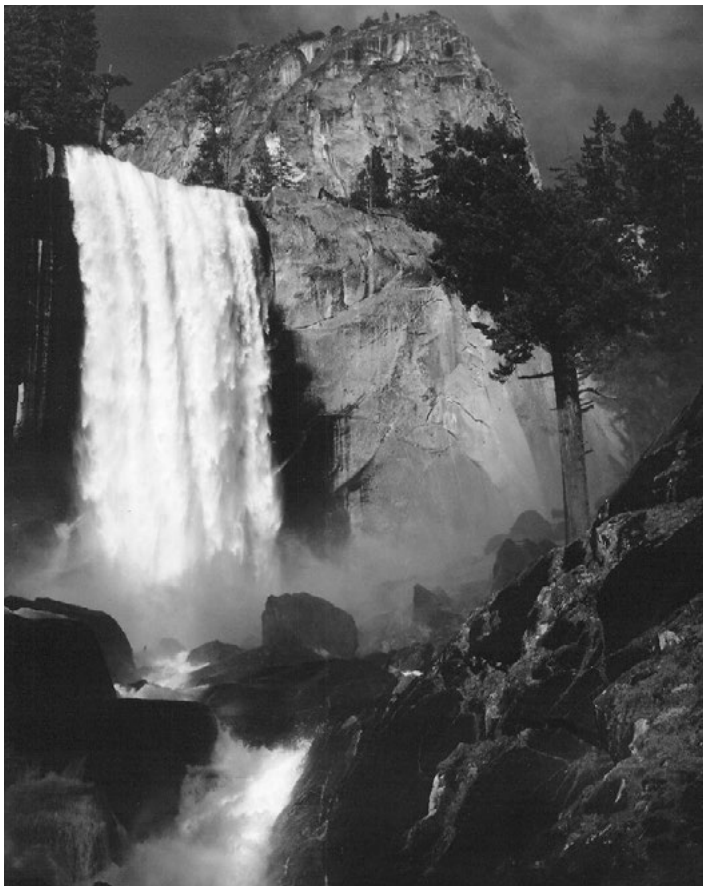
EXPENSE	COST
EXPEDITION	
Flights	[redacted]
Expedition Equipment	[redacted]
Expedition transport	[redacted]
Expedition food etc.	[redacted]
Expedition Accommodation	[redacted]
Artist fees	[redacted]
Expedition Sub Total	[redacted]
EXHIBITION	
Digital fabrication of landscape	[redacted]
Materials	[redacted]
Transport	[redacted]
Fabrication & installation	[redacted]
Processing software	[redacted]
Printing	[redacted]
Online platform	[redacted]
Artist fees	[redacted]
Exhibition Sub Total	[redacted]
GRAND TOTAL	[redacted]
[IN KIND SUPPORT]	[redacted]

Implementation Plan:

KEY MILESTONES	START DATE	FUNDS
Expedition		
- Planning	March 2015	
- Yosemite trip	July 2015	
- Processing Data	Sept 2015	[redacted]
Exhibition		
- Design	Sept 2015	
- Build + Install	Oct 2015	
- Exhibition + Interaction	Dec 2015	[redacted]
Online Environment	Oct 2015 - onwards	[redacted]

Links and websites:

http://www.scanlabprojects.co.uk/
http://www.scanlab-ucl.co.uk/
https://vimeo.com/scanlab/videos



Eadweard Muybridge
Pi-Wi-Ack (Shower of Stars) 1872

Muybridge's first photographic project took place in Yosemite, California in spring 1867; using a mobile photographic unit - 'The Flying Studio' and the pseudonym 'Helios'. A pioneer in capturing this astounding landscape, Muybridge trekked the uneven terrain of Yosemite Valley with assistants and a pack train, often camping overnight.

http://www.eadweardmuybridge.co.uk/muybridge_image_and_context/california_landscape/

Ansel Adams,
Vernal Fall, 1948

"Here are worlds of experience beyond the world of the aggressive man, beyond history, and beyond science. The moods and qualities of nature and the revelations of great art are equally difficult to define; we can grasp them only in the depths of our perceptive spirit.

Each represents, for me, a moment of wonder."

Adams on Yosemite National Park

Frozen Relic: Arctic Works

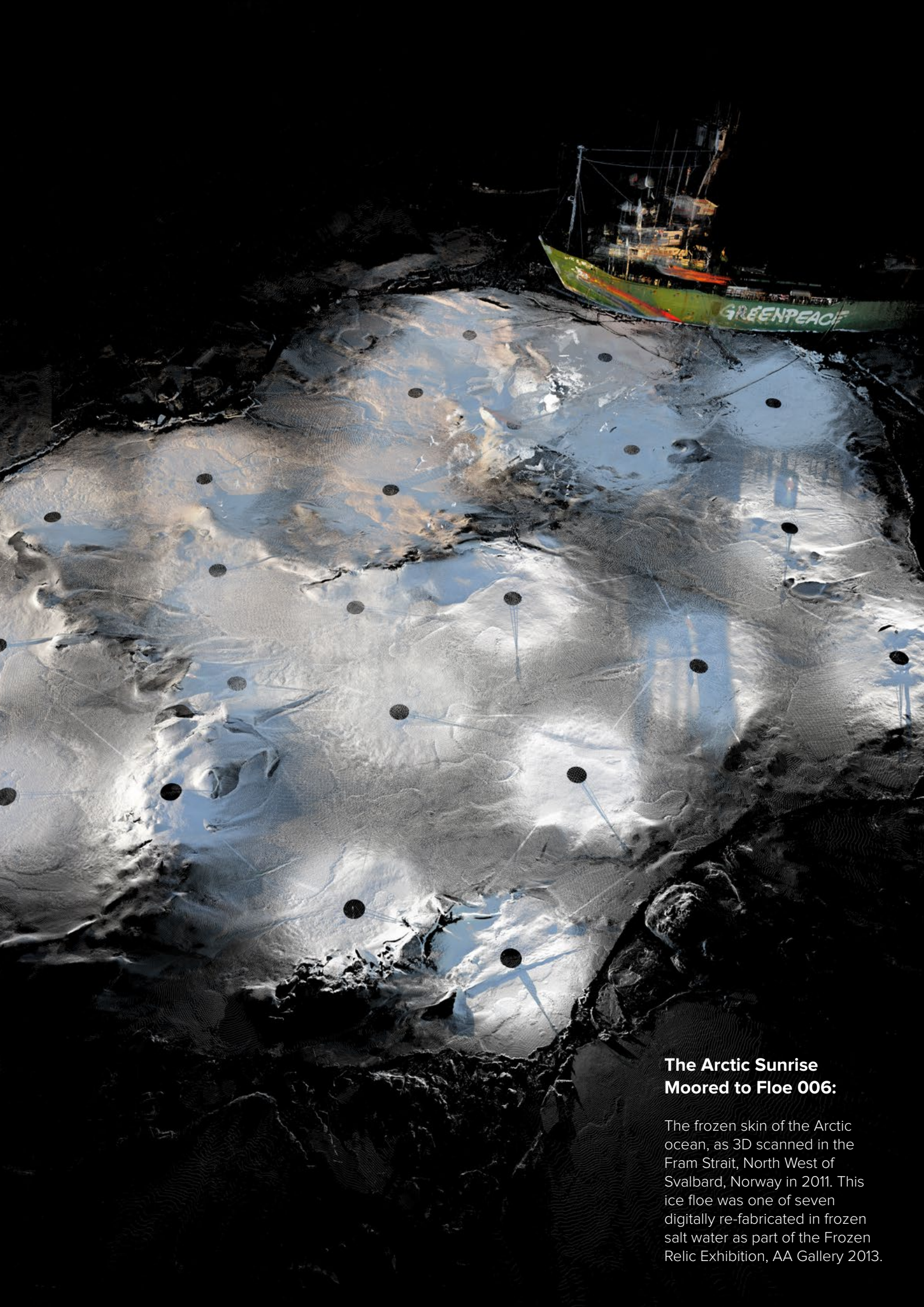
The exhibition, Frozen Relic: Arctic Works followed two expedition to the Arctic with Greenpeace and Cambridge University. The exhibition recreates this landscape in its natural material – frozen saltwater.

Kielder CAPTURE:

Deep within the manufactured landscape of Kielder Forest a single laser scan captures the moss covered forest floor and delicate trees surrounding a small clearing.

Terrestrial laser scan of a rock formation in Joshua Tree National Park:

An outcrop of rock in Joshua Tree National Park, California scanned as part of the LA Skin Deep series of surface transplants across the state.



The Arctic Sunrise Moored to Floe 006:

The frozen skin of the Arctic ocean, as 3D scanned in the Fram Strait, North West of Svalbard, Norway in 2011. This ice floe was one of seven digitally re-fabricated in frozen salt water as part of the Frozen Relic Exhibition, AA Gallery 2013.

ScanLAB Projects

Exhibitions & Screenings

New Museum, New York Feb. - Mar. 2015 (with Daniel Steegmann)
SOHO Fuxing Plaza, Shanghai 2. Nov – 16. Nov 2014 (Group Show)
Bergen KunstHall, Norway 17. Jan – 9.Mar 2014 (with Otolith Group)
Royal Academy, London, Summer Show 2014
Loisiana Museum of Modern Art, Copenhagen, Sept 13- Feb 2014
CinemaXXI, Rome Nov 9-10, 2013 (with Anouk de Clercq)
Kaaitheater, Brussel, Sep 25, 2013 (with Anouk de Clercq)
Architectural Assocation, London, Jan - Feb 2013
Fabricate Conference, Bartlett Gallery London, April - July 2011
Royal Academy, London, Summer Show 2011
Royal Academy, London, Summer Show 2010

Awards

Tiger Award 2014, Nominated, Short Films at IFFR
Climate Awards, Best Artistic Response, Finalist, 2013
Awesome Foundation, Award Winner March 2011

Selected Publications

High Definition: Zero Tolerence in Design and Production.
Architectural Design. London: John Wiley & Sons. January 2014
ISBN-13 9781118451854

FABRICATE 2014
Riverside Architectural Press.

VIEW FROM: THE ARCTIC
Architects Review, Jan 2013

FABRICATE - Making Digital Architecture
Riverside Architectural Press. ISBN-10: 1926724097, ISBN-13: 978-1926724096

Selected Press

SUPERSIZE SCANNING:. WIRED Magazine, May 2011
BBC - Arctic ice: The exhibition that melts before your eyes
SKY News - News and Technology
THE IMPOSSIBILITY OF FORGETTING, Architectual Review, Feb 2013
BLDGBLOG, April 2011, May 2013
ITS NICE THAT, Apr 2011, Nov 2011, Feb 2013

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Selected Collaborators

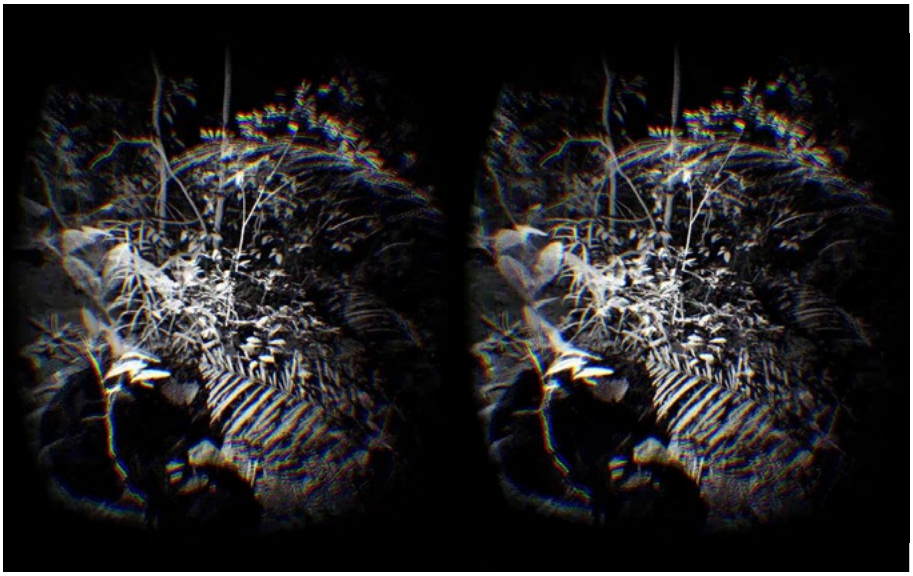
BBC
National Martime Museum
New Museum, New York
Science Museum
Cambridge University
Forensic Architecture, Goldsmiths University
Vivienne Westwood
Carmody Groarke Architects
Greenpeace International
Tsunami Support UK
The Natural History Museum

Selected Recent Works:

Frozen Relic:
Arctic Works

The exhibition, Frozen Relic: Arctic Works followed two expedition to the Arctic with Greenpeace and Cambridge University. The exhibition recreates this landscape in its natural material – frozen saltwater.

Each piece is a digitally fabricated scale replica of the original ice floe which was 3D scanned from above and documented using underwater sonar from below. The completed digital model is used to guide a CNC machine which carves the moulds in which each replica is cast.



PHANTOM.
New Museum 2015 TRIENNIAL

Working with artist Daniel Steegmann ScanLAB Project's have installed a new immersive experience at the New Museum, New York. Utilising the Oculus Development Kit2, visitors are invited to transport their senses to the dense Brazilian Rainforest.

Connecting the physical with the psychological, the work was produced within the Mata Atlantica Brazil, one of the most fragile ecosystems of the world. Immersed in the middle of this digital forest, the work makes reference to the indigenous cosmologies and their pantheistic beliefs governing body and environment.

Rome's Invisible City, BBC 1

BBC's ONE's 60 minute special Rome's Invisible City follows ScanLAB Projects and presenters Alexander Armstrong and Dr Michael Scott as they explore the hidden underground secrets of Ancient Rome. The show explores Roman infrastructure and ingenuity, all below ground level. We journeyed via the icy, crystal clear waters of subterranean aqueducts that feed the Trevi fountain and two thousand year old sewers which still function beneath the Roman Forum today, to decadent, labyrinthine catacombs. Our laser scans map these hidden treasures, revealing for the first time the complex network of tunnels, chambers and passageways without which Rome could not have survived as a city of a million people.