

Overview of 3D scanning of Steinway & Sons Piano W1, London. The image shows one of the point-cloud buildings in the archive in which a visitor can move inside.

The Eternal Return

Eternal Return explores science fiction, an increasingly relevant artistic genre today, not only as stories feeding the human imagination of possible future worlds not yet there, but the as the insights of the mental and sensorial processes *that makes up a world* and how they can be manipulated and resisted.

Eternal Return is a complex installation in the form of a reality matrix.

Seen through wireless VR goggles, the world is perceived as a digital pointcloud universe operating similarly to elementary particles. Governed by its own physical laws, its realm extend out into the exhibition space through hyper-connected objects.

In the physical installation sculptural yet functional objects recall a theatre set left at night. Each object, with its own lineage, streams into different strata of time: a handrail from the Titanic corridors is held up by the weight of a 3.5 billion year old microbial matt, a 3D-printed door handle floating in mid air, a victorian headboard, a chandelier, a working desk and a soundproof door from Steinway piano workshop.

While mimicking the physics of recurring universal and creative patterns found in earth's first living organisms, the code, content and music that form the simulation lacks the ability to experience anything other than itself. On its own, Eternal Return is an archive of forms, sounds and scents.

Nevertheless, any sentient being that enters the archive, is able to learn and evolve complex qualities, like intuition, that have some form of control on such world. Invisible to the immersed visitors, performers acting as living extensions of the matrix, augment their experience.

Once you enter, the technical interface and the overview you once had of the physical installation is now forgotten. Like children learning to walk, the new world and the ability to move inside it is integrated. The two perspectives contrast each other, creating an amazing yet disturbing dichotomy.

To accentuate the dichotomous nature, the physical setting holds a sci-fi book entitled *Eternal Return*. It provides an expanded narrative framework, and is provided as a publication related to the installation. With each chapter conceived in parallel to each installation object and respective digital space, it is available to read to those curious visitors soon to be immersed.

While "full immersion" is the ultimate goal for many virtual environments, *Eternal Return* wants to make the visitor aware of its dual presence, divided between the physical and virtual realms. The spaces and glitches in both realities are not to be seen as obstacles or mistakes, but rather as true reflections of the nuanced nature of being present. It is a way of exploring, through simulation, concepts like reality, truth and authenticity — measured against and within the experience of the visitor's own self.

Eternal Return is an installation created by Lundahl & Seidl and ScanLAB Projects. The book *Eternal Return* is written by architect theorist Malin Zimm.

J. S. Bach's *Fugue in A Minor BWV 543* written for the organ, arranged by Liszt for piano, is performed by Cassie Yukawa-McBurney.

Dramaturgy by Rachel Alexander.

Waves is what keeps us together. From the wriggling vibrations of the quantum particles that constitutes our physical existence, to the ocean waves carrying force towards the shore, to the electromagnetic waves of heat, sound and light carrying information to our senses. Waves is also what keeps us apart. Gravitational waves keep us grounded, making any displacement on earth an energy cost for all of us, and at the other end of the spectrum it is what keeps the matter of the universe apart, just enough to allow mass to compile and life to form. Einstein was working on the cosmological constant in 1912, a theory that allowed for a uniform repulsive energy throughout the universe, yet the theory also revealed a gap that has embarrassed first Einstein and subsequently everybody who had attempted to wrestle sense of this paradox. This is the cosmological constant, sometimes known as dark energy. The number 10 to the power of -120 is the number that mocked our understanding of the universe, the number that told us that the amount of matter observed in the universe did not match the observable gravitational effects in our universe. This number had something important to tell us, and the story begins in the spring of 1912, with the impact of Titanic and an iceberg that would not have been there at any other point in time.

Malin Zimm ,
extract from the book based on the artwork *Eternal Return*.

Background & Idea

While "full immersion" is the ultimate goal in many virtual environments, Eternal Return instead want to make the visitors aware of their dual presence, divided between the physical and virtual parts of the exhibition. The spaces and the 'glitches' in reality flow are not seen as obstacles or mistakes, but rather as a true reflection of the nuanced nature of embodied presence. It is a way of exploring, within a simulation, concepts like reality, truth and authenticity – measured against and within the experience of the visitors own Self.

Science fiction

Science fiction is one of the main themes of this project. Stories have the opportunity to create visions of possible future or provide a true rendering of our contemporary condition. According to Professor Yuval Harari who focuses his work on macro-historical processes, art and stories about the future has a responsibility to society to not mislead people to focus on the wrong things.

Sci-fi stories are often about war between robots and people, while focus should be more on conflict between the superhuman biotechnology updated elite and a subclass of "worthless" people, sci-fi still has more to learn from Karl Marx than Steven Spielberg. Harari

Films like The Truman Show and The Matrix raise the danger that technology is used to control and manipulate people, but according to Harari, it is a big misconception that there is an artificial barrier that separates an inner authentic 'Self' of the films protagonists Truman and Neo - that they are stuck in a box that they can break free from if they just try hard enough.

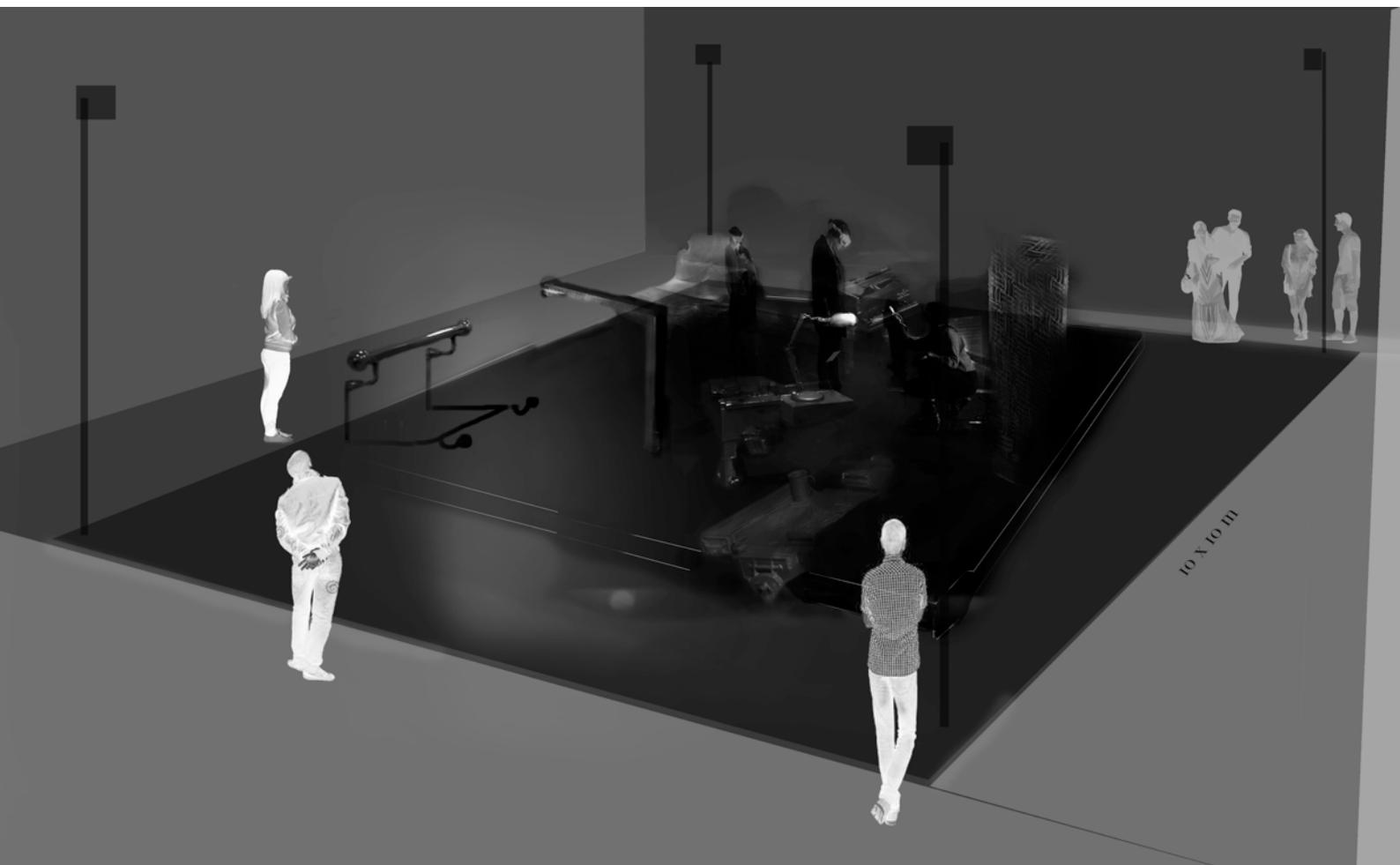
When the peasants and workers revolt against the Tsar they end up with Stalin.
Yuval Noah Harari

Harari believes that if we begin to explore the multitude of ways the world manipulates us, we soon realize that the core of our identity is a complex illusion created by neural networks. And contrary to the creators of Matrix and the Truman show, Harari doubts on the ability to escape by questioning if there is somewhere to make the escape: because your brain and the "Self" are part of the matrix, so to escape the matrix you have to escape yourself.

However, this remains as a possibility to explore. Getting away from the narrow definition of "Self" as well as learning not only about the world beyond ourselves - but also the body and the mind that we use as channel to perceive the world with, may be a necessary survival skill in the twenty-first century.

Perhaps technological simulations can make this easier?
Eternal Return examine this possibility.

Following guidance from Eternal Returns archive curator, visitors finds out how to re-entering the multiple layers of the installation the visitors soon learns that escape from one reality matrix only means the discovery of an even larger matrix and that the reality of the Self can be explored within the matrix as well as outside of it. In the exhibition there is no way out from the reality of the self: even in a simulation curiosity is curiosity, fear is fear, aversion is aversion, craving is craving. Perhaps we can see Eternal Return as a place for simulated reincarnation? Where people train their mind and develop their Self?



When we are in an art exhibition or watching a theater performance, most people accepts the

concept of: Art as a representation of the world, rather than the world itself.

But what happens if the exhibition surround you and become your world, if only temporarily?

According to philosopher Thomas Metzinger, what we call 'reality' can be compared to a mental scene - that we move inside.

In Eternal Return, we can, for example, visit this scenography at night when not in use - look at it from the outside - as a collection of mental and physical objects. The visitors first meet a cold temperature in the room. A wall text carefully describes the conditions of reality within Eternal Return. A choreography of personal endeavors takes them to the exhibition. Here they see a physical but incomplete outer shell of a world: a landscape of worn out colorless objects and sculptural shapes. The visitor will eventually be welcomed by the collection's curator explaining that Eternal Return is a simulation archive that collects the volatile nature of subjective experience...

- Choose an object, each preserved object contains a space in the archive. - Would you like to enter the archive of objects?

- Would you like to enter the archive of objects? Keep in mind, it will take about 15 minutes before you return to this space. The place you will enter might appear incomplete to you.

- Your senses will not be able to translate all information around you. You need to be aware that the place you enter operates under different laws of nature.

- This is a living archive, this means that if you choose to return to the archived object a second time your experience will not be the same. Even the objects themselves are unstable, rooms rearranging, falling out of existence and new things evolving.

From the outside, before entering the immersive VR part of Eternal Return, visitors can see which manipulation and control the artworks performers have over visitors. As they enter the matrix themselves, they know very well the manipulation that takes place. But inside the matrix, they meet an accompanying hand that gives confidence. The visitor's dependence on accompanying hands and instructions for navigation and making sense of the world within the matrix, combined with their drive to learn more about the world and having new experiences, makes them accept the new interface, even if this means giving up their own independence. (The acceptance is also based on the knowledge that they are inside an artwork of course). Depending on our viewpoint the world changes, It is not easy to determine if Eternal Return is dystopian or utopian.

*“Though we live in a world
that dreams of ending*

That always seems about to give in

*Something that will
not acknowledge conclusion*

Insists that we forever begin”.

Brendan Kenelly

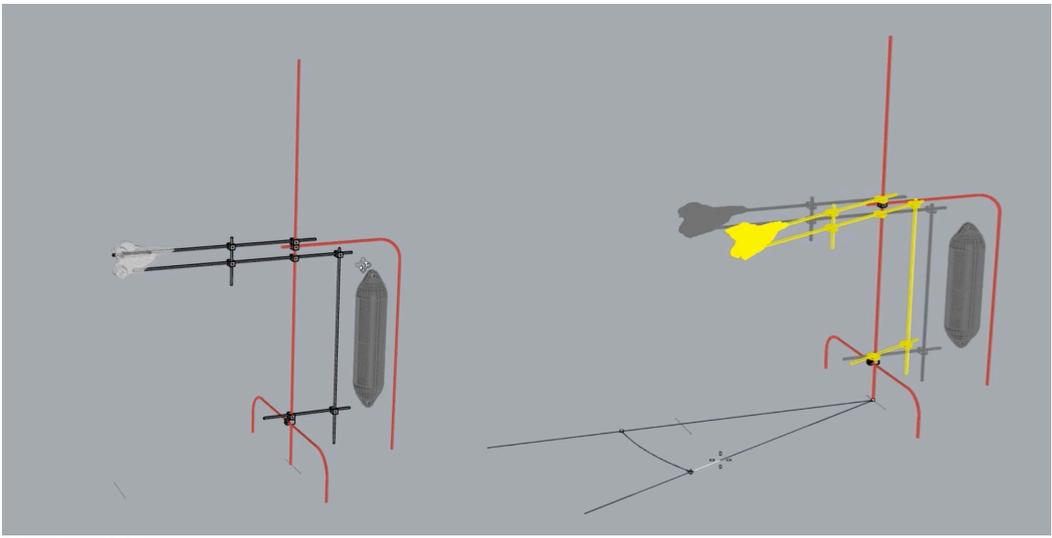


Eternal Return Point - cloud scan of Steinway Pian Workshop W1 London

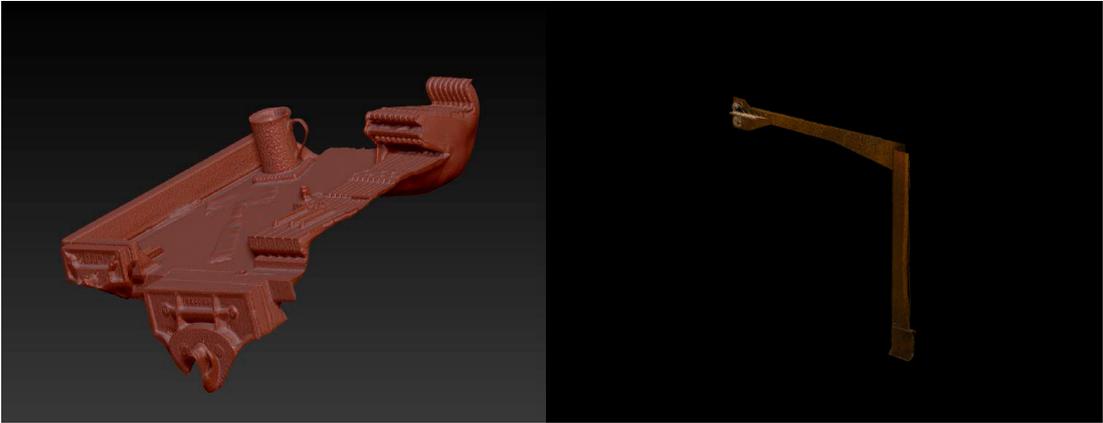


Image Courtesy Scan LAB Projects.

Eternal Return Point - cloud scan of Arctic iceberg



Sketches of Objects



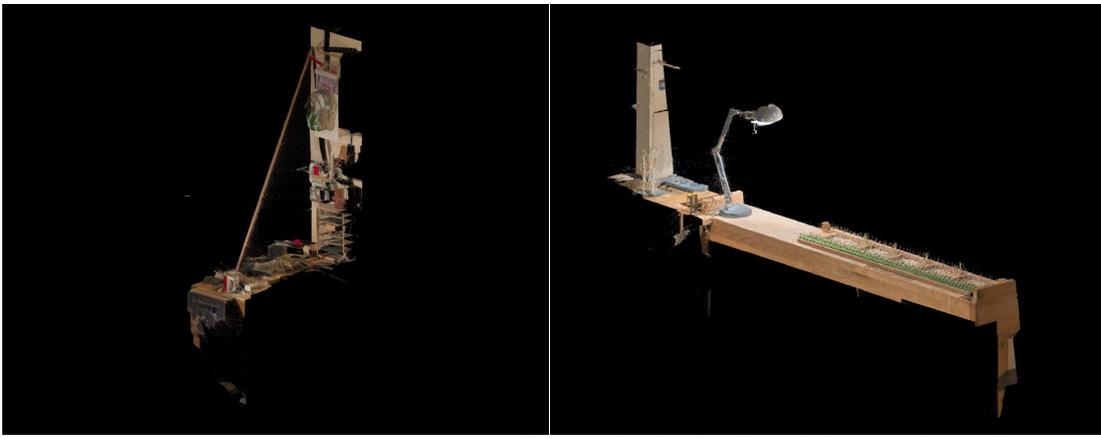
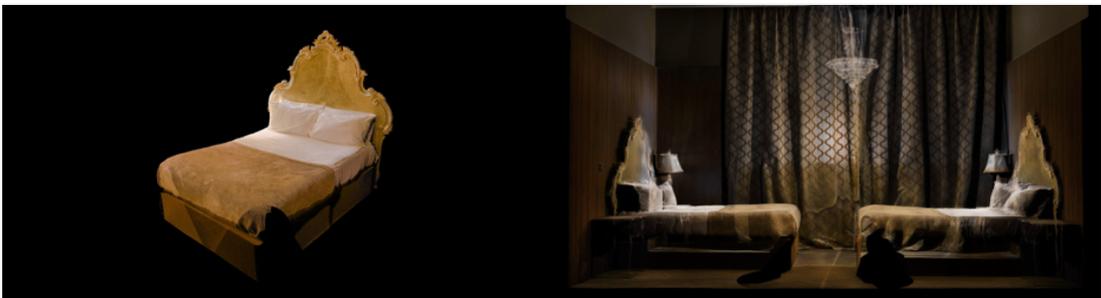
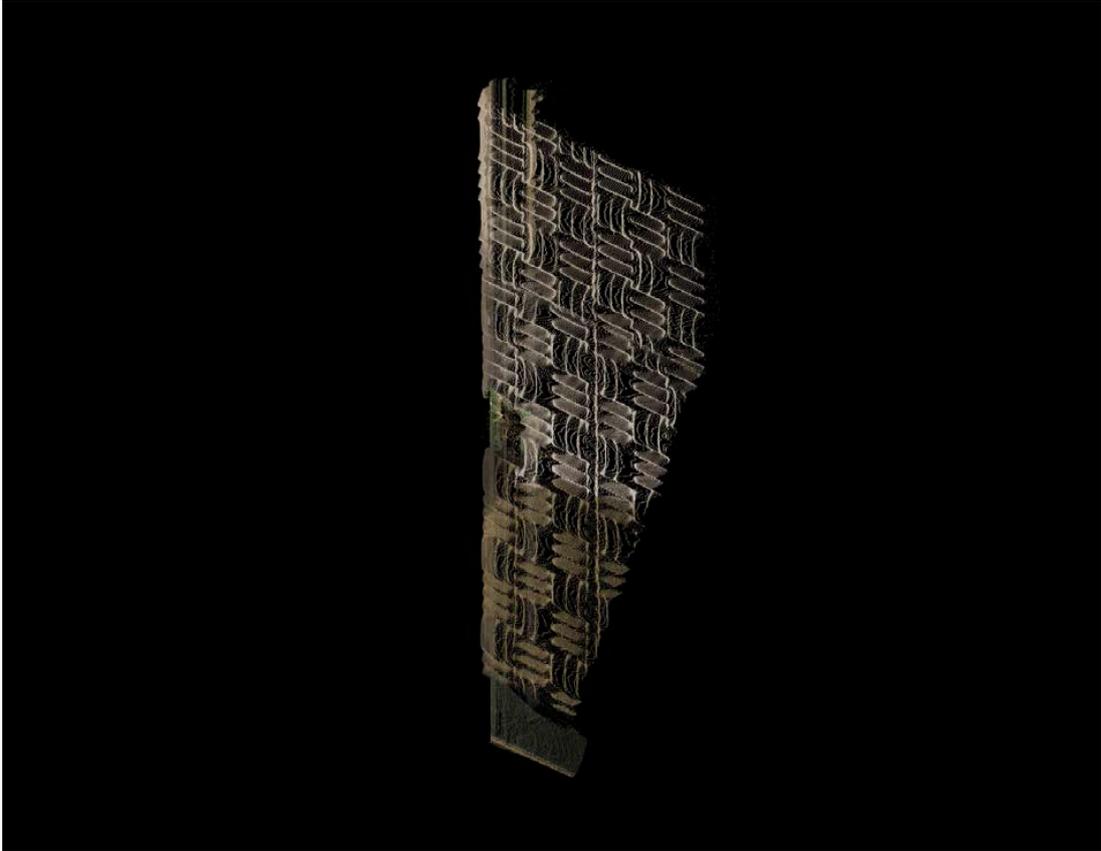


Figure 1 sketches for physical objects in the installation



Test scanning @ Liverpool Titanic Hotel

Installation layers

- your conditions for reality within Eternal Return.

1. THE EXHIBITION

In the outer layers of the exhibition gallery, visitors can watch the choreography of people being immersed inside Eternal Return.

They see only an outer shell of a world: the objects that the immersed visitors touch, the choreography of the performers touch, and perhaps glimpses of emotions and responses from participants.

In order for participating visitors to feel more comfortable, the light is pointing away from the rooms centre leaving the installation of objects and the floor elevation in half light.

(participant often forgets the outer world when in a virtual space)

With no access to their inner world apart from that they learn about the world through the Sci-fi book Eternal Return: which chapters are based on the objects in the exhibition which makes the exhibition a physical extension of the book.

2. PHYSICAL AND VIRTUAL OBJECTIVES

- Enclosed inside the VR installation, you can explore the materiality of the world you're moving in; can you touch the items? If yes - can you still touch your hand? In the installation we map and track physical objects to match the virtual space and sometimes we introduce glitches. For example: you try to grab a hammer and instead you feel the cavity of the hammer shaped inside the workbench - a kind of interruption in reality flow with philosophical analogy to Heidegger's Hammer 'OR' inside a space, a dark void: the sound of a piano playing creates ripples in space-time forming the physical piano materializing under your fingers when you touch it. Marked with Beacons, physical objects can be tracked and placed correctly in the scanned virtual space, giving the digital world weight by being touchable.

3. DIGITAL COPY OF BUILDINGS AND ROOMS

Together with Scan-LAB, we create digital copies of the following spaces: 1st Class Corridor of RMS Titanic, 1st Class Cabin RMS Titanic, Iceberg from the Arctic, Steinway Piano Workshop, WI London.

SCENT RE-CONSTRUCTIONS & DISSONANCE

Artist Sissel Tolaas creates chemical scent re-constructions of the sites we will also work to create dissonance in perception by introducing deviating fragrances.

4. PARTICIPATION & THE NUMBER OF IMMERSED VISITORS

Scan-Lab will work with a new VR wireless system tracking 3 times 6 x 6 meters (which is highly unusual large for art contexts) allowing up to 5 enclosed visitors at the same time every ten minutes. At times, visitors' inter-act in the experience.

5. EACH PARTICIPANTS HAVE A PERFORMER THAT AUGMENTS THE EXPERIENCE FOR THEM.

The performers enables flexibility in VR by bridging many technical problems and creating dynamics in the experience through touch and movement: WHICH ENABLES THE VISITORS EXPERIENCES BEYOND THE LAWS OF NEWTONIAN PHYSICS e.g. floating upside down on a bed and controlling movement by breathing.

6. ARCHIVE CURATOR

The visitor is firstly welcomed by an archive curator explaining that Eternal Return is a simulation archive that; *collects the instable nature of subjective experience.*

7. ETERNAL RETURN A Sci-fi Book

Visitors can read about the extended world of the exhibition inside the book Eternal Return, written in collaboration with the author and architect theorist Malin Zimm.

The choice of RMS Titanic as a *place* for one of the 3Dscannings in Eternal Return has little to do with the known story of the ships disaster. Instead our starting point is on the SOS signal that was sent from the Marconi telegraph as the historical event when for the very first time News spread over most of the world by the use of new technology.

Just after midnight on April 15, 1912, the first message was telegraphed over the dark water - a start on what from our perspective today could be similar to trying to organize a rescue operation through twitter.

8. MUSIC

One of the objects in the installation is a water filled pianokeyboard that inside VR sometimes appears solid, sometimes liquid and yet sometimes transparent. In a void of total darkness the sound of the piano creates ripples the space and creates form making a piano visible, the stronger the tones the more a landscape of icebergs

starts to emerge around and underneath the visitor. Compositions shift and changes in tandem with the star constellations on the sky - Ligeti's avant-garde with the Baroque Bach - two composers that lived almost 300 years apart. The structure of the music, defined by time, is transferred onto the landscape which define space.

The music sets the pace, but it will also open doors between different buildings and narratives of the work making histories collide.

The hands of pianist Cassie Yukawa (with previous shows at Carnegie Hall and Wigmore Hall) will be scanned into the digital environment and embodied by performers.

