So Mote it be…

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Abstract:

So Mote it be… describes a trinity of art works by the author that explore the delicate relationship we have with the extremes of our perception. These data driven sonifications and visualisations play with the atomic forces that bind the material world as measured through the Atomic Force Microscope (AFM). The works try and locate the trauma of seeing things that are invisible and beyond the resolution of the human eye to a history of cultural experience that similarly try to see things that might ordinarily have been perceived as occult or at the very least the product of Hollywood.

Keywords: nano technology, data, dust, ghost, Atomic Force Mircroscope.

The works described below are: *A Mote it is...* (Phillips 2010), *spectre [ˈspɛktə/]* (Phillips 2011) and *Exposure* (Phillips 2012). These explore the ubiquity of data streamed from an instrumentalised world (in particular the AFM) and its potential as a material for manifesting things that lie outside of the normal frames of reference - things so far away, so close, so massive, so small and so ad infinitum. These works are audiovisual manifestations of things so small that they require a leap of faith in theory and a delegation of perception to instrumentation to believe they are actually there. Yet increasingly these technologies inform the philosophy and knowledge of the Twenty First Century. Our understanding of the world is becoming less about photographs and video and more about Radio telescopes X-ray computed tomography, Scanning Electron Microscopes and Atomic Force Microscopes.

At these extremes the instruments that do our seeing for us translate their visions through data and consequently there is an increasing gulf growing between the traditional gatekeepers of cultural knowledge and a scientific community that is ripping the fabric of the material world apart at the seams. The algorithm of 1/100 of a second at f/16 for a photograph on a sunny day and the 625 lines at 25 frames per second of a frame PAL video just doesn't add up anymore when calculated against piconewtons of the AFM or 28 billion parsec of the radio telescope.

The debate around representation through grain on film or lines and frames has moved on, there are (to paraphrase Hamlet) more things in heaven and earth than currently dreamt of in our media philosophy. The concern then is that the dominance of the image created on film or TV is undermining the evolution of media forms. The instruments created at the end of the last Century cannot be found in the edit suits and sound rooms of the Media, Art and Design institutions of the world. Instead they cluster in the shiny clean white coat tended laboratories of Science and Technology Faculties.

These works explore a new vanishing point, a perspective on the world which we always thought was there but never had the instruments to make it manifest. *A Mote it is…* explores the impossibility of seeing the nano level and the trauma this creates in the mind of the viewer, *spectre [ˈspɛktə/]* attempts to uncover lost love from ectoplasm bonded in

the atomic forces of a buildings dust and *Exposure* mourns the demise of film as the photographed image becomes embedded in a basal cell carcinoma.

A Mote it is...

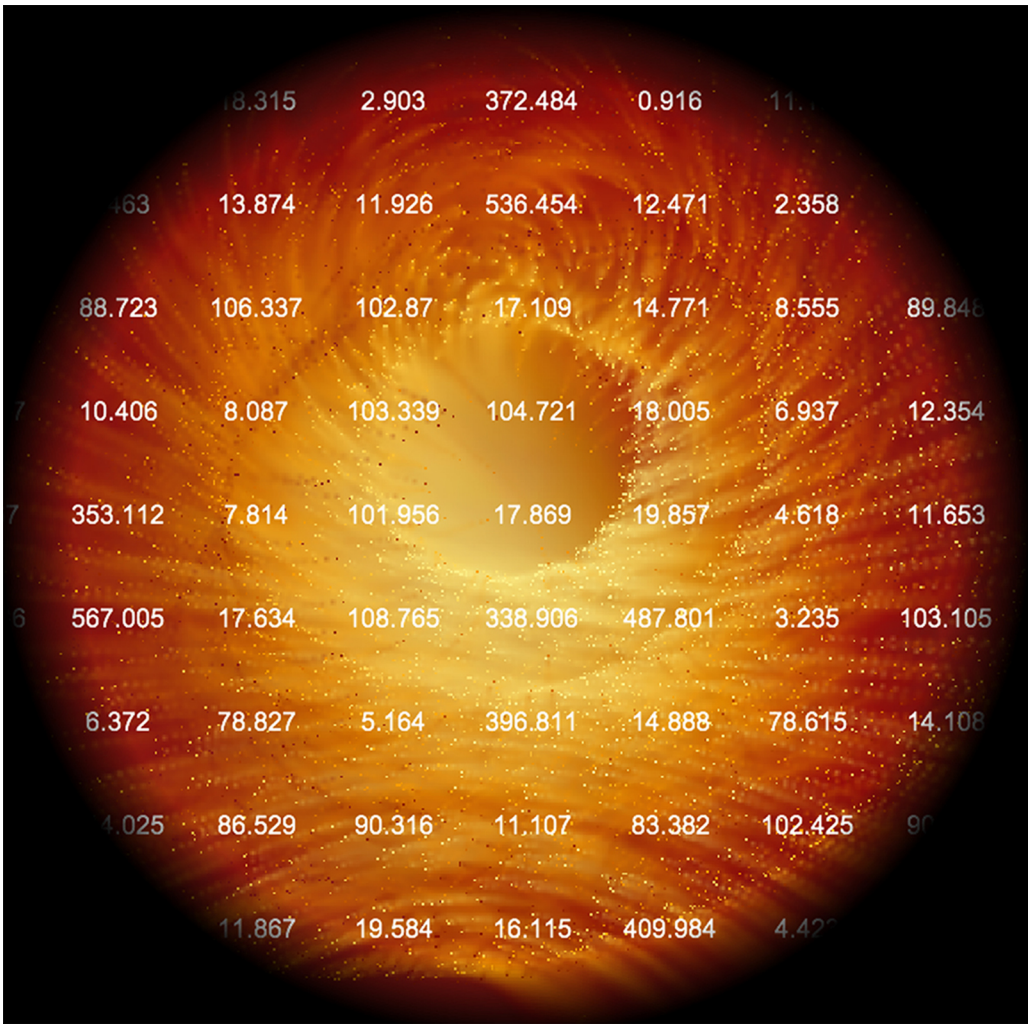

Figure 1*: A Mote it is…*

"A mote it is to trouble the mind's eye." (Shakespeare circa 1599)

A Mote it is... explored our relationship with technologies that trouble the mind's eye. Words spoken by Horartio to describe Hamlet's father's ghost. In this Shakespearian play the ghost is seen but not believed and one is left to wonder if it is just the seeing of it that makes it real - its existence totally dependent on the desire of the viewer to see it. The 'mote' or speck of dust in the eye of the mind of the beholder both creates the illusion and convinces us that what we see is real. Something just out of the corner of our minds eye, those little flecks magnified by our desire to see more clearly. Yet the harder we look the more blurred our vision becomes.

A 'mote' is both a noun and a verb. Middle English with Indo-European roots, its early Christian origins and Masonic overtones describe the smallest thing possible and empower it with the ability to conjure something into being (*so mote it be...*). This dual

state of becoming and being (even if infinitesimally tiny) render it a powerful talisman in the context of nano technology.

Throughout the last Century we were reintroduced to the idea of an invisible world. The development of sensing technologies allowed us to sense things in the world that we were unaware of (or maybe things we had just forgotten about?). The invisible ‘Hertzian’ landscape was made accessible through instruments that could measure, record and broadcast our fears and desires. Our radios, televisions and mobile phones revealed a parallel world that surrounds us. These instruments endow us with powers that in previous centuries would have been deemed occult or magic.

It is our relationship with these technologies that troubles the mind’s eye. Our ability to shift scales, from the smallest thing to the largest thing has been described as the ‘transcalar imaginary’. In this context astronomer Carl Sagan described the Earth as a “mote of dust, suspended in a sunbeam.” The famous image taken from Voyager 1 in 1990 shows the planet suspended in an infinite Universe. A mote that seems so large to us, but which is in fact so cosmologically small, disturbs our sensibilities and desire for order in our world.

A Mote it is... was constructed from data captured by an AFM from a ‘mote’ or piece of dust extracted from the artist’s eye. A whirlwind of data projected within the gallery is rendered invisible by the gaze of the viewer through a simple face recognition system. The more we look the more invisible it becomes - look away and it re-emerges from the maelstrom of data. A ghost of the mote can be seen in viewers peripheral vision but never head on.

spectre [ˈspɛktə/]

spectre [ˈspɛktə/] noun
1. a visible incorporeal spirit, a ghost, apparition, phantasm, phantasma, phantom.
2. a mental image of some entity of terror or dread: *the spectre of death…*
[C17: from Latin *spectrum*, literally 'image, apparition', from *specere* 'to look at']

Figure 2: *spectre [ˈspɛktə/] installation.*

"The concept of objects (or places) seeming to record events and then play them back for sensitive people is generally referred to as psychometry. The objects can be called psychometric objects or token objects"[6] (Morris 1986).

The author's previous work developing the Arch-OS.com system built on an exchange of letters with Robert Morris, Koestler Chair of Parapsychology at the University of Edinburgh, in the mid 1980's. The introduction of monitoring technologies into the fabric of a building could be described as a 'Psychometric' Architecture, a viral infection of a building that replayed at night the activities that took place during the day, a kind of dreaming architecture.

spectre [ˈspɛktə/] suggests that the Schauraum in the Quartier21 (Electric Avenue) of the MuseumsQuartier in Vienna is such an architecture and that the memories of the building are bonded to its fabric by the atomic forces that have now been unlocked by the Atomic Force Microscope. *Spectre* builds on the collision of *A Mote it is…* and Psychometric Architecture by drawing on the experiences of Professor Gustav Adolf Schwaiger, the Technical Director of the Austrian Broadcast Corporation, and his collaboration with famous medium Rudi Schneider in the late 1930's to the early 1940's. "G.A. Schwaiger… conducted some private (and rather obscure) experiments with the famous medium Rudi Schneider in the studio of a female painter... In fact the flat could have been right above our exhibition space (Schauraum)." (Fiel 2011).

The spectre of Schwaiger is made manifest from the atomic forces that bind the Schauraum dust, a space dreams. According to Mulacz's *History of Parapsychology in Austria*, "Schwaiger in his research focussed on investigating that 'substance' and its effects applied then state-of-the-art apparatus, such as remote observation by a TV set." (Mulacz 2000). That 'substance' was the ectoplasm that would emerge from Schneider mouth during their experiments. *Spectre* extends these experiments by broadcasting live

feeds from the space of the Schauraum and simultaneously replaying the physical remnants of these happenings as captured in the atomic forces binding the dust from the their laboratory. This blended reality provided by the multiple screens merge the viewer with the recovered presence of the three 'lovers'.

Exposure

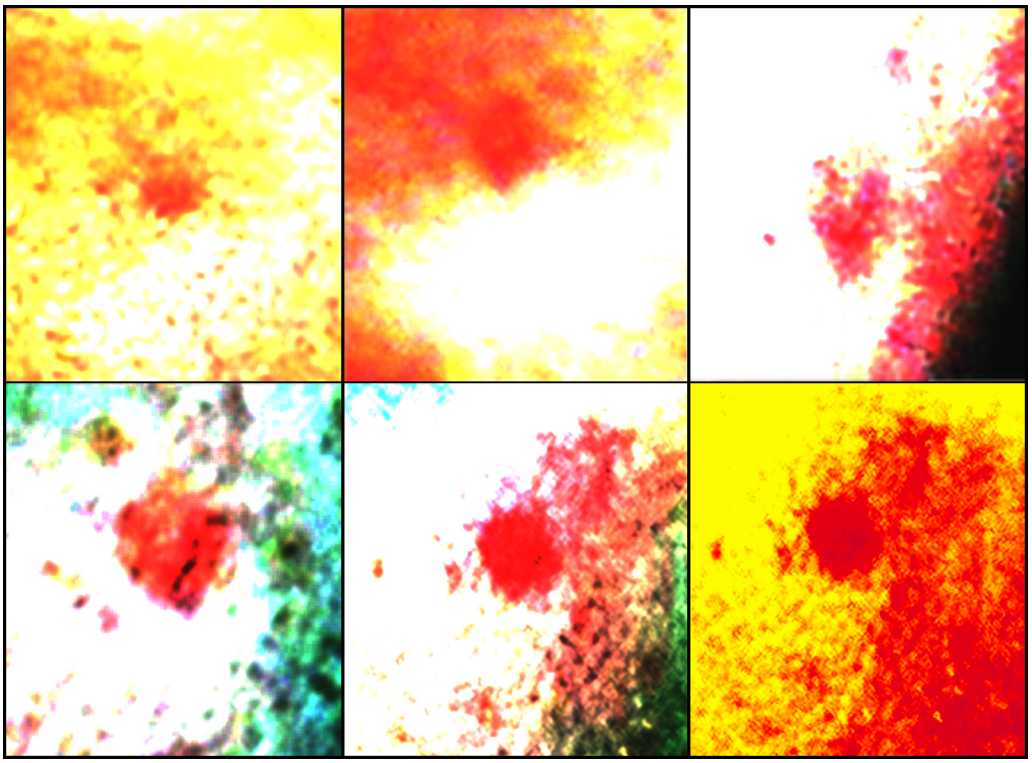

Figure 3: *Exposure, Basal series.*

The year that Eastman Kodak filed for bankruptcy protection was the same year Fujifilm moved from film production to beauty products (Pico-Collagen). This did not just mark a technological shift from film grain to nanoparticles but also a massive cultural shift - a shift from capturing the face on film to the embedding of 'film' in the face. The thing that once froze the face in an eternal youthful smile is now the anti-aging nanoparticle that preserves the face we wear. Barthes described the face on film as representing "a kind of absolute state of the flesh, which could be neither reached nor renounced" (Barthes 1993). Now this absolute state is closer to hand and we will walk around wearing our old photo albums as our face, peeling away the frames like layers of dead skin. Our essence, like Garbo's, will not degrade or deteriorate.

'Viewed as a transition' *Exposure* explores the deterioration of the flesh through the temporality of the Atomic Force Microscope (AFM). From the 60th of a second exposure of the Kodak Brownie camera to the 20-minute scan of the AFM - the closer the subject the longer the 'exposure'. Incorporating data from an AFM scan of a basal cell carcinoma Exposure, exhibited at the ART|SCI Centre at UCLA, explores the convergence of ideologies constructed around imaging technologies. Through a subtle interaction the viewer conjures up a dynamic data/image of a skin cancer - over exposed to the sun - or the intense light of the camera flashgun?

So Mote it be…

All of these projects rely on the viewer to unlock the manifestation of data, either through face recognition or motion detection, the viewers presence in the reading is essential. The act of looking at the invisible creates a tension that exists between the instrument and our faith in what it reveals to us. As if to reinforce our significance and necessity in interpreting the information gathered from the world around us, these projects leave us teetering on the edge of an abyss. Although apparently still located at the centre of the observable universe (do not think to hard about the fact that we are the observers and that somewhere out there may be another centre of someone else's universe), we have yet to come to terms with the fact that it is not our eyes that are doing the observing but the technologies to which we have delegated this responsibility. In bringing the world into being around us through our perception of it, we struggle to accept that the astronomical shifts in scale revealed through contemporary instruments do not: A, have a grounding in our media philosophies; B, need us to be part of the equation. So Mote it be…

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Sagan, C. 1994,Pale Blue Dot, Random House. p6

Shakespeare, W. Hamlet. Act 1, Scene 1, Line 129.

Notes:

Pico-Collagen (acetyl hydroxyproline), http://and-fujifilm.jp/en/html/skincare/index.html

Transcalar Imaginary. “mundus imaginalis traversing the micro, meso, and macro...” Curated by David McConville. http://www.scoop.it/t/transcalar-imaginary/

Arch-OS.com: http://www.i-dat.org/i-dat-launches-op-sycom/

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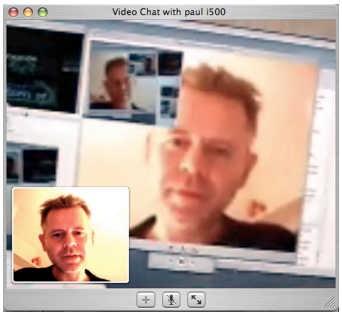
Images:

Figure 1: Phillips, M., A Mote it is…, 2010, screen capture. Image courtesy of the Artist.

Figure 2: Phillips, M., spectre [ˈspɛktə/] installation Schauraum. Quartier21 (Electric Avenue), MuseumsQuartier, Museumsplatz 1/5, 1070 Wien, Austria. 2011. Image courtesy of the Artist.

Figure 3: Phillips, M., Exposure, Basal series. 2012. Image courtesy of the Artist.

Short biography:



Mike Phillips is Professor of Interdisciplinary Arts at the University of Plymouth. R&D orbits digital architectures and transmedia publishing, and is manifest in a series of ‘Operating Systems’ to dynamically manifest ‘data’ as experience in order to enhance perspectives on a complex world. The Operating Systems project explores data as an abstract and invisible material that generates a dynamic mirror image of our biological, ecological and social activities.

Mike Phillips is director of i-DAT.org, an Arts Research Organisation that acts as a catalyst for creative innovation across the fields of Art, Science and Technology, facilitating regional, national and international collaborations and cultural projects. As a networked organisation and ‘cultural broker’ i-DAT’s transdisciplinary agenda fosters ‘open innovation’ and knowledge exchange between companies, institutions, communities and individuals. i-DAT is developing new ‘tools’ for production, dissemination and participation that challenge traditional models of creation and consumption, and embrace the shifting relationships between audiences and cultural producers. i-DAT’s projects can be found on the i-DAT web site at: www.i-dat.org.

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