



Scale Electric...

19 - 20 July 2010

i-DAT.org
The Wolfson Nanotechnology Laboratory
Ubiquity Journal

Introduction

The Scale Electric workshop couples the power of the Atomic Force Microscope to touch the infinitesimally small with the potential of the Full Dome environment to immerse participants in visualisations of the incomprehensibly big.

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 Scale Electric - the invisible 'hertzian' landscape was made accessible through instruments that could measure, record and broadcast our fears and desires. These instruments endow us with powers that in previous centuries would have been deemed 'occult' or 'magic'.

Our Twenty First Century magic instruments mark a dramatic shift from the hegemony of the eye to a reliance on technologies that do our seeing for us - things so big, small or invisible that it takes a leap of faith to believe they are really there. Our view of the 'real world' is increasingly understood through images made of data, things that are measured and felt rather than seen. What we know and what we see is not the same thing - if you see what I mean?

Our ability to shift scales, from the smallest thing to the largest thing has been described as the 'transcalar imaginary'. The workshop will enable participants to touch the nano level and then immerse themselves within it through visualisations and sonifications.

Image: "A Mote it is...." (Mike Phillips)

Image: Out of Scale / Arch-OS HD (Chris Speed)

Context

Scale Electric extends a series of collaborative projects orbiting i-DAT's research agenda. It builds on:

... practical workshops to explore the application of novel and innovative technologies to creative practice.

... projects with the Immersive Vision Theatre (a 40 seat 9m Full Dome digital projection system) a transdisciplinary instrument for the manifestation of material, immaterial and imaginary worlds - modelling, visualization, sonification and simulation.

... research projects such as Arch-OS and Ecolid's which stream real time data to facilitate insights into complex temporal architectural and ecological systems (<http://www.arch-os.com/>)

... more recently nano technology projects in collaboration with the Wolfson Nanotechnology Laboratory and John Curtin Gallery, Perth, WA - Art in the age of nanotechnology, 5/02 - 30/04/2010 (<http://johncurtingallery.curtin.edu.au/>)

Scale Electric explores some of the 'transcalar' (<http://www.elumenati.com/products/TInarrative.html>) conundrums that are increasingly intruding into our daily consciousness.

Image: A Mote.... (Mike Phillips)

Process...

A: Experiencing Atoms:

The first practical session will utilise the AFM in the Wolfson Nanotechnology Laboratory to produce data and images. The materials themselves will be defined during the morning session. Participants will be asked to propose matter and associated narratives for examination.

B: Modelling Experience:

Software templates will allow the interpretation and visualisation of the data gathered by the AFM. These visualisations will be hacked, tweaked and ultimately experienced within the Immersive Vision Theatre.

Image: Drosophila- Volumetric model (Musaab Garghouthi)

Schedule...

Monday 19/07/2010

10.00-10.15: Introductions, Briefing: Location - Babbage 213
10.15-10.30: Presentation 1: Prof Mike Phillips.
10.35-10.50: Presentation 2: Dr Chris Speed.
10.55-11.10: Presentation 3: Prof Genhua Pan.
11.15-11.30: Presentation 4: Pete Carss.
12.00-12.30: Tour of the AFM & IVT
12.30-13.30: Lunch
13.30-14.30: Production Planning: Location - Babbage 213
14.30-17.30: AFM Scanning: Location - The Wolfson Nanotechnology Laboratory,

Tuesday 20/07/2010

10.00-10.30: Briefing: Location Babbage 213
10.30-12.30: Project development AFM & IVT
12.30-13.30: Lunch
13.30-15.30: Project development AFM & IVT
15.30-17.30: IVT Manifestations

Image: Aggregator v1.0 (Pete Carss)

Project Team...

Pete Carss (<http://www.i-dat.org/pete-carrs/>)
Prof Genhua Pan (<http://www.plymouth.ac.uk/staff/gpan>)
Prof Mike Phillips <http://www.i-dat.org/mike-phillips/>
Dr Chris Speed (http://fields.eca.ac.uk/?page_id=65)

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Image: <http://www.i-dat.org/ahobartletti-dat/>