WELCOME TO CREATIVE SCIENCE 2013

29th November 2013, King's Collège, London (UK)
(a workshop of the 3rd European Immersive Education Summit)
Vic Callaghan

iED · IED EUROPE · KING'S College LONDON · University of Essex · CSf CREATIVE SCIENCE FOUNDATION
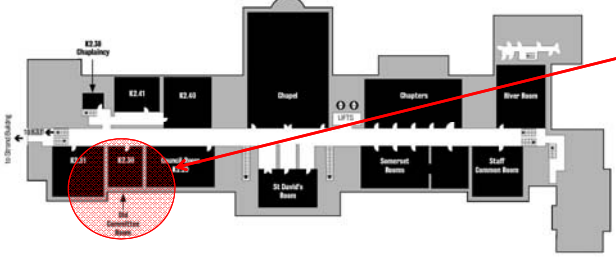
Creative Science London
Exploring Education Innovations
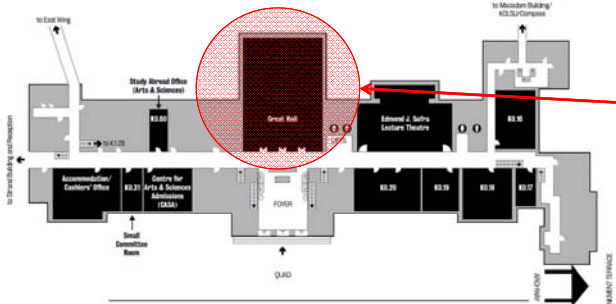
Finding Your Way Around

Old Committee Room (in **level 2** of Kings Building)**:**
Creative Science Workshop

Enter through entrance 'A' from The Strand'

Great Hall (in **level 0** of Kings Building)**:**
Coffees, teas and lunch
Posters
Panel session
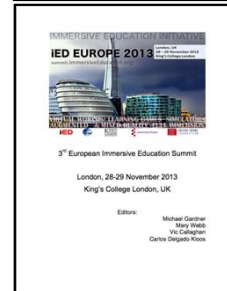Keynotes
Immersive Displays demo

Schedule & Proceedings

- Schedule
  - **09.45-10.15** – Vic Callaghan, "*Welcome & Introduction to the workshop*"
  - **10.15-10.45** – Jim Hensman, Ian Upton, "*The Turing Shroud*"
  - **10.45-11.15** – COFFEE / TEA
  - **11.15-11.45** – Anasol Pena-Rios, Emmanuel Ferreyra-Olivares, Alejandra Pena-Rios *"Stories of the Virtual Mind*"
  - **11.45-12.15** – Carlos Sanchez-Lozano "*Storyweavers*"
  - **12.15-12.45** – Paul McCullagh "*Ureka Potential*"
  - **12.45-13.45** – LUNCHBREAK (+Posters & Demos)
  - **13.45-14.15** – Gordon Fletcher, Anita Greenhill, Marie Griffiths, Rachel McLean "*Science Fiction Prototypes in Educational and Business Settings*"
  - **14.15-14.45** – Vic Callaghan "*The Dream Machine*"
  - **14.45-15.15** – COFFEE / TEA
  - **15.15-16.30** – Panel Session
  - **16.30-17.15** – Brian Johnson (Intel Futurist & Principal Engineer) KEYNOTE (see following)
  - **17.15-17.30** – CLOSE
- Proceedings:
  - Available from: http://www.creative-science.org/activities/csl13/
  - ISBN (10 digit): 84-695-8902-4
  - ISBN (13 digit): 978-84-695-8902-1
  - 72 pages

Keynote Speaker

Brian David Johnson
Futurist & Principal Engineer – Interactions and Experience Research
Intel Labs, Hillsboro, Oregon, USA

Biography
- Futurist at Intel Corporation,
- develop an actionable 10 -15 year vision for the future of technology.
- Author of '*Vintage Tomorrows*', '*Science Fiction Prototyping: Designing the Future with Science Fiction*', '*Screen Future: The Future of Entertainment Computing and the Devices we Love*' (in your pack) , and '*Fake Plastic Love*'
- Has directed two feature films and is an illustrator and commissioned painter.

Synopsis of Talk
Title: "How to build the future?"
What kind of future do you want to live in? What futures should we avoid? What will it feel like to be a human in the year 2020 and beyond? Intel's Futurist Brian David Johnson explores his futurecasting work; using social science, technical research, statistical data and even science fiction to create pragmatic models for a future that we can start building today. In the next decade it will be possible to turn anything into a computer and participate in truly immersive education experiences. We will be living in a world where we are surrounded by computational intelligence. Join Johnson as he explores what that means for the future and how can we envision our

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(intel)

- **Charitable organization founded by Intel in 2010 to promote**:
  - creativity in STEM disciplines
  - engagement between companies, academics, schools and the wider public
- **Methodology:**
  - Uses SciFi stories (prototypes) as a *shared language* to enable researchers, companies and ordinary people to explore the possible implications of new technology on humans, societies, and the world.
  - In iED looks at future of education and immersive education
- **Brian Johnson**:
  - Intel's Futurist applying SciFi-Prototyping
  - Giving keynote 16.30 Friday 29th November 2014
  - Join CSf and/or create your own CSf events

Linked in http://www.linkedin.com/groups/ Creative-Science-Foundation-4081352

www.creative-science.org

The Challenge That Started it All

- **Fear** – All companies fear failure; for small companies that is often related to finance but for large companies, that is often being overtaken by better products or business practices as they struggle to react to survive the *effects of technology and societal changes*.

- **Examples** - IBM & DEC, Blockbuster , Borders, Kodak, Nokia
.
- **Questions for CS'13**
  - *Could the same happen to education, and where might those threats come from?*
  - *Can we identify what technologies might spell the end of schools and universities as we know them?"*

- **Answers From CS'13 ?** - May not produce any but at this (small) event can:
  - Hear how **Intel** address these challenges (Science Fiction Prototyping)
  - Begin the conversation and listen to some interesting ideas from our 6 Science Fiction Prototypes

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The (intel) Story

- Intel's 'chip life cycles' occupy about 7-10 years from concept to shipping (and maybe another 15 years of product life)!
- How can they specify chips for products & worlds that don't exist yet)?
  - Perhaps extrapolate current research (incremental)?
  - Ask people what they want (generally incremental)
  - Brain-storming (a bit more radical)
  - A few beers , a few glasses of wine or …. (even more radical!)?
- Intel came to view that the magic ingredient was imagination
- The main Intel resource is engineers (but traditional engineering education encourages structured (incremental?) thought !
- **The Intel solution** - use fictional stories as a shared language to explore the possible implications of technology on humans, societies, and the world.
- 'Science' or 'Engineering' or 'Business' + Imagination = *Science Fiction Prototyping*
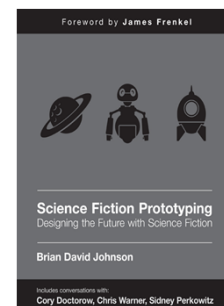
www.creative-science.org

see more detail on http://victor.callaghan.info/history/csf/

Image from drawing by Paul Rumsey

Science Fiction Prototyping

- Core methodology is the use of science fiction to motivate and direct research into business & science via science fiction prototypes (*imaginative stories about business, services or products in the future*)
- SFPs grounded in existing research, and written for explicit purpose of acting as prototypes for people to explore a wide variety of futures.
- SFPs can be created by *scientists* and *business professionals* using their imagination to stretch their work or by, for example, *writers*, *school children* and members of the *public* to influence the work of researchers.
- Outcomes of SFPs are used generally to create new <u>business models</u> or <u>innovative products</u>.

Foreword by **James Frenkel**

Science Fiction Prototyping
Designing the Future with Science Fiction

Brian David Johnson

Includes conversations with:
Cory Doctorow, Chris Warner, Sidney Perkowitz

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From Imagination to Products; From ePods to ImmersaVUs

Additive Technology ePod-4

In this increasingly competitive world, where knowledge determines success, your child deserves the very best education available and that is Addictive Technology's **ePod-4**

Pioneering research by Benjamin S. Bloom in the 1980s (and supported by all work since) proved that students who receive one-on-one tuition learn at least an order of magnitude better than grouped students. If you want to give your child the best one-to-one education in the world, give them an Addictive Technology's **ePod-4**

Education:

- Super-Intelligent Artificial Teachers
- Personalised one-to-one tuition (the gold standard)
- Teacher's avatar has visualisation powers that don't exist in physical space
- Available 24 hours a day, 365 days a year
- Learning environment (avatar, surroundings, lessons) can be tailored for each student
- Unwavering attention and happy disposition
- Compelling content combined with contextual delivery
- Teachers available in different cultures, ages, sexes and form

Technology

- Free-Will 3 © - Quantum processor (upgradable)
- My-Mind 1.2 © - Evolving Persona Engine (customizable)
- Flame 5 © - EmotionWare
- Get Real 8.2 © - Mixed Reality Cocoon
- Real-Touch © iSkin & Haptics
- Ghost 4.1 © – 3D Imaging & Audio
- SentiNet © - Knowledge Engine

Addictive Technology, Zizhu Science Park, No. 880 Zi Xing Road, Minhang, Shanghai 200241, China

From "Creative-Science 2010"
iPods were effectively small cocoons; something like a comfortable armchair enclosed within a sound-proof egg-like structure packed with sophisticated but largely invisible technology that included immersive mixed reality and sophisticated AI. When participating in a movie (the industry had long dropped the word "watching" which describing these new immersive movies) the immersive reality technology aimed to make the participant feel as though they were truly part of a fictional physical world.

"Tales From a Pod". In Creative-Science 2010 (CS'10). Kuala Lumpur, Malaysia: IOS Press

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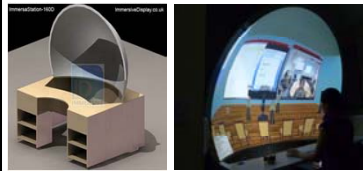
The CS'13 Workshop

- Six Science-Fiction Prototypes
    1. *"The Turing Shroud"* (Jim Hensman & Ian Upton)
    2. *"Stories of the Virtual Mind"* (Anasol Pena-Rios, Emmanuel Ferreyra-Olivares & Alejandra Pena-Rios)
    3. *"Storyweavers"* (Carlos Sanchez-Lozano)
    4. *"Ureka Potential"* (Paul McCullagh)
    5. *"Science Fiction Prototypes in Educational and Business Settings"* (Gordon Fletcher, Anita Greenhill, Marie Griffiths &Rachel McLean)
    6. *"The Dream Machine"* (Vic Callaghan)

- Authors from mix of disciplines including education, computing and business
- Five of the papers touch on technology that operated on student's brains!
- Two papers based on nanobots; two on implants (or other plug-ins)!
- One was more academic, and describes a workshop methodology for business innovation and planning

Upcoming Creative Science Events
www.creative-science.org

The 10th International Conference on Intelligent Environments (IE'14)

Shanghai, China
7-11th July 2014

www.intenv.org

21st Century Robot - A 'Maker' Event
http://intenv.org/?q=conferences/ie14/robot

Maker activities (crowd sourced) aim at moving people away from being just consumers of technology, to *creators of technology* & include activities such as 3D printing, virtual appliances & customisation are often seen as the forerunners of these processes.

(intel) O'REILLY

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Intel Labs Pittsburgh (intel)

7th - 9th July 2014 Creative Science Shanghai

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www.creative-science.org

Two workshops:
• Creative-Science 2014
• Imagine 2014

The Singularity Hypothesis:
A Pragmatic Approach.
Springer edited volume in The Frontiers Collection.
The Singularity – Point where AI transcends the limitations of peoples brains

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Lets Get on With the Workshop!

KING'S College LONDON

University of Essex