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FOUNDATION

#iLRN

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#iLRN16_SFP

Thinking about ‘*The Future of Immersive Education*’ through the Lens of science fiction prototyping

http://www.creative-science.org/activities/ilrn16_sfp/

CSF
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Organisers

Organising Locally

- ▶ Dennis Beck, University of Arkansas, USA
- ▶ Vic Callaghan, University of Essex, UK
- ▶ Michael Gardner, University of Essex, UK
- ▶ Christian Gütl, Graz University of Technology, Austria
- ▶ Leonel Caseiro Morgado, Universidade Aberta, Portugal
- ▶ Jonathon Richter, Salish Kootenai College, USA

Imagination Workshop (Advisor)

- ▶ Hsuan-Yi Wu (Jen), National Taiwan University, Taipei, Taiwan



Organising Online (Remotely)

- ▶ Anasol Peña-Rios, University of Essex, UK



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Overview of Afternoon

*“This workshop seeks to introduce micro **science-fiction prototyping** (μSFP) as a methodology for thinking about how immersive education might develop in the future”.*

- **2pm** – Welcome to iLRN (Jonathon Richter)
- **2.15pm** – Introduction to μSFP (Vic Callaghan)
- **2.45pm** – Invited talk *Brian Johnson* (via Skype)
- **3.30pm** – Coffee/tea & Ideation Sessions (divide into 6 groups, done at registration) (*Dennis Beck, Christian Gütl, Leonel Caseiro Morgado, Michael Gardner, Jonathon Richter & Vic Callaghan* facilitating)
 - Brainstorm ideas (30 minutes)
 - Discuss and prioritise ideas (15 minutes)
 - Create at least one μSFP to present in following session (15 minutes)
- **4.30pm** – Group presentations (5 mins per group) (*Michael Gardner*)
- **5.00pm** – Vote on best group μSFP (*Michael Gardner*)
- **5.15pm** – Prize (*Jonathon Richter*)
- **5.20pm** – Overview of follow-on μSFP competition (*Vic Callaghan*)
- **5.30pm** – Concluding Session (*Jonathon Richter*)



Outcome of Workshop



- ▶ An important aim of this workshop is to introduce you to a method of generating creative ideas called **Science-Fiction Prototyping (SFP)**.
- ▶ You will write a short story of just 140 characters (around 25 words) to describe an immersive education related innovation.
- ▶ Award for best short story (to make it a bit more fun!)



Part 1 – Introduction to SFP

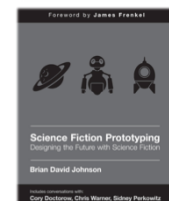


- The Intel Story
- SFP Workshops
- Introduction to SFP
- μ SFP writing



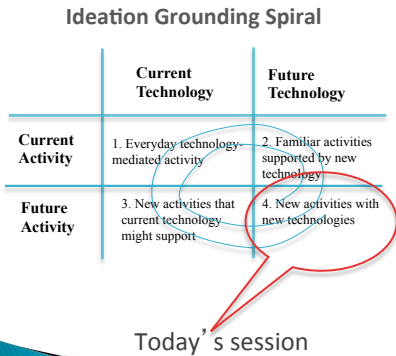
The Story

- Introducing new chips takes Intel 7–10 years from concept to shipping (with 15 years of product life!)
- How can they specify chips for worlds that don't exist?
- The main Intel resource is engineers (but traditional engineering education encourages structured & incremental thought!)
- Intel decided the magic ingredient was **imagination**
- The **Intel** solution was to ask their engineers to write fictional stories about technologies they are working on, to inject **imaginative leaps** in their thinking!



SFP Based Workshops

Vavoula G.N., Sharples M., "Future Technology Workshop: a collaborative method for the design of new learning technologies and activities", International Journal of Computer Supported Collaborative Learning, 2(4), pp. 393-419, 2007



Future Technology Workshop

- Developed by the 'Educational Technology Research Group', University of Birmingham for learning innovations.

Imagination Workshop

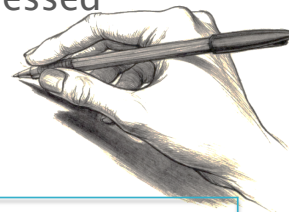
- Developed by the National Taiwan University business management Department for business and technology innovations
- Hsuan-Yi Wu, "Imagination Workshops: An Empirical Exploration of SFP for Technology-based Business Innovation", Futures, Volume 50, Pages 44-55, June 2013.

Expanded Consumer Experience Architecture

- Developed by Intel Labs in Portland for technology innovation.
- Brian David JOHNSON "Science Fiction for Scientists", Creative-Science 2010. Kuala Lumpur, Malaysia. 19th July 2010

Science Fiction Prototypes (SFPs)

- Are simply stories describing a future (and an innovation) you would desire.
- Written to persuade people to buy into your innovation (through credibility & emotion)
- Loosening remit from 'the likely' to 'the possible' allows leaps & disruptions to be addressed
- Two types of SFP
 - Micro-SFP (μ SFP): a very small SFP
 - Macro-SFP: a large SFP



- As part of this workshop you will create an μ SFP

Video Introducing Science-Fiction Prototyping

- ▶ SFP uses short stories about the future to inject imaginative leaps and provide a shared language for innovation



VIDEO INTRODUCING
SCIENCE FICTION
PROTOTYPING

µFiction (Micro-Fiction)

Provides quick
method to capture
the initial idea



Polytron Technologies, (Taiwan)

This is the style
Micro-SFPs adopt

- ▶ No agreed specification; Range from 6 to 1000 words; **Popular size 25–30, words** (text message size!).
- ▶ Similarities to *fables*, *parables*, *anecdotes*, *sayings*, *adages*, *proverbs* and *maxims*
- ▶ English speaking world called *micro-fiction*, *nano-fiction*, *flash-fiction*, *sudden-fiction* or *postcard-fiction*
- ▶ Around the world called *microrrelato* or *ficcione* (Latin-America); *nouvelles* (France); *minute-long* or *smoke-long* (China); *Haibun* (Japan)
- ▶ Technology based – *Mobile-phone* (Ketai) fiction (160 characters ~30 words); *'Twitter Lit'* (140 characters ~25 words)
- ▶ Examples can be found at
 - *Wired* (6-word) - <http://www.wired.com/wired/archive/14.11/sixwords.html>
 - *Espresso Stories* (25 words) - <http://espressostories.com>
 - *Micro-SFPs* (Twitter-size) - <http://www.creative-science.org/activities/microsfp/>

Writing a μ SFP

Technology oriented
story writing?

μ SFP components

1. User

2. Innovation (technology / service / process)

3. Event

4. Benefit

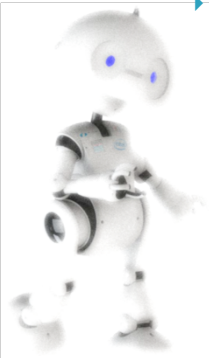
► Twitter / SMS sized fiction (140 /160 characters – 25 words)

Simple writing procedure

1. Name a user (use a very short name eg Joe)
2. Identify an innovation (technology, process etc)
3. Then create an event that illustrates the use and benefit of the technology, process or service (should include an inflection point)
4. Start big, then reduce it to <140 characters / 25 words

Simple μ SFP template

[Person] in [Situation] uses [Innovation] to do [Action] resulting in [Benefit]



Some Examples \Rightarrow

Examples – 6 Word micro fiction

- “*For sale: baby shoes, never worn*” – Ernest Hemingway (who, according to science fiction writer Arthur C. Clarke, in the 1920’s bet \$10 he could write a complete story in just 6 words, starting this genre!).



- “*Lie detector eyeglasses perfected: Civilization collapses.*” – Richard Powers
- “*TIME MACHINE REACHES FUTURE!!! – nobody there*” – Harry Harrison



Wired (6-word) -<http://www.wired.com/wired/archive/14.11/sixwords.html>

Examples – μSFP (text size 160 characters, 25 words)

.... created by 16/17 year-olds in 90 mins!

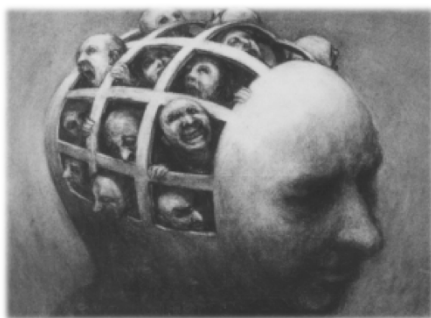


New Creatives,
Essex, 2014

1. technology
2. user
3. event
4. benefit

- ▶ *Jack* fall asleep in the sun. His **smart sun protection sensor** woke *him up* with an alarm & soft vibration. He *avoids sun strokes!*
- ▶ *Amy* can't diet but her **bracelet** helps *stop her eating a naughty treat* over a salad. It *clamps tight on her wrist & shocks her*.
- ▶ OMG where did *u* get ur coat from? It was the only one left in the store. But I can **3D-print it** *4 u*. Thank u so much.
- ▶ With *my* new **eFridge** I can have my cake & my *stay at home*. I come home *2 a full stock of food* & no court orders for a drunkard.
- ▶ I'll just pop off to *get some sushi*. *Bob* established a **wormhole link** to Japan and *vanished*.

Part 2 Practical Work



- Brainstorming
- μSFP writing
- Presentations
- Voting / Prizes

Imagination Workshop

Mediator – Jonathon Richter



► Brainstorming (30 minutes)

- Form groups of 3, 5 or 7 people (from registration)
- Elect a coordinator & scribe (to record ideas)
- Chose an innovation focus (see next slide)
- List as many ideas as possible (chosed quantity above quality)
- Do not worry about practicality of ideas
- Don't criticise ideas (out of the box thinking is encouraged)
- Offer new ideas, plus build on other members ideas

► Discuss & prioritise ideas (15 minutes) / Create μSFP (15 minutes)

- Each person might try to write an SFP and then you can decide amongst yourselves which one to put forward

EXAMPLES

*Jack fall asleep in the sun.
His smart sun protection
sensor woke him up with
an alarm & soft vibration.
He avoids sun strokes!*

*Amy can't diet but her
bracelet helps stop her
eating a naughty treat over
a salad. It clamps tight on
her wrist & shocks her.*

[Person] in [Situation] uses [Innovation] to do [Action] resulting in [Benefit]

Cross-Impact matrix (a brainstorming tool)

- Your brainstorm / μSFP needs to focus on immersive learning
- To get started – Use the xmatrix table to consider what happens when (pick) one of those trends combines with immersive technologies: how might they impact learning opportunities?
- You can also add to the list of technologies in the xmatrix table

	Impact on Immersive Education
3D printing	?
Robotics	?
Nanotechnology	?
biotechnology	?
Internet of Things	?
Maker spaces	?
Big Data	?
Visualisation	?
Cloud Computing	?
Social networking	?
E-paper	?
bitcoin / blockchain	?
MOOC	?
Game Technology	?
Intelligent Systems	?
Mobile /wearables	?
Smart glasses	?

5 Minute Group Presentation

Adjudicator – Michael Gardner

- ▶ Present your μ SFP by:
- ▶ Reading the μ SFP
- ▶ Providing an extra information you think useful
- ▶ Explaining its benefits to immersive education

Include

1. **technology /process**
2. **user**
3. **event**
4. **benefit**

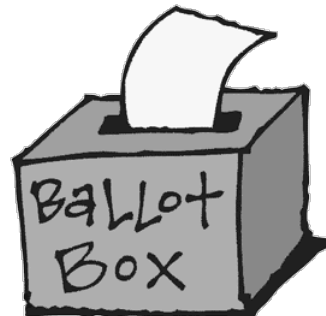


Prize for best μ SFP (Certificate for each member of group)

Competition & Voting

Adjudicator – Michael Gardner

- ▶ You will be the judges (voting by a simple show of hands)!
- ▶ Each person can vote for one group (but not their own) using the criteria:
 - How good the idea is
 - How good the benefits are
 - How 'story-like' the SFP is
- ▶ The μ SFP with the most votes will be the winner (in the event of a tie, organizers will have casting votes).



...and finally (a Twitter μ SFP competition)

► Competition

- You are invited to write an individual μ SFP describing how you foresee immersive learning technologies and pedagogies changing the nature of future immersive education.

- The top 3 μ SFPs (as voted by attendees) will receive an Amazon voucher

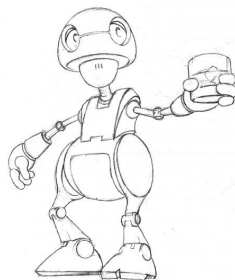
► How to enter the competition?

- Tweet your μ SFP using the hashtag #iLRN16_SFP no later than midnight on the 29th June 2016 (you have 129 characters for the μ SFP as the hashtag uses 11 of the 140 characters allowed)
- All μ SFPs will be retweeted in our official Twitter account @CSFoundation. Once we have retweeted your story, you are officially in the competition!
- Results will be announced, and prizes awarded, during the closing session
- The mechanics of this online competition is being organised by Anasol Peña-Rios (@prlosana).
- A useful guidance form for writing μ SFPs is available
 - http://www.creative-science.org/wp-content/uploads/2016/05/2016_iLRN16CompetitionForm.pdf
- More information is available from:
 - http://www.creative-science.org/activities/ilrn16_sfp/



#iLRN

That's it !



*"How do we change the future?
Change the story people tell
themselves about the future
they will live in"*
Brian Johnson

*"We are what we pretend to
be, so we must be careful
what we pretend to be?"*
Kurt Vonnegut

<http://www.creative-science.org>
<https://immersivelrn.org/>