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www.creative-science.org
http://linkd.in/1xUMdJD
https://twitter.com/CSciFoundation

Introduction To Computer English

through the lens of science fiction prototyping

Prof Victor Callaghan

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Outcome of Session

- This session aims to introduce you to **Science-Fiction Prototyping** (SFP) as a means of:
  - Learning language
  - Exploring the future of interpreting technology
- As an outcome you will write a short story of just 140 characters (around 25 words) to describe an interpreting technology related innovation.

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Structure of Afternoon

First 2 hours

- Introduction to:
  - The Computer English Book (a new way of learning language)
  - Technology Visions (some videos of technology trends)
  - Science-Fiction Prototyping (a tool for innovation and communication)

Final hour

- Imagination Workshop (using stories as a means of creating and communicating ideas – and an exercising language)

This PowerPoint is available to download from:
http://victor.callaghan.info/publications/2016_ISS16(IntroductionToComputer).pdf

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The Book

Details

- **CSf Website:** http://www.creative-science.org/activities/book1/
- **Tsinghua University Press Website**: http://www.tup.com.cn/booksCenter/book_05874101.html
- **Author:** Shumei Zhang, Vic Callaghan, Hongmei Wang, Bin Hedong
- **ISBN:** 9787302422730
- **Publication Date:** 2016.03.01

- Adopts a novel approach to teaching English as a foreign language by combining:
  - Language learning
  - Creative thinking and writing
  - Technology

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Part 1 – Technology Themes

- Smart Homes
- Robots
- Singularity

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5

Smart Homes (Samsung Video)

Modern homes are populated with numerous technologies that facilitate communication between devices and people to create **Smart-Homes**

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Robots (Intel – Wall Street Journal Video)

Wall Street Journal News Report

Brian Johnson Introducing Intel's *21st Century Robot* project on the *'Wall Street Journal Live'* TV channel (a business-focused, news service based in New York City.

VIDEO OF 21st CENTURY ROBOT INTERVIEW

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Video: The Singularity Documentary

The Technological Singularity …. *the moment machine intelligence exceeds human intelligence* (around 2050 according to Kurzweil)

A short exert from Doug Wolens acclaimed documentary of the singularity. See http://thesingularityfilm.com/

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Part 2- The Need for Innovation

- Creative Thinking
- Creative Science
- Art & Science
- The Intel Story

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Image from drawing by Paul Rumsey

Why creative thinking is important?

- The challenge to companies is how to avoid being sidelined by new **innovations**, or how to produce their own innovations. One solution is to employ creative-thinking methods, to **augment** other technical skills.

Examples: Kodak, Nokia

- Innovations come from **Creative Thinking**

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What is creative thinking?

- Creative thinking, is thinking about problems in a new way, or thinking of new ideas which can lead to novel products or solutions. [Oxford Dictionary]
- Imagination is a key ingredient of creative-thinking.
- *"Imagination is more important than knowledge. Knowledge often defines all we currently know and understand. Imagination points to all we might yet discover and create"* [quotation by physicist Albert Einstein]
- *"Creativity distinguishes between a leader and a follower"* [quotation by Steve Jobs]
- Science-fiction prototyping is a powerful creative thinking tool.

cREAtive ThinkiNG
is A sKILL that caN
Be leARNed

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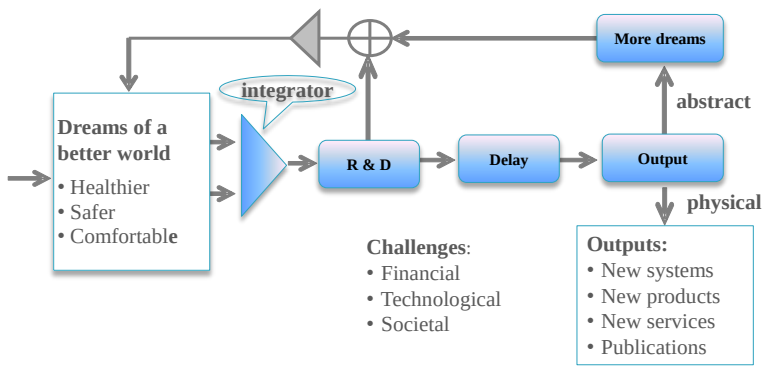
What is Creative Science?

"IF EVERYONE'S THINKING ALIKE, THEN SOMEONE ISN'T THINKING."

- Creative science refers to the use of creative methods to support science



The Creative Science Cycle

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Dreams, Art, and Science

Q: What dreams did you have when you were young? What dreams do you have now?

- Dreams are powerful mechanisms, as they allow us to imagine what might be possible in different circumstances. Imaging what might be possible is a crucial part of creative -design and -thinking.
- *There is a "need to bring art and science back together"* (quotation by Eric Schmidt, the chairman of Google).
- For example, James Clerk Maxwell, a Scottish mathematical physicist who formulated the classical theory of electromagnetic radiation was a published poet!
- *The Macintosh was so successful because the people designing it were musicians, artists, poets as well as skilled computer scientists"* (quotation by Steve Jobs, the founder of Apple Inc)

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The Science Fiction Prototyping Method

➢ Science-Fiction Prototyping uses fictional stories to inject imaginative leaps into the innovation process. It provides a rich virtual world to help explore the possible implications of technology on people, societies, and the world at large. It also provides a shared language to allow all the stakeholders of the future to engage in dialogue.

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The intel 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!

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see more detail on http://victor.callaghan.info/history/csf/ 15

Video Introducing Science Fiction Prototyping

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

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16

Part 3- Science Fiction Prototyping

- Science Fiction Prototypes
- µFiction
- Writing a µSFP
- Examples

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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** (µSFP): a very small SFP
  - **Macro-SFP**: a large SFP

- As part of this activity you will create an **µSFP**

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18

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/

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Writing a µSFP

Technology oriented story writing?

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

Some Examples ⇒

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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

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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.*

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

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Part 4 – Imagination Workshop

- Brainstorming
- µSFP writing
- Presentations

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Ideation Session

- **Brainstorming (30 minutes)**
  - Form groups of 3, 5 or 7 people
  - Elect a coordinator & scribe (to record ideas)
  - Chose an innovation focus (interpreting technology)
  - List as many ideas as possible (chose 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

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]

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Cross-Impact matrix (a brainstorming tool)

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

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

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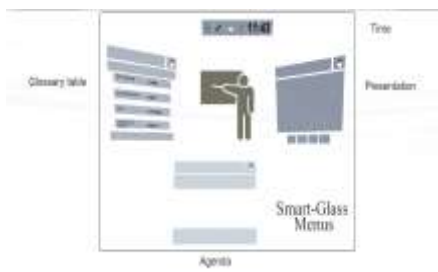
Example for Interpreting – Smart Glasses



- Chantel Dan Chen is investigating the use of smart glasses as an aid to interpreters

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5 Minute Presentation

- Present your µSFP by:
- Reading the µSFP
- Providing an extra information you think useful
- Explaining its benefits to interpreting technology

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

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That's it !

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

"Language is a process of free creation; its laws and principles are fixed, but the manner in which the principles of generation are used is free and infinitely varied. Even the interpretation and use of words involves a process of free creation". Noam Chomsky
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