GAETSS - Gamification and Enabling Technologies Strategic Solutions Newsletter

Shaping the Future of Business and Society through Human Development and Motivation

August 2016
**Pokemon and Mixed Reality, Ian Livingstone Academies,
Radio with Pictures Show Community Media Archives,
Thaisim 2016 Games and Simulations for Learning,
Revolutionary Learning 2016, Blockchains and BitCoins in Education
Drones and 360 degree Video, Impact of Machine Learning and AI on Society,
World of Health IT Conference and European Chapter of ISDM,
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Welcome to the GAETSS August 2016 E-Newsletter.

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Pokemon GO and Mixed Reality

Developments in Mixed Reality

SGI Circa 2007   Pokemon GO 2016

Mixed Reality Screenshots from 2007 vs 2016

Pokemon GO has attracted a lot of attention recently and has had a noticeable impact on the share prices of the companies involved. Last month I did a radio interview to describe my thoughts about the impact and sustainability of the Pokemon GO phenomenon. The integration of virtual objects and characters into real-world scenarios is not new. During my time at the Serious Games Institute (SGI), I either initiated, was involved in or promoted a number of different projects which mixed the real and the virtual. During the launch of the SGI in 2007, we combined the physical conference event with a parallel virtual conference held in Second Life and we integrated the physical and virtual in the design of the technology infrastructure of the SGI.

As the image above illustrates, we used live video in our reception area with virtual characters overlaid, potentially to achieve interaction between the real and the virtual. The SGI was involved in a project called "Stratford Unplugged" based around the Shakespeare heritage in Stratford upon Avon. Visitors could use their mobile smartphone to look at historic sites enhanced with characters or objects to augment the physical scene.

There were a number of other projects in the late 2000s around the UK which, like Stratford Unplugged, used geolocation, augmented/mixed reality and mobile devices. The SGI, though not directly involved, sought to promote and celebrate such projects and the people behind them. Those individuals and companies helped to pioneer the concepts and technologies that are now being leveraged by Pokemon GO.

The Pokemon GO application has much in common technologically with those previous innovations in the sense of relying on Geolocation services, augmented/mixed reality and mobile devices. The success of Pokemon GO and its sustainability will rely on a number of factors which some of the previous examples did not benefit from and which reflect the use of "Gamification Elements" in the mechanics of the application including :-

- The strength and Awareness of the Pokemon Brand
- The challenge of "Collecting" Pokemon Characters
- The collaborative eco-system that incentivises partners to develop local characters
- The perceived value of Pokemon GO in encouraging exercise and exploration

In many ways, Nintendo and Pokemon are in a fairly unique position to exploit these elements and gain rapid traction for the ideas. Almost inevitably, there will be those who seek to misuse the opportunity to leverage the commercial and engagement potential of Pokemon GO for unintended purposes just as early users of Second Life developed robot avatars programmed to generate the Linden Dollar virtual currencies through activities that were not thought of by the developers. It will be interesting to reflect on progress with Pokemon in a year's time.

Ian Livingstone Academies

Ian Livingstone Games Evangelist

Ian Livingstone Keynote at Revolutionary Learning in New York

Ian Livingstone is a respected GURU and a Living Legend in the Games Industry so I was privileged to meet him and listen to his keynote presentation at the Revolutionary Learning Conference in New York earlier this month. Ian has been a persistent pioneer and evangelist for the social value of games for decades. He was one of the people behind "Dungeons and Dragons" in the 1970s and a serial innovator not just in the use of technology for engagement, entertainment and learning, but also, primarily in being a passionate advocate of games as a catalyst for creative thinking and imagination.

Ian spoke in New York about his involvement in the games industry, which was not always an easy road, including the success of Lara Croft developed by a UK company to become a global phenomenon which crossed media boundaries and became an iconic brand.

In his presentation, Ian focused on the need to inspire creative thinking amongst today's students. Like Stephen Hawking and Eon Musk, Ian recognises the dangers to Society associated with rapid developments in machine learning and artificial intelligence (also covered later in this newsletter). To combat the impact of these technologies, Ian has set up a Foundation to establish academies designed to stimulate creativity and imagination in ways which the traditional curriculum fails to achieve.

For more information on Next Generation Skills – see http://www.nextgenskills.com/livingstone-promotes-new-free-school-for-creative-arts/
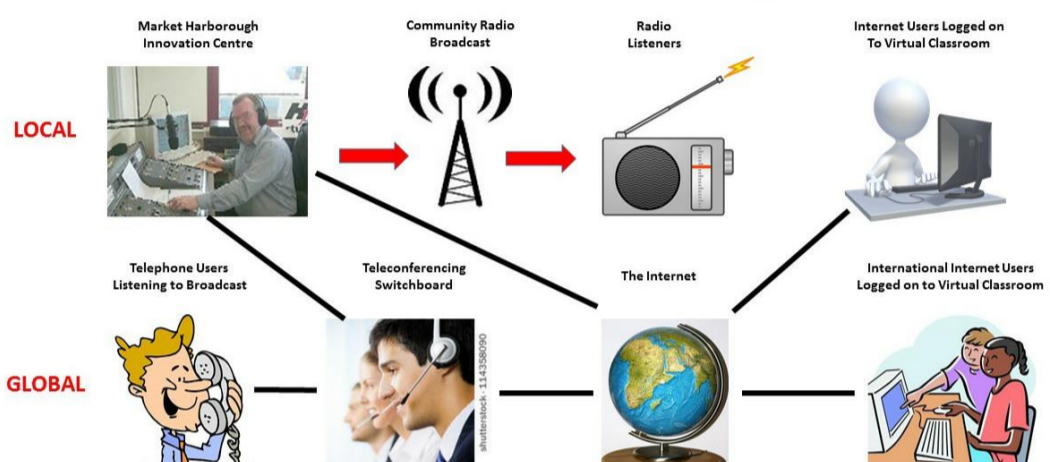
Radio with Pictures Show Community Media Archives

Radio with Pictures Show Global Reach

Radio with Pictures Community Media Interactive Chat Show where Local Meets Global

Whilst sorting through some of my stored memorabilia, I came across a DVD with archived recordings of an innovative breakfast radio chat show I devised and hosted in 2002. As well as bringing back some memories of the remarkable people I interviewed on the program, I felt a sense of pride in how advanced our use of technology to bring the local and global together was in 2002 when the broadcasts were made.

The Radio with Pictures Show (aka Harborough FM Interactive) harnessed the combined potential of Community Radio, teleconferencing and internet-based web conferencing to run a series of one hour shows exploring how Information Communication Technologies could be used to benefit society in such areas as health, community media, innovation, democracy and sustainable development. The audience were able to interact via their computers and/or phones and the audio was simultaneously transcribed into a text chat area by an on-line court reporter working from home in a nearby village.

The five broadcasts have now been archived onto Youtube and are accessible from the following links :-

- ICT and Health Broadcast
- ICT and Innovation / Entrepreneurship
- ICT and Community Media
- ICT and Community Engagement / Democracy
- ICT and the Future Society

There were many memorable moments during these interviews such as singing my school song in Latin in a duet with the British Ambassador in Belize, joking with a German academic about England beating Germany 5-1, and talking to Bob Bridges, a local man who worked on the special effects for Harry Potter. The image quality on these archives is not good but the audio broadcasts are very clear.

The Community Radio Station Harborough FM is still broadcasting now that it has a full-time licence.

Thaisim 2016 Games and Simulations for Learning

Thaisim 2016 Games and Simulations for Learning

Images from Thaisim 2016

The Thaisim Conference is one of the events I look forward to every year, not least because of the wonderful hospitality and good natured courtesy of Thai people. This year's conference, held at Sripatum University in Chonburi near Bangkok, was no exception. Thaisim has a strong commitment to delegate engagement in the learning activities which tends to be absent from many conferences. Virtually the whole of the second day of the conference is devoted to highly interactive games which effectively demonstrate the effectiveness and potential of games-based learning.

My presentation at Thaisim 2016 has been archived at http://www.slideshare.net/dwortley/what-shall-we-tell-the-children

A highlight of the conference from my perspective was an interactive games-based learning session based on encouraging teamwork and collaboration. It was organised by Professor Vinod Dumblekar from India. The exercise entitled "Salad Bowl Game" put together around a dozen small teams, each of which was given a bowl of paper cuttings with minimal instructions on what the objective of the game was, other than to be the fasted team to finish. It became quickly obvious that the paper cuttings were parts of a "jigsaw" puzzle that had to be glued to A4 paper to make a complete image. To complicate matters, each team had one piece missing that had to be collected from another team.

The engagement of the participants and the excitement and competition were intense. I found myself in a team with one of the keynote presenters who, like myself, has been involved in games-based learning internationally for years. It was somewhat ironic therefore that our team was the slowest in the competition.

I am grateful to Professor Songsri Soranastaporn and her colleagues for the invitation to Thaisim and also to Nitsinee Kuprasert and her husband for their hospitality in arranging some tourist activities for me during my stay. I have been impressed by the developments Thailand has made in its use of games and simulations for learning to the credit of Professor Songsri and my friend Professor David Crookall who have played a major role in this process.

Revolutionary Learning 2016

Images from Revolutionary Learning 2016 held in New York

New York was the location for the inaugural two-day Revolutionary Learning Conference which showcased some of the games-based learning initiatives in the New York area and internationally. My workshop presentation was based on the challenges faced by Gen Z students in a world which has been totally transformed by technology within my lifetime and, as Ian Livingstone addressed in his keynote presentation, is threatened by a changing job market in which many knowledge professional jobs currently done by humans will, in future, be carried out by robots.

One of the innovations of the conference was a competition amongst team of volunteer delegates to design a game within the 2 days of the conference to achieve a specific learning objective. I was pleased to act as a mentor alongside a panel of games industry experts to help the teams refine their ideas before the final presentation.

I was delighted to meet up with my former colleagues from The Disruptive Media Learning Lab at Coventry University and to observe first hand an example of how they use gamification techniques in team-based learning with a custom designed set of cards that create challenges for the individuals in the teams and stimulate creative thinking.

I also made use of a pack of "Happy Family" cards in my presentation which is archived at http://www.slideshare.net/dwortley/revolutionary-learning-for-genz. Each delegate in the session selected a card at random as they entered the room and I posed a question at the end of my presentation that could only be answered by a delegate with a card that matched the one I drew at random from the remaining pack.

BlockChains and Bitcoins and Gamified Learning

DMLL Gamified Learning and Disruptive Technologies

Disruptive Media Learning Lab (DMLL) Presentations at Revolutionary Learning 2016

Before I attended Revolutionary Learning Conference, I only had a vague idea about Blockchains and Bitcoins. A packed session run by the DMLL team covered Coventry University's involvement in projects such as the Nelson Mandela Virtual Museum in South Africa, a major European Learning project called Beaconing and very innovative gamification practices employed by Doctor Alan Richards in his course on business enterprise for international students.

Alan described how he employs quite radical techniques to encourage teamwork and discipline through gamification methodologies which include BitCoins and Blockchains. Without going into too much detail about what these are and how they are becoming increasingly important in commerce, their use in Alan's course is designed to give students a sense of responsibility for their actions, an appreciation of the commercial value of their skills, incentives for good discipline and enquiry in the lecture room and empowerment to assess each other's contribution to the learning process.

Alan Richards can be contacted at alan.richards@coventry.ac.uk.

Drones and 360 Degree Video

3DR Drone and 360 Degree Video for VR Technology

Drone Kit & VR Headset   **Spectacular 360 Degree Fly-Through**

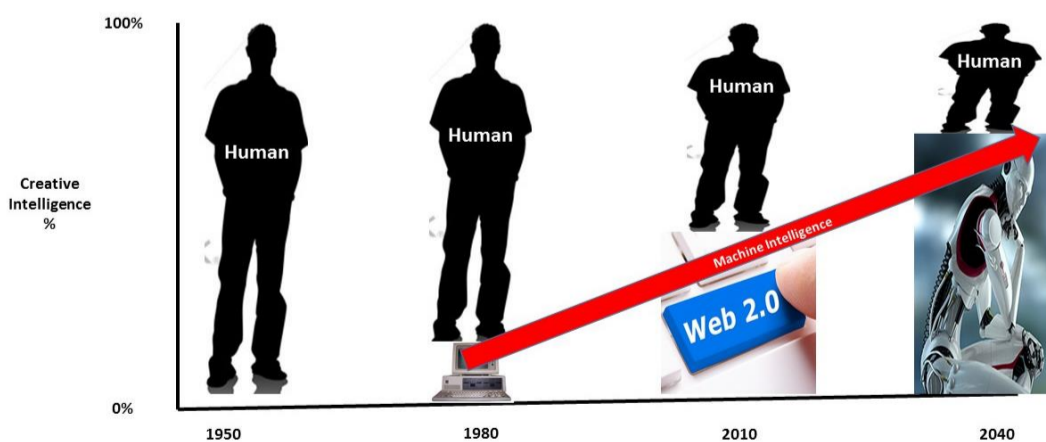*The New 3DR Drone Collaboration with Kodak*

I have written about my use of the 3DR drone in previous newsletters, including mounting a Theta S 360 degree camera on top of my 3DR drone to capture the experience of flying. Whilst the resolution of the Theta S is not broadcast quality and the VR video that can be captured also shows the body of the drone in the picture, the results do provide an illustration of the power of 360 cameras to create immersive VR experiences.

This week I received details of a new offering from 3DR in partnership with Kodak to provide good quality fully immersive VR 360 video experiences that give the impression of being able to fly and look all around. The images above were taken from the 3DR promotional mailer and shows the 3DR drone with Kodak 360 cameras mouted on a special rig above and below the drone. This, combined with special stitching software gives a truly immersive video experience that is best appreciated through a VR headset but can also be appreciated on YouTube.

To see an example of a spectacular 360m degree fly-through video go to https://www.youtube.com/watch?v=G7dwiim7IpQ&index=18&list=PLdqV8BIuik5jzLa0aUal1egqVaDqYy5SX

Impact of Machine Learning and AI on Society

The Prosumer Democratisation of Creativity

How Robotics and AI are transferring Creative Intelligence from Humans to Machines

Following on from the European CRe-AM Creative Industries Adaptive Roadmapping project, I have just submitted a Chapter for peer review for a proposed new book on the future of the creative industries. The chapter discusses the growing embedding of creative intelligence in technologies such as smartphones, cameras, drones, sensor technologies. This embedding of "creative intelligence" makes it possible for ordinary people to achieve professional or near-professional results in their creative output fuelling the "Prosumer" phenomenon and generating a highly competitive environment in which "amateurs" can challenge industry professionals.

Bernard Horan Guest Lectures

Whilst I was in Asia for the Thaisim conference, I was fortunate enough to be invited to a guest lecture given by Bernard Horan of Oracle. The invitation was arranged by Dr Wendy Liow of HELP University in Kuala Lumpur. The theme of Berbard's presentation was "Developments in Artificial Intelligence and Machine Learning". It was a fascinating insight into the technicalities of Machine Learning and Artificial Intelligence "under the hood". Connecting with Bernard Horan, listening to his presentation, sharing our experiences and researching his background brought home what a small world we live in today and what common experiences people who have never met can have. We had an interesting discussion after his lecture about the company Autonomy whom I had experience of in the 1990s when they were involved in the use of data analytics and AI for customer service applications. I subsequently discovered that Bernard was also involved in mixing real and virtual worlds in education which was one of the innovations I implemented into the infrastructure of the SGI building and its monthly mixed reality seminar events.

What struck me most about his lecture in Kuala Lumpur was the evolution of machine learning and the technology architecture developed from a scenario where machine learning and AI used to be based on comparing results produced by the computer with those produced by "Human-based knowledge and Intelligence" to a scenario in which machines mimic the structure of the human brain and no longer rely on human intelligence to "teach" them. The implications of this shift for our future society are profound and unprecedented in human history.

World of Health IT Conference and European Chapter of ISDM

The Upcoming World of Health IT Conference in Barcelona

The new HIMSS Europe World of Health IT (WoHIT) Conference & Exhibition will be taking place on 21–22 November 2016 in Barcelona, Spain. The event will gather top European healthcare stakeholders and will be the meeting point for the entire eHealth ecosystem.

A feature of the conference will be a special launch event of the European Chapter of the International Society of Digital Medicine. There will be a limited number of "invitation-only" places available at this prestigious launch event as we try to encourage high calibre and experienced professionals in the use of digital technologies for health and well-being applications to join the new Chapter and support its aspirations.

See www.isdm.org.cn for details of ISDM and http://www.worldofhealthit.org/ehome/index.php?eventid=141909& for more information on the World of Health IT Conference.

The Future of Digital Medicine in the Aging Society

Issue 2 Vol 2 of Digital Medicine

I had the privilege of writing an editorial for the latest issue of the Digital Medicine Journal which has just been published. You can access the journal article at www.davidwortley.com/DigitMed_2016_2_2_43_189502.pdf. Below is a short extract from the article :-

"Digital technologies have undoubtedly had a major impact on medicine both in diagnostics and treatment. Modern digital scanning, artificial intelligence, bigdata analytics, human-computer interfaces, robotics and 3D visualization technologies have all helped to not only increase our understanding of the physiology of the human body and enabled early detection of medical conditions but also they have contributed to increasingly more targeted and personalized interventions.

However, set against these positive benefits of digital medicine and health technologies is the impact of technologies which reduce the daily physical and cognitive challenges that have throughout history constantly exercised our bodies and minds and in the process, given us the active lifestyles needed to maintain health and well-being. Sedentary lifestyles at home and work coupled with the instant gratification of fast foods are leading to obesity epidemics in many different parts of the globe."

Featured Upcoming Events

Sept 7/9 VS-Games 2016

The VS-Games 2016 conference in Barcelona is the 8th International Conference on Virtual Worlds and Games for Serious Applications. Topics for this year's conference include :-

- Alternate reality games
- Virtual environments
- Augmented reality
- Game design
- Animation for serious games and virtual worlds
- AI applications for serious games
- Serious games methodologies
- User-modelling in serious games
- Pervasive gaming
- Interactivity issues
- Visualisation techniques
- Human-computer interaction
- Mobile games
- Education and learning
- Multimedia gaming
- Case studies in serious games and virtual worlds
- Gamification

For more details go to http://vsgames2016.com/

Sept 23/24 Singapore Health and Biomedical Congress

The Singapore Health and BioMedical Congress is flagship international event with top class international speakers which this year will include James Kinross from Imperial College. The theme of this year's conference is "Forging a Sustainable Relationship-Based Healthcare System".

For full details of the event go to http://shbc.com.sg/

Oct 31st – Nov 1st Games for Health Europe

Games for Health Europe brings together researchers, medical professionals and game developers to share information about the impact games and game technologies can have on health, health care and policy. A major effort of the Games for Health Europe is the Annual Games for Health Europe Conference.

For details of the conference go to http://www.gamesforhealtheurope.org/2016-overview/

Nov 28/Dec 1st SEANES 2016 Ergonomics and Human Factors Conference

The 4th SEANES 2016 Ergonomics and Human Factors conference in South East Asia will be held in Bandung Indonesia. The theme of this year's event will be:- "Green Ergonomics: Sustainability, Productivity, and Well-being". Within this theme, SEANES 2016 Conference supports and expands the application of human factors and ergonomics with regards to recent local and global needs. This international conference aims to enhance the awareness of the importance of Human Factors Engineering (HFE) in various human activities and application domains, including product design, learning, communication, healthcare, transportation, defence and security.

For more details of the event go to https://seanes2016.org/

Calls for Papers and Articles

Below is a selection of current calls for Papers, Posters and Articles that may be of interest :-

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The Digital Medicine Journal is encouraging the submission of papers and articles. If you are interested, please visit their web site at http://www.digitmedicine.com/ or contact me at david@gaetss.com for more details

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The Thirteenth International Conference on Technology, Knowledge, and Society to be held at University of Toronto, Toronto, Canada from 26-28 May 2017 is seeking proposals for papers and presentations.

If you are interested, visit the web site at http://techandsoc.com/2017-conference/call-for-papers

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The 1st Call for papers for ESM'2016 - The 30th annual European Simulation and Modelling Conference SIANI - Universidad de Las Palmas Gran Canaria - Spain October 26-28, 2016 has been released.

For details of this CFP go to http://www.eurosis.org/cms/?q=taxonomy/term/383

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Recent Articles, Presentations and Papers

A comprehensive list of archived articles, presentations and videos can be accessed at my website – http://www.davidwortley.com/conferences.html
The most recent updates are shown below :-

Date	Article/Presentation Title	Comments
August 2016	Digital Medicine Journal Digital Medicine and the Aging Society Editorial View the article here	This editorial focuses on the health challenges posed by the combination of technology and the Aging Society
August 2016	Revolutionary Learning 2016 Conference What and How do we Teach Generation Z View the presentation here View the conference images here	The Revolutionary Learning Conference is reviewed in several sections of this newsletter.
July 2016	Thaisim 2016 Conference What shall we teach the Children? View the presentation here View conference images here	Thaisim 2016 focused on highly interactive sessions. Click here for a review of the conference.
June 2016	International Society for Digital Medicine Digital Health and Gamification View the Presentation here View conference images here	The Medicon 2016 Conference provided an opportunity to meet academics and practitioners involved in a broad range of biomedical technologies and applications

Upcoming Events Listing

Below is a list of forthcoming conferences – also accessible at http://www.davidwortley.com/events.html

Date	Event Name / Description	Location	Web URL
Sep 7-8	Health & Care Innovation Expo 2016 Conference	Manchester, UK	https://www.england.nhs.uk/expo/
Sept 7-9	VS Games 2016	Barcelona, Spain	http://vsgames2016.com/
Sep 13-15	Eurosis GameOn'2016	Lisbon, Portugal	http://www.eurosis.org/cms/?q=taxonomy/term/381
Sep 23-24	Singapore Health and BioMedical Congress	Singapore	http://shbc.com.sg/
Sep 28-29	TCT and Personalise 2016 Conference	NEC, Birmingham, UK	http://www.tctshow.com/Content/Welcome/
Oct 19-20	World of Learning Conference	NEC, Birmingham, UK	https://www.learnevents.com/world-of-learning-conference-programme-2016.php
Oct 26-27	World Gamification Congress	Madrid, Spain	http://www.gwc-conference.com/
Oct 31 - Nov 1	Games for Health Europe	Netherlands	http://www.gamesforhealtheurope.org/2016-overview/
Nov 2-3	Innovate 2016	Manchester, UK	https://www.events.ukti.gov.uk/innovate-uk-2016/
Nov 8-11	Games for Health USA	Washington, USA	https://gamesforhealth.org/
Nov 21-23	World of Health IT Congress	Barcelona, Spain	http://www.worldofhealthit.org/ehome/index.php?eventid=141909&

Nov 28 – Dec 1st	SEANES 2016 Ergonomics and Human Factors	Bandung, Indonesia	https://seanes2016.org/
Nov 30 – Dec 3rd	SEGAMED 2016	Nice, France	http://segamed.eu/WordPress/
Mar 8-10	ABSEL 2016 - Association for Business Simulation and Experiential Learning (ABSEL)	Myrtle Beach, USA	https://absel.org/
May 26-28 2017	Technology, Knowledge and Society 2017	Toronto, Canada	http://techandsoc.com/2017-conference

If you would like any presentations, videos or documents circulated to my network, I am happy to provide this service free of charge for any material relevant to readers of this newsletter. If you are interested, contact me at david@davidwortley.com.

Best Wishes for a Better Future for all Mankind

David Wortley FRSA

Founder and CEO

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