EVIVA

Evaluating the Education of Interpreters and their Clients through Virtual Learning Activities

Report to accompany Deliverable 4.2
Seminar with VLE Developers

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EVIVA PROJECT

Seminar with VLE Developers
Event Report (Deliverable 4.2)
Bangor University
School of Computer Science

Held on Thursday 15th May 2014

Report by Dr Robert Gittins, Bangor University

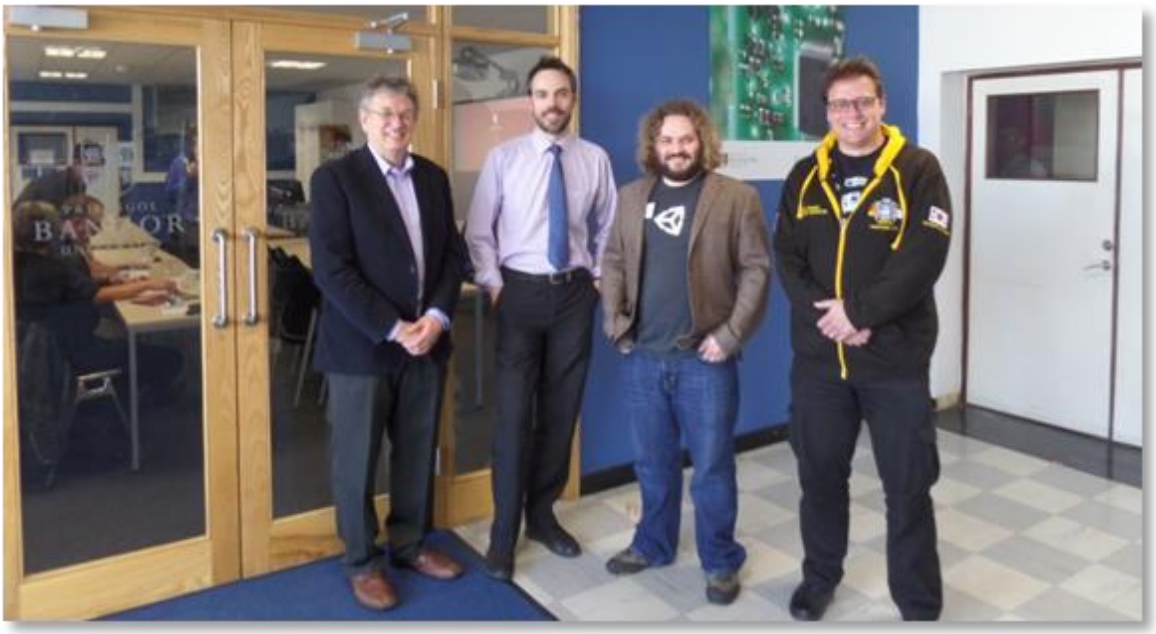

Fig. [1] Animation & Games Workshop
Bangor University, School of Computer Science 15/05/14
Robert Gittins & Jonathan Roberts EVIVA, Joe Robbins UNITY, and Ian Hughes BCS

1. INTRODUCTION

The European EVIVA Project and NCT WALES, an A4B programme developed at the School of Computer Science Bangor, hosted the EVIVA development workshop on Thursday 15th May 2014.

Forty guests were treated to lively presentations and debate on the development of the EVIVA Project and the state of the art Animation and Games technologies from guest speakers – Ian Hughes (Metaverse Evangelist, and Chair of the British Computer Society Animation and Games Specialist Group) , and Joe Robins (UNITY Software Platform Evangelist).

2. KEYNOTE PRESENTATION

The day commenced with a **keynote presentation** from **Ian Hughes** CEO of Feeding Edge Ltd and Chair of the BCS Animation & Games Development Specialist Group. Ian presented 'Why SL development is not UNITY3D' development**.** Ian explained the difference between the developments in a hosted virtual world like Second Life and developing or from scratch with Unity3d.

Ian Hughes
(epredator)
Feeding Edge Ltd
BCS Chair: Animation & Games Specialists Group

Ian Hughes (a.k.a 'epredator' online) is a Metaverse Evangelist. He set about leading a band of like-minded individuals and subsequently many thousands of colleagues in IBM into virtual worlds like Second Life in 2006, and beyond. This sparked the massive growth in interest from enterprise and press alike. In 2008 he received the first industry award for Innovation in Virtual Worlds in the Enterprise. As a digital native his epredator persona spans many Web 2.0 places, blogs, PSN, WoW, Xbox Live, Twitter, Flickr, LinkedIn etc.
As a former IBM Consulting IT Specialist, Ian has worked on leading edge emerging technologies for the past 20 years, and now as an independent consultant and director of Feeding Edge Ltd. Ian writes and presents a thread on emerging technology on the ITV programme Cool Stuff Collective by Archie Productions, covering 3d printers, haptics, scanning, virtual world, first shown weekly Monday 13th September 2010 CITV (UK), with series 2 airing January 2011 on ITV1 8:10am. Series 3 started on 15th October 2011 - a total of 39 episodes.
Chairman of the British Computer Society Animation and Games Specialist Group. Promoting the games industry and associated technology within the BCs but also reaching out to the games industry to help provide professional recognition to the development community.

3. EVIVA PRESENTATION

The second presentation was given by Panagiotis Ritsos from the EVIVA Development team at Bangor University School of Computer Science. Panos introduced the IVY 3D virtual environments, explained how the environment had been enhanced in the EVIVA project and then discussed future challenges and prospects.

Panagiotis Ritsos
EVIVA Development Team Member
Bangor University – School of Computer Science

Dr Panagiotis Ritsos has an MEng in Electronic Systems Engineering and a PhD on Wearable Computing for Augmented Reality, both from the University of Essex. His research interests include mixed and virtual reality, multimodal visualization, wearable computing, learning analytics and user experience. He is a Research Officer in the School of Computer Science, Bangor University working on the EU-funded project EVIVA, evaluating the use of virtual learning environments in interpreter-mediated communications. He is also working on haptic data visualization, information visualization for oceanography and learning analytics. He is an active member of the AR Standards community, promoting standardisation for open and interoperable augmented reality.

Panos provided a comprehensive description of the challenges of developing the 3D Environment interactive tools (Heads Up Displays and respective resource interfaces) now being evaluated in the EVIVA project and the more specifically the use of 3D virtual environments with interpreting students, tutors and clients of interpreters in the current Second Life environment before discussing initial investigations into a future Unity3D platform.

The Bangor EVIVA team investigated emerging technology and particularly the development of augmented and immersive tools where Panos proved to be crucial in trailing and appraising new technology.

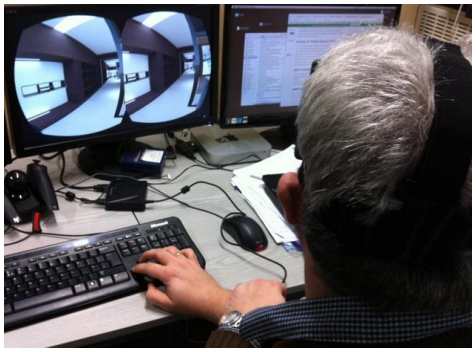

Fig. [2] Panagiotis Ritsos (Right) demonstrates Oculus Rift walking through the EVIVA - IVY virtual 3D Evaluation Centre.

4. OTHER KEY PRESENTERS

Llŷr **ap Cenydd**
Bangor University
School of Computer Science

Dr Llŷr ap Cenydd is a Lecturer at the Computer Science department, Bangor University, UK. He holds a Ph.D in Computer Graphics and Animation, and his research interests include real-time graphics, VR, procedural animation, artificial life and medical visualization.

Llyr is working on R&D projects for both Oculus and Samsung.

Llŷr **ap Cenydd** from the School of Computer Science at Bangor **University**, shared his research on *procedural animation* and provided demonstrations of cutting edge research into realist 3D interactive visualisation. Llŷr showed his original procedural 'spider' and then demonstrated the Oculus Rift to show a deep sea experience with procedural generated animations of Dolphins. Llyr provided interesting insights into how 'procedural animation' will be more important in future 3D virtual environment development. He explained that very often animations have been "recorded" either by someone or something being filmed in a special way that takes their movements and makes them available digitally as a whole. Procedural generation uses algorithms that provide a response - to sense and respond to the environment and be adaptive – seamlessly in the construction of the object being animated. In procedural animation 'things' are not recorded but happen in real time because they have to. An object can be given a push or an impulse to do something, the rest is 'discovered' by the collection of bits that make up the animated object.

Joe Robins
UNITY Evangelist

Joe Robins from **Unity3D**, a community evangelist and long term member of the Unity team introduced and demonstrated before lunch, the latest tools in Unity 5. Later in the afternoon Joe provided specific and targeted demonstrations in response to feedback from the morning session.

Joe has been at Unity since the early days of the Company. Having various roles within his career at Unity, he now spends his time traveling internationally to 'spread the word' of Unity. Joe joined Unity in Denmark, His education focused on 3D art and Game Design at the University of Teesside. Sometime after that, Joe landed a job using Unity where he became an active member of the community and worked on various projects, from jet ski games with purple water to a building familiarisation tool for Greater Manchester Police HQ.

Fig. [3] Joe Robbins of UNITY presents at the EVIVA Workshop Bangor

Joe said he divides his time between establishing and implementing a strategic plan of action for the Unity User Groups globally and presenting Unity at events, conferences and expositions, where projects such as EVIVA are emerging to make use of the UNITY platform.

David Burden
CEO Daden Technology Ltd Birmingham

David Burden is CEO of **Daden Technology Ltd** Birmingham and is a Chartered Engineer and European Engineer who started his career in army communications managing a range of mobile and wireless systems in a variety of challenging situations, including second-in-command of an airmobile Signal Squadron. After being "demobbed" in 1990, David joined Ascom, the Swiss telecoms company, and then Aseriti, the £70m turnover IT arm of Severn Trent plc. Formerly David has been involved in immersive worlds since the mid 90's, having created early spaces using VRML and played in several early 3D communal worlds. David also has a keen interest in artificial intelligence, speaking recently at TEDxBrum on the subject of AI and Immortality. David set up Daden Limited in 2004 to help business and organisations explore and exploit the social and commercial potential of using chatbots and immersive environments.

David Burden: *'Virtual Reality (VR) the Second Coming of Virtual Worlds'* – David gave an interesting presentation exploring the sudden rise of VR and where it fits in the social adoption and tech adoption curves. A huge subject, and of course VR is getting extensive coverage in academic and commercial circles, much the same as virtual worlds. They are, David explained, the same but with different affordances of how to interact - they co-exist.

5. PECHA KUCHA SESSIONS

After lunch **Pecha Kucha** presentations (http://www.pechakucha.org), organised to limit presentations to 20 slides each of 20 seconds, were given in a purposely design fast-fire format. The session covered a lot of ground very quickly highlighting new technology, and in many cases similar technology adopted in the development of the EVIVA project and that later prompted lively discussions and raised lots of questions.

Pecha Kucha Presenters:

- **Andy Fawkes of Bohemia Interactive:** talked about the Virtual Battlespace – From Computer Game to Simulation. His company has developed the ARMA engine (http://en.wikipedia.org/wiki/ARMA_2) that was originally used for Operation Flashpoint, and now has a spin off with the cult classic Day Z. Andy talked about the sort of simulations in the military space that are already heavily used and how that is only going to increase. An interesting question was recognised, about the behavioural impact of increasingly real simulations. His opinion was that no matter what experience currently - we still do know the difference, but that the real effects of war are drastically different than even the best simulations - however good those simulations are now. Training is increasing concerned with effective procedures – a mechanism to get users through the reality/simulation experience as effectively as possible. Andy expressed concern that drone pilots, who are in effect doing real things via a simulation are too detached from their potential real-world impact; head to the office, fly a drone, go home to dinner.
- **Gaz Thomas of Gaz Thomas Media: '**BAFTA Cymru' award winner 2014, provided a lively presentation on **'**How to entrain 100 million people from your home office'. Gaz is a budding young animation and games developer. He had made lots of quick fire games, not trained as a software programmer; he knew vaguely that he wanted to do something on the web. Gaz set up a website and started building games as ways to bring people to his website. This eventually led to some very popular games, however he soon found he was vulnerable to having his games 'cloned'. More recently Gaz has adopted the strategy of releasing mobile and web versions at the same time. Gaz related his experiences for the benefit of the mixed audience of developers and managers, and the EVIVA development team.
- **Ralph Ferneyhough of 'Quantum Soup Studios':** debated 'The New AAA of Development – Agile, Artistic, Autonomous'. This was a talk about how being small and willing to try newer things is much more possible and needed that the constant churn in the games industry of the sequel to the sequel of the sequel. Because of the sums of money involved and the relative sizes of projects, results often lead to stagnation. It was useful to hear from someone who has been in the industry for a while and branched out from corporate life.
- **Chris Payne of 'Games Developers North Wales':** gave the final talk on 'Hollywood vs VR' - The Challenge Ahead. Chris works in the games industry and had had for several years been a virtual camera expert. Chris showed a prototype 360 degree camera that s capable of shooting in all directions. Chris explained that it was not possible to build one that was stereoscopic. The type of parallax and offsets that are needed can only realistically be done through post filming. Particularly as it applies to EVIVA future development tools, a lot has to be done to make this giant 360 camera capable of interaction with the Oculus Rift headset.

6. DISCUSSION PANEL

Panel sessions at the end of the morning and afternoon were well received and generated lots of questions and interaction with the keynote speakers and the EVIVA team. There was considerable discussion on education – children and students in technology. Particularly, and given the pace of technology, raising the question – is it more beneficial to let students get on in their own time, at their own pace – without waiting for their teachers to become experienced?
The event concluded with networking engagement over coffee and biscuits. Contact details were exchanged and opportunities for further conversations and meetings brokered.

7. BENEFITS OF THE TECHNICAL EVENT

The EVIVA workshop addressed the on-going development of the IVY 3D virtual environment (VE). The IVY 3D virtual environment uses the features of Second Life VE to provide an environment to simulate professional practice in interpreting (i.e. spoken-language translation). The IVY environment allows trainee interpreters to practise their interpreting skills, whilst their potential clients (e.g. students from subjects such as law and medicine) can observe and explore practice and learn how to work with an interpreter. Both user groups can also interact live in the virtual space. The environment is essentially a set of buildings containing a suite of customised rooms/locations in which interpreter-mediated communication would typically take place, e.g. meeting, conference and presentation rooms, a court room, a doctor's surgery, a tourist office etc. The virtual locations create credible interpreting scenarios, i.e. the idea is to facilitate situated-ness (sense of presence) as an important prerequisite for learning, simulation and immersion.

The environment has different working modes which are linked to the different user activities, each with a different set of challenges. For example, the ***interpreting practice mode*** is populated with speeches and dialogues in different languages, which are 'presented' by robot-avatars acting as role players through a heads-Up-Display (HUD). In other words, the audio files are linked to the robots to create the impression that they are speaking. The student, represented by his/her own avatar, joins them to interpret. The student uses the HUD to choose the working mode, the interpreting scenario and the appropriate content (i.e. speeches in the appropriate language for her/him), i.e. to select from menus and to navigate/teleport to the scenario. The student also has audio player to play and pause the speeches once s/he has arrived in the scenario. In the ***live interaction mode*** the trainee interpreters and clients may come together to carry out role play simulations. The live mode uses the same virtual locations (meeting room etc.) but there are no robots to speak scripted roles. Rather, the students use the voice chat to interact live.

The workshop helped engage with experts from industry and academia to help address the challenges, and particularly the limitations the technical team at Bangor are currently dealing with which include gestures, facial expressions, lip movement, and i.e. features where even a small improvement will provide a better or more acceptable service to users. Problems we are addressing include the need for more richly rendered avatars capturing head movements, eye movements, and body language which might offer much more compelling person-to-person interaction possibilities that the badly-lit, awkwardly-framed facsimiles of ourselves we often share through video-conferencing.

To summarise the workshop show-cased our technical achievements and helped us to engage with academics and commercial practioners to explore opportunities, not only to resolve challenges but to accelerate development - to move from classic 3D prototyping environments to more flexible (unconstrained) and richer development environments of the future.