Interactive Experiences for Entertainment

Entertainment and the creative industries are one of Britain's greatest exports. Brendan Walker tells us about his work with Horizon on developing interactive experiences for entertainment.

Brendan, tell us about your work with Horizon.

My interest in developing interactive installations to elicit increasingly thrilling experiences has earned me the title of the world's-only 'Thrill Engineer'. Thrill Laboratory evolved from my work backdating to 2003.

Historically Thrill Laboratory has worked on a number of research projects involving the development of digital technology in collaboration with the University of Nottingham (Horizon and the Mixed Reality Lab (MRL)), and external partners including designers, artists, engineers, technologists, and cultural historians - indeed anyone who has an interest in the manufacture of 'thrill' and how it appears in our cultural world.

This blend has continued through the various projects I've worked on over the last 10 years, ranging from the heavily commercial, for example Nissan advertising, through investigating the relationship between wellbeing and happiness through entertainment and play. I was involved in a project 'Vertigo in the City' which helped to advance understanding of vertigo and motion sickness, addressing what we are able to comfortably experience. Our creative practice-led approach to research has seen us reverse engineer and study physical, physiological and psychological experience and use this knowledge as a basis to create new virtual worlds to test our understanding - something that nobody following the traditional academic research path had ever done. Our creative trans-disciplinary approach allows us to move laterally, and explore new areas. We often generate more questions than the ones we answer, which isn't a bad thing…

I also run my own design practice Aerial, consulting on rides and entertainment TV shows, which often involves physiological monitoring of participants and design of dynamic data graphics for factual entertainment. Much of the work of Thrill Laboratory (which is a product of Aerial) has been monitoring people's physiology to help them understand their emotional responses to different types of thrill-related entertainment. Another facet has been to create new experiences – I created Neurosis, the world's first brain controlled thrill ride, commissioned by Nesta and funded by the Arts Council England. Neurosis was the pinnacle of body monitoring for me – monitoring brain activity, using this neurological data to create a new abstract virtual world in in real time, creating neuro-generative music, and a light show for a spectating audience, and a motion platform allowing riders to fly through their own brain data. This was my first experience of using virtual reality. I was using VR in a very simple way but I realised that there was something very interesting in the relationship between what the rider was seeing, the motion they were sensing, and their relationship between the real and virtual worlds.

Tell us about the VR Playground

Early versions of VR Playground concentrated on the relationship between the rider and their physical experience, using a playground swing and creating a very simple room for the virtual world, replicating the gallery space they were in. Experimenting with this technology allowed me to explore the relationship between the visual world and the real experienced world, and to start amplifying aspects of the virtual world, for example how far people felt they were swinging in the room. Dropping away the virtual floor was also very successful to the extent that we were able to make people scream! Exploring these visual, psychological techniques - similar to those used on the

Victorian ride called ‘The Haunted Swing’ - made me realise I was able to replicate what they had managed to do mechanically 100 years ago but using virtual reality. Surely there must be more we could do…... and hence the development of the VR Playground

What ideas are you exploring?

Interesting areas we are exploring are around motions that currently exist in the real world and looking at ways to add a VR narrative over the top. By doing this we are immersing people in a completely ‘other’ world, appropriating existing experiences that aren’t intended or understood as being thrill rides to start with – for example the playground swing, but also things likes lifts and escalators.

The most unique thing is that we are deconstructing the physical experience, and this draws on my original training and career as a military aeronautical engineer at British Aerospace. Rather than studying the G-Forces exerted on a pilot in a fighter jet, in VR Playground we’re studying the forces exerted on the body and the physical actions of the body during the action of swinging. Even though it may appear to be just a simple pendulum, these forces can be just complex as with a pilot albeit a little subtler. We’ve started to be able to isolate different forces that are felt by the body and use

visual and audio techniques to amplify these in the virtual world. For instance, while you may feel like you're on a pendulum swing in the real world, you may, in our virtual world, believe you're bouncing up and down on a spring. The narratives you can create, and the rides themselves, start to become quite fantastical.

Where are you at with the project?

We are now taking the VR Playground on tour. This has been funded by Horizon and MRL, the Arts Council, England, Norwich & Norfolk Festival, Greenwich and Dockland Festival, and (thanks to winning a competition) supported by Without Walls - a consortium of most of the major outdoor arts festivals in the UK, which also provides exposure to their touring network. The first year sees the VR Playground attending four UK venues, and in the second year we will be promoted to international festivals looking to source work for 2018.

Visitors coming to experience the VR Playground will firstly see a series of sculptural cubes with swinging riders inside. Riders will have chosen to ride one of five different themed worlds to explore. They'll hopefully be screaming and laughing disproportionately as they swing in their cubes, wearing VR headsets and earphones. What are they experiencing? Well, you'll just have to join the queue to find out.

Once the VR Playground goes live, we hope it will attract a lot of interest, resulting in bookings to present the work at different venues. The University of Nottingham are providing the underlying technology, and are developing the support package required to train staff at each venue. This model of technology hire and production support is generating income for the University. It is exciting new territory for me as this is a financially sustainable model, which means our work can now reach a much larger audience, over a greater period of time, across wider geographic locations, hopefully internationally.