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Keynote

Self-Transformation Through Virtual Embodiment

Mel Slater
Event Lab, University of Barcelona, Spain

Abstract
In virtual reality you can look around wherever you like, and still of course see virtual reality. What happens when you look down towards yourself or in a virtual mirror? If it has been so programmed you will see a life-sized virtual body replacing your own. You are likely then to have the perceptual illusion that the virtual body is yours, even though you know for sure that it is not. In this talk I will show how this perceptual illusion can be used for various types of self-transformation. In particular I will concentrate on 'becoming someone else' and how this can be useful both for self-change and support resistance to the peer pressure.

Short Biography
Mel Slater DSc, is currently Distinguished Investigator at the University of Barcelona where he co-leads the Experimental Virtual Environments for Neuroscience and Technology (EVENT) Lab (www.event-lab.org). He was Professor of Virtual Environments at UCL in the Department of Computer Science. He has been involved in research in virtual reality since the early 1990s, and has been first supervisor of 38 PhDs in graphics and virtual reality since 1989. In 2005 he was awarded the Virtual Reality Career Award by IEEE Virtual Reality 'In Recognition of Seminal Achievements in Engineering Virtual Reality.' He has been involved in and led several international projects in this field. He held a European Research Council (ERC) Advanced Grant TRAVERSE and two subsequent ERC Proof of Concept grants, and currently holds a new ERC Advanced grant MoTIVE. His publications can be seen on publicationslist.org/melslater. He is co-founder and CSO of the company Virtual Bodyworks S.L. www.virtualbodyworks.com.

Keynote

The Increasing Importance of Virtual Worlds in Daily Life

Nadia Magnenat Thalmann
MIRALab, University of Geneva & Nanyang Technological University, Singapore

Abstract
The creation of virtual worlds has required during decades a lot of efforts and know how. First of all, the digitization or parametrization process has taken quite some years to allow the creation of 3D worlds. Then the animation of these 3D worlds is still an open research topics as well as their natural interaction. As ultimate goal, users aim to experience virtual fictive or realistic 3D worlds through 3D glasses and have the feeling of presence during the interaction.

Today, these virtual worlds are more and more used to create new reality that can be produced through 3D fabrication. With the use of real 3D models, their simulation, the interaction, we can test quantities of new worlds, games and situation. The addition to that is that we can immediately fabricate these virtual worlds and use the simulation software to manage their behaviour.

In this presentation, we will show how we are able to capture all kind of information, model it in 3D, simulate it, interact with it and finally develop real 3D models by fabricating them automatically for real worlds applications. We will show case studies with the fabrication of social robots.

Short Biography
Professor Nadia Magnenat Thalmann has pioneered research into virtual humans over the last 30 years. She obtained several Bachelor's and Master's degrees in various disciplines (Psychology, Biology and Biochemistry) and a PhD in Quantum Physics from the University of Geneva in 1977. From 1977 to 1989, she was a Professor at the University of Montreal in Canada and then Professor at the University of Geneva.Nadia Magnenat Thalmann is currently Professor and Director of the Institute for Media Innovation, Nanyang Technological University, Singapore. She is also the Founder and Director of the MIRALab, an interdisciplinary lab in Human Computer Animation, University of Geneva, Switzerland. Her global research area is the modelling and simulation of Virtual Humans. She is also working on Social Robots, mixed realities and medical simulation. All over her career, she has received many artistic and scientific Awards, among them the 2012 Humboldt Research Award, and two Doctor honoris Causa (from University of Hanover in Germany and from the University of Ottawa in Canada). She is Editor-in-Chief of the Journal The Visual Computer (Springer-Verlag) and is a Member of the Swiss Academy of Engineering Sciences.

Keynote

Using VR and AR Technology to Drive Engagement in Military History Museums

Tracy Spaight
Wargaming.net

Abstract
Over the past five years, video game developer and publisher Wargaming has developed several virtual reality and augmented reality experiences for military history museums around the world. We have used AR technology to bring museum exhibits out into public spaces (with the Dornier 17 project), made inaccessible areas of museums (such as the engine room of a destroyer) accessible through 360 VR, and allowed audiences to engage with historical vehicles in ways that simply aren't possible with real vehicles (like firing the main armament). Through our museum collaborations we have helped to solve some of the outstanding challenges faced by museums today, including how to reach 'digital natives', who grew up in a different media environment than baby boomers. This talk explores the challenges of integrating VR and AR technology into a museum setting, the kinds of engagement these technologies make possible, and the lessons we've learned along the way.

Short Biography
Tracy Spaight is the Director of Special Projects at Wargaming.net, a leading video game developer and publisher. Since 2012, he has developed interactive exhibits, 360 VR films, Augmented Reality Applications. Tracy's job is 'to do cool stuff.' Some of his recent projects include developing an AR experience for the 100 th anniversary of the Battle of Jutland for the National Museum of the Royal Navy, the SturmTiger AR project at the Bovington Tank Museum, and a commemorative flight of WW2 aircraft along the Alaska to Siberia air route - an event attended by the U.S. and Russian Ambassadors.

Tracy has worked in the video game industry as a publisher, game developer, and media project specialist since 2005. In that year, Tracy joined Atlanta based Rapid Reality Studios, where he served as VP of Research & Development and later as Chief Operating Officer. From 2008 through 2011, he was the Executive Director of Publishing at Gamersfirst, where he evaluated online games for licensing or acquisition.

Tracy has twice been a speaker at the State of Play conference at New York Law School, the BIART Conference in Russia, Gamelab in Spain, Digital Taipei, the Integrated Media Conference in Seattle, the Yorkshire Game Festival, and VR Connects in London in 2016 and 2017. He was the keynote speaker at the IEEE conference in Cyprus in 2015. Tracy is the author of 'Who Killed Miss Norway,' which first appeared in Salon, and the co-author of Alter Ego: Avatars & Their Creators.

Tracy holds a Bachelor of Arts degree in history from Santa Clara University and a Master of Arts degree in Science & Technology Studies at Cornell University. He was a visiting scholar in the History of Science at Cambridge University in 1998-1999. He has held fellowships from the Deutsche Akademische Austauschdienst, the National Science Foundation, and the Russell Sage Foundation, as well as media grants from the Texas Council for the Humanities and the Texas Commission for the Arts. Tracy is the co-founder and organizer of Cyberia, the 'coolest place on the playa' at Burning Man.