Graduate research yields better video games

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Research by two graduates from the University of Lincoln, UK, will be discussed at the world's leading conference on entertainment computing.

Sean Oxspring and Nick Bull, who both graduated with a BSc in Games Computing in September 2013, have had academic papers accepted to ACE 2013 – the 10th international conference on Advances in Computer Entertainment Technology.

Oxspring, who runs his own games studio, Top Notch Studios Ltd, looked at improving realism and believability of characters in large game crowds, such as hordes of zombies.

"When simulating realistic crowds in virtual environments, it is often hard to make characters look and behave completely differently to each other," he says. "My project aimed to increase visual diversity by exploring techniques in which crowd-generation algorithms can be adjusted to better support greater variety and create a more believable and engaging play environment. This involved creating a 'clone spotting' activity and producing an adjustable solution, such as altering the character's height or movement. It's about making the game more enjoyable."

Bull's research focused on developing smartphone games that hinge on interactions in the real world.

Bull, who works as an assistant web developer at Blue Box Software, said: "I concentrated on mixed-reality games, which means the merging

of real and virtual worlds to produce new environments where physical and digital objects interact in real time. The idea is that actions carried out in reality will have an impact on the game. I looked at whether I could create a game in which the rules are not compatible with the rules of the real environment."

His game, Shhh!, was developed for Android phones, and challenged players to see how much noise they could make in libraries without being reprimanded. Results suggested that the game provoked a heightened awareness of social rules.

Conor Linehan, lecturer in the School of Computer Science and member of the Lincoln Games Research Group, said, "We are seeing more and more of a trend in these kinds of mixed-reality games, so one of our areas of research is to explore the possibility of being able to actually interact with the real environment instead of simply staring at a screen. It's a very different type of game playing."

The University of Lincoln has a strong background in games-related research and teaching across a range of academic schools and research centres. The Games Research Group brings together various strands such as Artificial Intelligence, social aspects of game playing and player data analysis in order to provide a support network, and to help share the knowledge and experience of staff and students.

Provided by University of Lincoln