

**M&S SEMINAR SERIES**  
**Overview of Virtual World Research at the  
Simulation and Training Technology Center (STTC)**  
**Presented by Douglas Maxwell, MSME**



**Douglas Maxwell, MSME**

**Tuesday, March 25, 2014**

**2:00pm – 3:00pm**

**Partnership III Building, Room 233**

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## **PRESENTATION OVERVIEW**

Virtual Worlds are a distinct subset of virtual environments and our current research focus with the technology is to find a way to properly insert simulation based training (SBT) technology into the Infantry Soldier training cycle. A soldier will be able to experience a realistic mission in a virtual environment that exercises their classroom training and get a pass/fail grade from a training officer (TO) based on their performance instead of a paper exam. The theory is we can create virtual environments with the richness and fidelity needed to properly exercise critical thinking skills and allow soldiers to exercise their classroom training.

We are performing research in two areas, one technological and one human performance oriented. The technology thrust involves partners such as Intel Corporation and the human performance thrust involves the University of Central Florida Institute for Simulation and Training. The human performance element seeks to define quantitatively the training effectiveness of simulation based systems vice traditional classroom instruction. The technology thrust seeks to solve basic game engine limitations such as how to scale to hundreds or thousands of human participants in the same simulation at the same time. When the two research thrusts converge in the future, we will have a usable training platform that can accommodate a wide range of mission training objectives.

We will also discuss the role of a US Army Civilian Science and Technology Manager, what a Cooperation Agreement is, and how the STTC works with UCF/IST to accomplish research and development goals. This information may be of interest to new professionals interested in learning how to look for research support.

## **SPEAKER BIOGRAPHY**

Douglas Maxwell conducts research into the use of virtual environments for strategic applications as a Science and Technology Manager for the U.S. Army Research Lab, Simulation and Training Technology Center in Orlando, Florida. He is the founder of the Military Users of Virtual Worlds working group and serves as a virtual world technology advisor to the Office Deputy Under Secretary of Defense Readiness.

He is the director of the Military Open Simulator Enterprise Strategy (MOSES), which is exploring extremely flexible virtual environments such as real time terrain warping in response to explosions, context switching artificial intelligence behavior models, and computational steering in response to trainee input.

He was awarded a patent related to automated terrain generation and multiple engineering and innovation excellence awards from the U.S. Navy. He holds a bachelor's degree in Mechanical Engineering and a master of science in Mechanical Engineering with a significant course background in software engineering. Mr. Maxwell is currently pursuing a Ph. D. in Modeling and Simulation at the University of Central Florida.

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