

KEYNOTE ADDRESS

DOES THE FUTURE OF MODELING AND SIMULATION HAVE A GAME FACE?

Michael Zyda

The MOVES Institute
Naval Postgraduate School
700 Dyer Road, Building 245, Room 271
Monterey, CA 93943, U.S.A.



ABSTRACT

The MOVES Institute's mission is research, application and education in the grand challenges of modeling, virtual environments and simulation (MOVES). The institute's focus is on 3D visual simulation, networked virtual environments, computer-generated autonomy, human performance engineering, immersive technologies, defense/entertainment collaboration, and combat modeling and analysis. In networked virtual environments, we are architecting the technology that allows us to build large-scale, dynamically extensible virtual environments, virtual environments that are semantically interoperable and always on. In computer-generated autonomy, we are building a scenario engine for determining the space of potential outcomes from a virtual description of an infrastructure, a set of policies, characters and cultural behaviors. In immersive technologies, we have designed a source-less tracker that is micromachinable, and have performed considerable work on the deployment of sound to

enhance the feeling of immersion. In defense/entertainment collaboration, we have constructed a PC game, America's Army, that provides the experience of a potential career in the Army. America's Army has become the fastest growing online PC game in history, a game that has been the recipient of several "best game" or "runner up for best game" of the year awards. Since the release of America's Army, the number one question being asked of our institute is will the next generation of training and combat modeling systems have a game-like face? In this talk, we answer that question and discuss the potential that game technology has for the future of modeling and simulation.

AUTHOR BIOGRAPHY

MICHAEL ZYDA is the Director of The MOVES Institute, LOCATED at the Naval Postgraduate School, Monterey, California. He is also a Professor in the Department of Computer Science at NPS. Professor Zyda's research interests include computer graphics, large-scale, networked 3D virtual environments, agent-based simulation, modeling human and organizational behavior, interactive computer-generated story, and modeling and simulation. He is a pioneer in the fields of computer graphics, networked virtual environments, modeling and simulation, and entertainment/defense collaboration. He is the principal investigator of the America's Army PC game funded by the Assistant Secretary of the Army for Manpower and Reserve Affairs.