

The Potential of End-User Programmable Worlds: Present and Future

Organizer & Moderator
Jessica Hodgins
Carnegie Mellon University
jkh@cs.cmu.edu

Organizer & Panelist
Amy Bruckman
Georgia Institute of Technology
asb@cc.gatech.edu

Panelist
Paul Hemp
Harvard Business Review
phemp@hbsp.harvard.edu

Panelist
Cory Ondrejka
Linden Labs
cory@secondlife.com

Panelist
Vernor Vinge
San Diego State University
vinge@sciences.sdsu.edu

In Vernor Vinge's 1981 science fiction classic *True Names*, a global multi-user virtual world underlies the functioning of government and business. Some control this world in a literal-minded filing cabinet sort of fashion, and others with more colorful metaphors. Either style of interaction is a form of end-user programming. The power of cyberspace lies in the creativity and programming talent of its inhabitants.

Has that day arrived? Some view end-user programmable virtual worlds like Linden Labs' Second Life as a meaningful step in that direction. In fact, end-user programmable worlds had their start in text-based virtual worlds, MUDs (1979) and MOOs (1990). Are these systems just a different style of multi-player game, or is something happening with broader implications? Will commerce embrace these worlds? What about education? Is the future "cyberspace" a world built in computer graphics, or is it more likely a proliferation of networked devices in real space? In this panel discussion, we consider the present and the future of end-user programmable graphical worlds.

Bios

Amy Bruckman is an Associate Professor in the College of Computing at the Georgia Institute of Technology. She and her students in the Electronic Learning Communities (ELC) research group do research on online communities and education. She is the creator of MOOSE Crossing, a text-based virtual world in which kids ages 8-13 practice their creative writing and learn object-oriented programming. MOOSE includes a new programming language designed to make it easier for kids to learn to program, and was open to kids for eleven years from 1995-2006. Current projects include Science Online (a wiki-based public science resource in which students learn science content and method by writing for a real audience) and ThinkGame (where students studying games both reflect on their own experiences and have an opportunity to contribute to the new field of academic game studies). Amy is interested in ethical issues in Internet research, and was a member of working groups on this topic organized by AAAS, AoIR, and APA. Amy received her PhD from the MIT Media Lab's Epistemology and Learning group

in 1997, her MSVS from the Media Lab's Interactive Cinema Group in 1991, and her BA in physics from Harvard University in 1987. In 1999, she was named one of the 100 top young innovators in science and technology in the world (TR100) by Technology Review magazine. In 2002, she was awarded the Jan Hawkins Award for Early Career Contributions to Humanistic Research and Scholarship in Learning Technologies. More information about her work is available at <http://www.cc.gatech.edu/~asb/>

Paul Hemp is a senior editor at Harvard Business Review, where he edits and writes articles on a variety of topics. He is the author of "My Week as a Room Service Waiter at the Ritz" (HBR June 2002), "Presenteeism: At Work – But Out of It" (HBR October 2004), "Avatar-Based Marketing" (HBR June 2006), and "Are You Ready for E-tailing 2.0?" (HBR October 2006). He has appeared as a commentator on CNN, CNBC, and the BBC and as a panelist at such conferences as the Yale CEO Leadership Summit and the SXSW Interactive Festival. Previously, Mr. Hemp was the director of publications at Mercer Management Consulting in Boston, a writer and editor at The Boston Globe, and a reporter at The Wall Street Journal in London and Brussels. He is a graduate of Whitman College and Harvard Law School.

Jessica Hodgins is a professor in the Robotics Institute and Computer Science Department at Carnegie Mellon University. Prior to moving to CMU, she was an Associate Professor and Assistant Dean in the College of Computing at Georgia Institute of Technology. She received her Ph.D. in Computer Science from Carnegie Mellon University in 1989. She has received a NSF Young Investigator Award, a Packard Fellowship, and a Sloan Fellowship. She was editor-in-chief of ACM Transactions on Graphics from 2000-2002 and Papers Chair for ACM SIGGRAPH 2003. Her research focuses on human animation, humanoid robotics, human-robot interaction, and perception of human motion.

Cory Ondrejka is CTO of Linden Labs. Cory Ondrejka leads the team developing "Second Life," Linden Lab's award-winning, user-created digital world. His team has created the revolutionary technologies required to enable collaborative, atomistic creation, including distributed physical simulation, 3D streaming, completely customizable avatars and real-time, in-world editors.

He also spearheaded the decision to allow users to retain the IP rights to their creations and helped craft Linden's virtual real estate policy.

Prior to joining Linden Lab in November, 2000, Ondrejka served as Project Leader and Lead Programmer for Pacific Coast Power and Light. At PCP&L, he brought the "Road Rash" franchise to the Nintendo for the first time with "Road Rash 64" and built the core technology teams that completed multiple products for Nintendo and Sony consoles. Previous experience includes Lead Programmer for Acclaim Coin-Operated Entertainment's first internal coin-op title and work on Department of Defense electronic warfare software projects for Lockheed Sanders. While an officer in the United States Navy, he worked at the National Security Agency and graduated from the Navy Nuclear Power School. Ondrejka is a graduate of the United States Naval Academy, where he was a Presidential "Thousand Points of

Light" recipient and became the first person to earn Bachelors of Science degrees in two technical majors: Weapons and Systems Engineering and Computer Science.

Vernor Vinge is an award-winning science fiction author. From 1972 to 2000, Vinge taught Math and Computer Science at San Diego State University. He has won four Hugo awards for his science fiction, including two Hugos for best novel. His *True Names* (1981) was one of the earliest stories about cyberspace. His most recent novel, *Rainbows End* (2006), considers how virtuality and networked embedded systems can transform our real world.