

Simulation Security “What if a Simulation is Too Good?”

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Dr. John Hamilton, Jr.
*Professor of Computer Science & Engineering
Director of Center for Cyber Innovation
Mississippi State University*



Abstract:

The need for simulation software vulnerability assessment is being driven by three major trends: increased use of modeling and simulation for training and operational planning; increased emphasis on coalition warfare and interoperability and finally increased awareness of the potential security risks inherent in sharing operationally useful software. This presentation will describe in an unclassified manner the process developed by Dr. Hamilton and the Missile Defense Agency to evaluate potential vulnerabilities in shared simulation software.

About the Speaker:

John A. "Drew" Hamilton, Jr., Ph.D., is the director of Mississippi State University's Center for Cyber Innovation and a professor of Computer Science and Engineering. Previously he held a professorship in Computer Science and Software Engineering\ endowed by the Auburn Alumni Association with joint appointments in Management and Industrial and Systems Engineering. Dr. Hamilton was the founding director of Auburn's Cyber Research Center and founding director of Auburn's Information Assurance Center. Dr. Hamilton was responsible for Auburn University being designated as Alabama's first Information Assurance Center of Academic Excellence in Research Education and Cyber Operations by the National Security Agency. He is a Fellow and Past President of the Society for Modeling & Simulation, International (SCS), Chair of ACM's Special Interest Group on Simulation (SIGSIM) and previously served on the Board of Directors of the Colloquium for Information System Security Education.

During his active duty career in the United States Army, he commanded HQs & HQs Battery, 1st Bn. 5th Field Artillery, Battery A, 8th Bn., 8th Field Artillery, Service Battery, 1st Bn, 8th Field Artillery and Battery F (sep), 7th Field Artillery and qualified in nuclear / chemical targeting. Dr. Hamilton served as the first Director of the Joint Forces Program Office at SPAWAR working command & control interoperability and on the Electrical Engineering & Computer Science Faculty of the United States Military Academy as well as Chief of the Ada Joint Program Office.

Dr. Hamilton has a B.A. in Journalism/Public Relations from Texas Tech University, an M.S. in Systems Management from the University of Southern California, an M.S. in Computer Science from Vanderbilt University and a Ph.D. in Computer Science at Texas A&M University. Dr. Hamilton is a graduate of the Naval War College with distinction. Dr. Hamilton's research interests include simulation of computer networks, practical applications of the DOD Architecture Framework (DODAF), prevention/protection against distributed denial of service attacks and software vulnerability analysis.

Reception in Dunn Hall 336 - 1:30pm