MODELING AND SIMULATION CAPABILITY STATEMENT

CyVerify was founded as a Women-Owned Small Business (WOSB) to address the growing need to secure our nation's digital assets from malicious attacks, intruders and spies. It comprises a team of highly motivated entrepreneurial-thinking high-tech engineers with a common vision. Our team is experienced in analyzing, developing and deploying complex systems in harsh environments. Our thought leaders are veterans in diverse industry segments from defense, to transportation, to information technology.

MODELING AND SIMULATION

Modeling and Simulation is one of the most essential components of any technology development process in the current age. The team at CyVerify is composed of several pioneers of modeling and simulation processes whose work has paved the way for the current M&S methodologies used in the Defense and Aerospace industry today. The scientists and engineers at CyVerify collectively hold several patents in the field and are authors of numerous technical publications.

CyVerify's Engineers and Scientists have decades of experience in dozens of commercially available and industry generated M&S and virtual prototyping tools, war gaming models, operations analysis toolkits and performance analyses software.

Tactical Simulation Systems
- Joint Semi-Automated Forces (JSAF)
- One Semi-Automated Forces Test bed (OneSAF)
- Naval Simulation System (NSS)
- Advanced Joint Effectiveness Model (AJEM)
- Extended Air Defense Simulation (EADSIM)
- Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR) network and operational modeling
- Chemical, Biological, Radiological and Nuclear (CBRN) evacuation route planning and analytical modeling.
- Other distributed simulations

3D Modeling for Realtime Simulations
- Presagis modeling and simulation tools and libraries (formerly Multigen Paradigm)
- Creation of synthetic environments
- Terrain generation (Common Database [CDB] format and others) based on GIS data (DTED, LIDAR, DEM and high-resolution satellite imagery)
- Military systems and facilities modeling
- Geospatial modeling
- Real time models with low polygon count
- Visualization of operational scenarios
- Conversion and optimization of models from non-realtime to realtime models
- Stealth viewers
- Filtering, classification and cleaning of GIS data
- Physics-based warfare simulations
- User Interface [UI] development for simulations
- Application Interface Development [API]
- Large scale co-simulations

3D Model Sources
- FAA airport diagrams, architectural drawings, parametric CAD/CAM models, high-resolution geo-specific satellite imagery in combination with DTED/DEM and/or LIDAR data, GIS data, such as geo-specific vector data, site surveys of actual buildings and terrain, concepts and ideas.

3D Model Features
- Hierarchical structured models
- Multiple levels-of-detail (LOD)
- Degrees of freedom (DOF)
- Geo-referenced models
- Reduction in polygon count to match the underlying processing power of the simulator
- Multi-resolution texturing using mipmaps
- Texturing using GeoTIFFs
- Materials modeling to provide proper response to sensor models and physics based simulators
- GPU and OpenGL based shaders
- Articulated components

3D Modeling for Post Rendering
- High quality models
- Marketing movies of modeled systems
- Visualization of operational scenarios

Hardware-in-the-loop (HWIL): System development, Virtual Prototyping
Sensor Modeling: IR and Radar sensor modeling
Simulation Interfaces: DIS, HLA, ALSP, Tactical Data Links
Discrete Event Simulation: BONeS Designer (acquired by OPNET), ModSim
Network & Communications Modeling: OPNET

FOR MORE INFORMATION CONTACT:

Visit us online:
www.cyverify.com

Small Business, Woman owned

Systems Integration and Security Solutions, LLC / dba CyVerify
8370 Greensboro Drive, Suite 907
McLean, VA 22102

TEL 202-643-8004
FAX 206-666-4071   info@cyverify.com