

Kristopher Houston *Simulation Database Developer*

Expertise:

I have worked in the United States defense industry since 2000 and in the military simulation and training industry for over 8 years. I have been involved with most phases of the simulation and database development process from proposal support, production and testing to onsite acceptance. My responsibilities included GIS data creation, optimization and storage to terrain database creation and 3D modeling. Sometimes this involved R&D and proof-of-concept roles including technical documentation. I strive to advance my knowledge in real-time database modeling, GIS and simulation to create both accurate and realistic training and educational platforms. I also hope to expand my knowledge base in this field to better contribute to industries which rely on accurate, dependable and cutting-edge simulation and training systems.

Professional Experience:

- **Presagis USA, Inc.** [2011 - Present]
Technical Consultant / Engineering Lead
 - Produced synthetic environments for Fixed Wing, Rotary Wing and Ground Tank trainer applications
 - Technical lead for MoD ITAR database programs
 - Designed and implemented large Network Access Storage system for services department
- **CAE USA, Inc. (Army Synthetic Environment Core [SE Core])** [2010 - 2011]
Database Production Lead
 - Supervised 2nd shift production department (21 GIS analysts & three 3D modelers)
 - Build, validate and QC database per US Army (SE-CORE) database requirements:
Using DB development software (Terra Vista, Bohemia Interactive) and image generators (Rockwell Collins & CAE Medallion)
 - Collect employee metrics and manage daily personnel activities
 - Individually developed production methods which increased production efficiency and data accuracy
- **CAE USA, Inc. (Professional Services)** [2008 - 2010]
Visual Database Lead
 - Produced synthetic environments for real-time simulation
 - Collect source data and built geo-specific, level-D airfields.
 - Clean and digitize GIS data and produce geo-typical & geo-specific models for real-time databases
 - Research & Development of new simulation and database formats/workflows
 - Performed customer program integration & program ATP (acceptance test procedures)
 - Performed business development assistance including proposals & quotes from source providers
 - Interact regularly with both DoD & commercial customers
- **Quantum3D, Inc.** [2005 - 2008]
Senior Synthetic Environment Developer
 - Organize production schedules, training & workflow for four company contract modelers
 - Produced geo-typical and geo-specific environments for real-time simulation (Civ & DoD)
 - Perform tasks aiding in production, testing & development of inter-company production tools
 - Responsible for department product libraries of 3D real-time models (1000+ unique 3D models)
 - Created 3D model library for OTW and FLIR sensor representations
 - Perform customer program integration & program ATP (acceptance test procedures)
- **Alpha Press, Inc.** [2003 - 2005]
Design Director
 - Supervised production schedule for design department

- Designed custom artwork & desktop publishing for digital & offset printing
- Created company web site
- **Self-Employment** [2001 - 2003]
Digital Media Contractor
 - Developed 3D production renders and videos for healthcare facilities
 - Created still & interactive trade show presentations
- **Northrop Grumman Laser Systems** [2000 - 2001]
Reprographics & Business Communications Support
 - Created & organized company proposals, reports & white papers
 - Supported Business Communications Dept. with marketing design & digital media efforts

Relevant Technical Skills:

- **Terrain Development & Simulation**
 - ESRI ArcGIS 10.1
 - Presagis Terra Vista 7 (3D database generation software)
 - CAE Lithos database generation software
 - VBS2 VTK terrain generation toolkit
 - Semi-automated forces (OneSAF) database development
 - Extensive understanding of mapping and geographic coordinate and projection systems
- **Modeling in Three Dimensions**
 - Presagis Creator 5 (3D modeling software for real-time systems)
 - Autodesk 3D Studio Max 2010
 - Unity Character rigging and animation
 - Bohemia Interactive Oxygen 3D modeler
- **Scripting & Programming**
 - Medallion RTS software including Atmos© scripting language
 - Quantum3D Mantis© simulator controller plus other OTW & Sensor simulation tools
 - C and C++ programming, XML, HTML (including Dreamweaver)
 - Windows 7, Apple OSX, Ubuntu Linux operating systems
- **Miscellaneous**
 - Adobe Creative Suite (CS5)
 - Microsoft Office 2010
 - Writing technical manuals, design documents and training materials
 - Experience researching, ordering, assembling and optimizing production computer hardware/software

Academic Qualifications:

- **University of Central Florida**
 - BS: Computational Science & Biomedical Science
 - Minor: Mass Media
(Currently enrolled)
- **Full Sail University**
 - AS: Digital Media

Notable Achievements/Projects:

- **Presagis USA, Inc:**
 - Produced CDB database for IAF F-16 Military Training Center program for both OTW and sensor applications

- Developed Geo-typical world library for Presagis SGen (Synthetic Environment Generation system) software application for OTW and tactical map displays
- **CAE USA, Inc:**
 - Developed 3D real-time databases for bottom-line performance for the following formats: CDB, SE-Core, Forterra OLIVE, Second Life, VBS2, CTDB, OneSAF (OTF versions 5-8)
 - Created and organized 3D database library to maintain and productize open-source assets created by database department
 - Able to develop new database formats and develop products & processes to correlate with existing 3D geographic databases while adhering to strict DoD standards of accuracy as well as ITAR and export-controlled data.
 - Created and updated production Share Point and approved database standards *Wiki*.
- **Quantum3D:**
 - Created design for more secure product library
 - Helped develop scripts and workflow to create sensor texture/model library
 - Engineering lead on successful projects for Lockheed Martin, Boeing, PEOSTRI and NAVAIR including but not limited to SE-CORE, Common Database (CDB) development, AV-8B Harrier II Plus RNAWST block upgrade, KC-135 BOWST programs
 - Awarded Quantum3D "Top Gun Award" for employee excellence & performance.

Memberships & Certifications:

- Army Aviation Association of America member
- United States Government Secret Clearance
- TSP (Team Software Process) Certification: Carnegie Mellon