

Shawn M. Hillis

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Education

May 2001 – present
May 2000
Aug 1994

University of Central Florida

Ph.D. Program, Computer Engineering
Master of Science, Computer Engineering
Bachelor of Science, Liberal Studies

Experience

Dec 1998 – present **SPARTA, Inc. - Senior Engineer**

CTIA Project Oct 2001 – Dec 2004

Served as Simulation Team lead responsible for requirements development, scheduling, resource allocation, design, and development of scalable, multi-threaded distributable C/C++ and MS VS C# GUI components for a distributed computing environment using CORBA, ACE/TAO, and STL libraries. Components included: a DIS gateway that translates between DIS packets and entities from OTB (the One-SAF Test bed Baseline) and CTIA events and entities; a minefield simulation; a real-time casualty assessment engine; and GUI tools for creating and modifying artillery fire missions, artillery commands, minefields entities, minefield engagements, weapon entity states, battle-damage assessments (BDA). Full-spectrum engineering responsibility from domain engineering and requirements derivation to high-level design to testing and integration support.

Served on the Integration and Test (I&T) team that included responsibilities to provide configuration management of all developed software into a base-line build, create and run system-level tests, develop test-specific software, troubleshoot failed builds or tests, generate and track product tracking reports (PTRs) for discovered defects, and maintain testing equipment and environment.

Served on the Architecture Working Group to turn system-level requirements into detailed system designs and definitions. Responsible for the definition of system-wide data structures, system and component interfaces, persistent object definitions, and object relationships and interactions.

A-TES Project Dec 1998 – Oct 2001

Designed and developed a 3D graphics engine in both Java and OpenGL and a parser to display OpenFlight database models through OpenGL API calls. Designed and developed a language to script human and soldier actions for use with a third-party human modeling software product. Developed a real-time casualty assessment engine and simulation for infantry level training that implemented: ballistic munitions flyouts; flyout-terrain collisions; flyout-player collisions; extensible fragment producing detonations; high fidelity player models; localized, energy based player damage; very efficient algorithms; and a time-ordered priority event queue. Developed and implemented a remote, web accessible object-oriented database utilizing Versant DBMS and Java applets and servlets. Implemented Java 2D, Java 3D, and OpenGL graphics and GUIs for simulation software.

Web-site Engineering Jan 2001 – May 2001

Designed and developed a website based on dynamic data in an SQL database; utilizing XML for data content and structure description, PHP for control and processing, templates to create a common look & feel for entire site, and separation of data content from data formatting to allow them to be modified independently. Incorporated dynamic content and image generation, data passing between applications using XML, error detection and recovery, and encapsulated functions and capabilities.

Local Site Administrator (LSA) Dec 1998 – July 2002

As the LSA, responsible for the planning, specification, configuration, and maintenance of computer hardware, software, networks, and telecommunications of the Orlando Sparta office.

Aug 1998 – Dec 1998

PF1 Software Development - Programmer/Analyst

Responsible for analyzing system specifications and assisting in development of program specifications; writing, testing, and debugging programs; evaluating and modifying existing programs to take into account changes in system requirements. Worked on software enhancements to X.25 to SS7 protocol conversion system, administration of Stratus FTX real-time Unix system, and configuration and testing with Tekelec's Message Generator Test System.

Experience Continued:**Sept 1997 – April 1998 Federal Express - Communication Systems Programmer**

Responsible for developing and supporting network software products.. Products include network trending packages, network monitoring and management suites, and file transfer programs. Responsible for supporting gateways and network communications between UNIX platforms and Mainframe computers. Help support network issues such as capacity planning and troubleshooting problems.

May 1996 – June 1997 Time Warner Cable, Full Service Network - FSN System Administrator & System Engineer

Responsible for monitoring and maintaining interactive services and systems on a production network. Includes running, troubleshooting, and updating proprietary software, Oracle database, SGI computers, and combination of Ethernet, FDDI, and ATM networks. As acting Senior System Administrator, responsible for oversight of integration of new applications and procedures into production environment and providing training for other system administrators.

Responsible for the configuration, implementation, and troubleshooting of existing and new network and system components. These included ISDN routers, Cisco 7000 routers, Cabletron Hubs, remote annex servers, architectural changes from FDDI ring to star via a Bay concentrator, distributed sniffer systems, and architectural changes from Ethernet subnetting to Ethernet switching. Responsible for building and maintaining new computer systems and administering the email system, network addressing, and firewall/security systems.

June 1994 – May 1996 Institute of Simulation and Training - Research Assistant

Responsible for researching and conducting experiments on issues related to Distributed Interactive Simulation (DIS). Assisted in generation of material for DIS training courses, conducted experiments using IP multicast for DIS exercises, assisted with proposal to use NTP as standard time synchronization application for distributed simulations, and investigated use of SNMP as remote management and data gathering protocol.

Computer Skills

Operating Systems - Experienced with installing and configuring UNIX systems (e.g. RedHat Linux, IRIX, Solaris, HP-UX, and Stratus FTX 2.3-2.4), Windows (NT, 9X, 2000), and MacOSX.

Networks - Experienced with and educated in Ethernet, Fast Ethernet switching, Wireless Ethernet (802.11), FDDI, and ATM networks; DSL, ISDN, and T1/T3 lines; TCP/IP, SS7 and X.25; SLIP/PPP remote connections; Annex and ISDN/T1 servers/routers; CISCO router products, Bay Network Switches, and Cabletron Hubs; and SNMP Network Managers.

Languages/Scripting - C++, C, OpenGL, SQL, Java – including 2D & 3D, PHP, Perl, HTML, XML.

Applications - Microsoft Visual C++, IBM VisualAge for Java, Versant Object-Oriented Database System – Java Interface, HP NetMetrix, HP Openview Network Node Manager and OpCenter, TRENDSnmp, Connect:Direct, and NerveCenter.

Training – A Practical Guide to High Level Architecture (HLA), Secure Communications and VPNs, Versant Object-Oriented Database with Java Interface, Sun Solaris Administration

Personal Note: 33 ... in good health ... married ... a father of two... responsible ... interested in productivity. Flexible and very quick to learn, I grow proficient without official training. I love the challenge of solving problems, taking initiative, and achieving results. I have excellent troubleshooting abilities, am a team player and builder, am task oriented, and I love my field as both a hobby and career.

References: Available upon request