

## GOAL

To expand my knowledge base and apply my expertise in the field of computer science for product development, simulation, or algorithm research purposes.

## EDUCATION

- Bachelor of Science, Computer Science, Carnegie Mellon University, 1998
- Bachelor of Science, Physics, Carnegie Mellon University, 1998

## CLEARANCE

- Secret clearance held since 1996

## EMPLOYMENT EXPERIENCE

- Digital Sandbox, Inc. (December 1998 to present) - *Vice President, Research and Development*
  - Leading design and development effort of the Risk Operations Center framework
  - Leveraging SharePoint and Silverlight technologies for analysis reporting and visualization
  - Directed product development in the Advanced Products Group
  - Senior developer on the ASP.NET Site Profiler and Risk Analysis Center (RAC) web applications
  - Senior developer on the Site Profiler<sup>TM</sup> risk management tool and enterprise Information Management System
  - Architect and lead developer of SOAP-based data synchronization tool (connects UNIX server product and client tools)
  - Lead developer and project leader for web-based distance learning delivery, authoring, and management software using PHP and MySQL; trained over half of a million users in one year (three million to date) (at-awareness.org)
  - Developed applications for the Palm Computing platform, including an implementation of the OpenGL graphics library for the Palm OS (miniGL)
  - Developed 3D simulation viewer and scenario editing software for a PC-based anti-terrorism planning tool using the OpenGL graphics API
  - Founding employee
- 7b5 Labs, Inc. (March 2009 to present) - *Co-founder*
  - Developed XPilot for the iPhone
- Sonalysts, Inc. (June 1998 to June 1999)
  - Computer graphics programming in OpenGL for 3D gaming applications
  - Real-time computational fluid dynamics research in the area of smoke propagation and volumetric rendering
- Logicon, Inc. (May 1997 to November 1997)
  - Developed OpenGL and X application for real-time smoke device simulation on a Silicon Graphics Onyx workstation
- Camber Corporation (Summer 1995 to May 1997)
  - Web authoring with Java, HTML 3.0, VRML 2.0
  - Assisted in Government field tests at Ft. AP Hill, VA and Ft. Huachuca, AZ.
  - Wrote and published Government technical reports on thermodynamic behavior of land mines
  - Obtained Secret clearance
- Carnegie Mellon University School of Computer Science (Spring 1995)

- Developed an X program for person recognition for intelligent video conferencing software

## TECHNICAL EXPERIENCE

- Software Development
  - Fluent in C++, C, PHP, C#, Objective C, JavaScript; heavy use of Perl, Java, Lisp, ML, Prolog and Pascal
  - Web Services development (SOAP, XML-RPC, .NET)
  - iPhone development using XCode and Cocoa Touch
  - Web Application development (PHP, ASP .NET 2.0)
  - MySQL (SQL) and Oracle database APIs
  - Development with gcc compiler and CVS under Linux
  - Development with Microsoft Visual Studio and Visual Source Safe under Windows
  - GUI packages including XUL, Motif, GTK, FLTK, and MFC
  - Palm<sup>TM</sup> mobile computing platform (C)
- Computer Graphics
  - Programming with the OpenGL 3D graphics API since 1994
  - Wrote several real-time 3D graphics engines for both the Windows and IRIX/Linux platforms using OpenGL
  - Wrote a file format reader for translation of 3D Studio MAX models into custom engine polygon storage structure
  - Generated renderings using C bindings for the Renderman interface
  - Wrote a fully-functional raytracer with soft shadows, depth-of-field, and texturing support
  - Wrote an OpenGL-based animation and modeling package using cubic surfaces and keyframe animation techniques
  - Heavy use of the GNU Image Manipulation Program (GIMP) for 2D artwork.
  - Portfolio available on the web at <http://stealthboy.com/portfolio.php>
- UNIX Systems
  - Extensive knowledge and use of Linux (since pre-1.0 kernel in 1993)
  - Mac OS X
  - Wrote a basic UNIX kernel and filesystem with caching
  - Administered dozens of UNIX machines, 10+ years experience with SGI IRIX
  - Networking, web server administration, firewall setup, mail configuration, and other sys admin functions

## ACCOMPLISHMENTS

- Web-based training product won e-Learning Award of Excellence in 2002
- Presenter at the 2000 ACM SIGGRAPH Computer Graphics conference in New Orleans, LA - *Interactive 3D Rendering on PDA Platforms*
- Published at the 2000 I/ITSEC Computer Simulation conference in Orlando, FL.
- Various web pages have received numerous awards and publicity, including an article in the London Times.
- SuperQuest 1994 national supercomputing competition – “*Investigation and Modeling of Electron Wave packet Transmission and Reflection Through Various Mediums*”

## OTHER INTERESTS

- Member of the ACM (SIGGRAPH), APS, NRA, VCDL, and PCA
- Linux hacking, filmmaking, collecting vintage Star Wars items, and listening to U2 and J.S. Bach