

## PROFILE

C/C++ Software Engineer with a focus on graphics at both the applications and systems level, including architecture and implementation of OpenGL drivers. Experience with GPU computing, compiler technology and the OpenCL API as well as performance analysis dependent on underlying hardware design. Looking to grow into leadership role tackling challenging problems across the computing spectrum, from systems to theory.

## EXPERIENCE

### **PROGRAMMER, APPLE COMPUTER** NEWTON, MA 2008-2010

Developed an llvm backend for OpenCL targeting AMD's GPU intermediate language.

Maintained and enhanced Apple's PVR texture compression tool.

I deeply appreciated the opportunity to meet creative and talented students during recruitment sessions at Smith and Wellesley Colleges.

### **SOFTWARE ENGINEER, AMD** MARLBORO MA 2003-2008

Worked as part of the Apple Macintosh OpenGL driver team at ATI Research, Inc, working in all areas of the ATI software stack and mentored new team members. Played a lead role at ATI during Macintosh bringup of ATI's key shader centric Radeon 9700 including extensive new texture data formats made possible by the 9700. Implemented portions of the OpenGL Shading Language compilers. Performed developer relations role with key 3rd party developers. Moved to 3DARG (Application Research Group) in 2006 focusing on future graphics technology and GPU computing.

### **SOFTWARE ENGINEER, ICE INC.** WALTHAM, MA 1999-2000

Developed Quicktime components required to interface SW with SDI I/O subsystem on Blue Ice board.

### **SOFTWARE ENGINEER, ELECTRONIC ARTS** VANCOUVER, BRITISH COLUMBIA, CANADA 1992-1994

While in the Library and Tools group I developed a motion compensation based video compression technique for 256 color graphics and worked with artists to create a custom cel-animation painting utility. Developed 3D collision physics model for the original 3DO "Need for Speed" game and the initial frameworks for the games' front end and competitor AI as well as interfacing with the audio lead for collision SFX.

### **PROGRAMMER, SWARTHMORE COLLEGE** SWARTHMORE, PA 1990-1992

Developed 3D animations using a C rendering library to create broadcast quality educational materials. Part of the The Visual Geometry Project.

## EDUCATION

**Dartmouth College**, Hanover, NH — M.S. Computer Science, 1996

Appreciated working with students in small groups as a teaching assistant. Advised undergraduate independent study in computer graphics implementing procedural tree modeling.

**Swarthmore College**, Swarthmore, PA — B.A. Mathematics, 1990

## SKILLS

C C++ OpenGL Perl Unix Mac OS X Subversion Perforce Xcode Computer Graphics Perl PowerPC

## PATENT

TEXTURE LEVEL TRACKING, FEEDBACK, AND CLAMPING SYSTEM FOR GRAPHICS PROCESSORS  
United States Patent 20100091028 Issued April 15, 2010

Inventors: Mark S. Grossman, Thomas Frisinger, Daniel M Gessel.