

BRAD GRANTHAM

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OBJECTIVE

Design and implementation of desktop, web, or mobile application software and systems

EDUCATION

Graduated 1992 from Virginia Tech with B.S. in Computer Science.

PROFESSIONAL EXPERIENCE

Principal Graphics Architect, ARM Inc., November 2016 – Present

- Participated in Khronos OpenXR open VR/AR API working group
- OpenGL ES temporal reprojection antialiasing sample built for internal investigation framework
- OpenGL ES shaders for convolutional neural network investigation
- Patent applications for GPU hardware features

Principal Software Engineer, ARM Inc., Ecosystem, December 2013 – October 2016

- Debugging of Mali 400 integration issue with partner – OpenGL ES 2 app characterization, onsite partner collaboration, coordinated Shanghai and Cambridge groups
- Managed port and bringup of Unreal Engine on 64-bit Android with Mali GPU - ISV relationship and directed two additional engineers. “MoonTemple” demo at GDC 2015 with Epic Games

Staff Engineer, ARM Inc., Direct3D, April 2010 – December 2013

- Command transport layer, register tracing, test frameworks for Direct3D driver for mobile GPU
- Investigated traces of hardware commands, filed bugs, worked with hardware team
- Detailed investigation of Direct3D 11 Specification for verification of hardware features
- Drafted, directed bring-up procedure for tests on new GPU architecture

Senior Software Engineer, AMD/ATI, January 2008 – April 2010

- Wrote tests, samples, and benchmarks for GPUs on Linux and Windows
- Worked on-site with ISVs and partners, analyzed ISV software, traced and analyzed OpenGL command streams, assisted with optimization and feature implementation

Senior Software Engineer, PalmSource (later Access Company), August 2006 – July 2007

- Development of embedded apps and frameworks on Linux using X Window System and GTK

Senior Software Engineer, Applications Engineering, Silicon Graphics, January 2002 – September 2005

- Wrote IRIX, Linux, Windows GL samples, benchmarks, tests; wrote whitepapers, presentations
- US Patent 7460126 for multithreaded 4K OpenGL and OpenML using 4 video devices and RAID

Member of Technical Staff, Silicon Graphics, June 1995 - April 1999

- Design & implementation for Fahrenheit Scene Graph, OpenGL Optimizer, Cosmo 3D, Performer
- US Patent 6933941 describing an object-oriented 3D scene representation (Cosmo3D)

OTHER EXPERIENCE

Transform/lighting/clipping library, reference rasterizer, I2C, schematic capture, PCB routing for handheld graphics demos computer - <http://lkesteloot.github.io/alice/alice4/>

Firmware for STM32F4, KiCAD schematic capture, PCB routing for Z80+CortexM4+Propeller SBC - <http://plunk.org/alice3/>

Designed, implemented shared dinner payment web app including backend using Flask

Designed, implemented parts of interactive threaded ray-tracer using C++, Boost, OpenGL

Presented portion of SIGGRAPH 2002-2004 *Performance OpenGL* course

SKILLS

Windows, Linux, MacOS, C/C++, Python, Javascript, SVN, Git, Gerrit, Gitlab, OpenGL ES, GLSL, WebGL, jQuery, Flask, SQLite, KiCAD, STM32Cube, ARM Cortex M, Embedded Systems