

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 Software Engineer, ARM Inc., Ecosystem, December 2013 – Present

- Debugging of Mali 400 integration issue with partner – app characterization, onsite partner collaboration, coordinated Shanghai and Cambridge groups
- Managed port and bringup of Unreal Engine on 64-bit Android with ARM Mali GPU, including managing ISV relationship, two additional engineers, implementation plan. Showed “MoonTemple” demo at GDC 2015 with Epic Games
- Wrote Android test program for VR extensions using NDK, OpenGL ES 2, and pthreads
- OpenGL ES tracing and debugging on Android

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 including 10-bit color component porting guide and test, volume rendering benchmark, OpenCL ray-tracing sample
- 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

OpenGL Software Engineer under contract, Rearden Studios, April 2006 – January 2007

- Designed and implemented API for GPU imaging operations including convolution and correlation using OpenGL fragment shaders, FBO, float texture on Microsoft Windows

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

- Wrote IRIX, Linux, Windows GL samples, benchmarks, tests; wrote whitepapers, presentations
- Ported ATI Sushi demo engine to proprietary UNIX system (IRIX)
- 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

Part of team that designed and built Z80+CortexM4+Propeller SBC, <http://plunk.org/alice3/>,

Embedded C firmware for STM32F4 including SD Card IO, UART, PS/2 kbd,

KiCAD schematic capture and PCB routing

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, OpenGL ES, GLSL, WebGL, jQuery, Flask, SQLite, KiCAD, STM32Cube, ARM Cortex M, Embedded Systems