Jeffrey Lassahn

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Skills

Software Engineering

- Fluent in C. Experience in other languages, including C++, C#, Java, Fortran, and several assembly languages.
- Systems programming, including device drivers for video DMA hardware under Windows NT.
- Embedded programming, including microcontrollers, TI C6000 DSP, and ARM processors.
- Image processing techniques, including vision algorithms such as Hough transforms and template matching, image compression, and wavelet transforms.
- Computer graphics, including 2D and 3D graphics programming, ray tracing, and fractal geometry.

Electrical Engineering

- Hardware/Software interface design including bus master DMA, PCI bus, shared memory and register based interfaces, etc.
- Familiar with Video, including NTSC, RS-170, PAL/CCIR, and CMOS digital imagers.
- Digital electronics design, including interfacing processors, memory, and digital peripherals; power supply design with DC/DC converters. Low power design for battery powered systems.
- Some analog experience, including signal conditioning with filters and op-amps, analog-digital converters.

Work Experience

CyberOptics Semiconductor (2001 to Present)

Wrote embedded image processing software on TI C6000 series DSPs for several versions of an automated fiducial alignment sensor. Lead engineer for wireless Bluetooth enabled inclination sensor; did system design, wrote firmware, managed integration of mechanical, electrical and software components. Designed a machine vision sensor with 400MHz DSP, CMOS digital imager and Bluetooth wireless interface; did schematic design, managed contractors for PCB layout, fabrication and assembly.

Consultant for Mare Crisium LLC (1999 to 2001)

One of four programmers for multiplayer strategy game. Wrote tools for text compression and bitmap image management. Participated in game design, game logic implementation, graphics and user interface.

Imagenation, Inc. (1995 to 1999)

Lead software engineer on several frame grabber designs. Wrote device drivers for Windows NT, Windows 95, and MS-DOS. Worked with electrical engineers to design register interfaces and DMA controllers. Wrote debugging tools and assisted with debugging prototype hardware.

EG&G, Idaho, Inc. (Summer 1990 and Summer 1991)

Wrote software in C and FORTRAN to analyze optical interference patterns from material stress experiments. Measured electrical resistivities of metals and superconductors at cryogenic temperatures. Operated cryogenic and vacuum systems.

Education

Bachelor of Arts, Physics and Mathematics, University of Oregon, 1994
Departmental honors in mathematics. Honors thesis: Basic Analysis on Countable Sets.

References available on request.