

Raymond Frank Woods

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Summary

Thirty eight years of experience with design, development and production of embedded computer systems. Specialized in object-oriented software development for embedded ultrasound systems.

Extensive experience with C / C++, Java ,Object oriented design, CUDA , GPGPU

Application development under Windows, Android, Linux, WEC 2013, Threadx, VxWorks
Extensive experience with IEC 60601 quality control.

Programming languages: C++, C, Java , CUDA, Matlab, Python, ,

Assembly languages for Intel, ARM, TI, MIPS and 68000 platforms.

Experienced with Agile PLM, git / Perforce / Subversion / Clearcase SCM

Certified ClearCase configuration management administrator.

Completed Siemens management training course.

Employment

Fujifilm Sonosite Inc. Bothell WA

10/16 – present

Principal Software Engineer, Research and Development.

Software development for medical ultrasound products under Android using Java and C++. Design and implementation for FIPS 140-2 compliance.

Solta Medical Inc. Bothell WA

7/14 – 10/16 (2+ years)

Manager, Software Engineering, Research and Development.

Software group manager and lead engineer of a small team performing design and development for cosmetic medical devices implemented Windows Embedded Compact 2013.

Develop schedules, coordinate team tasks and performance reviews..

Developed WEC2013 Board Support Package for TI AM3358 based platform.

Developed embedded applications for calibration and control of RF generator module.

Canon Medical Research USA Inc. (formerly Toshiba Medical Research Institute USA, Inc.) Redmond, WA

4/08 – 4/14 (6 years)

Principal Software Engineer, Ultrasound Research and Development.

Design and development of software supporting innovation of medical ultrasound products.

Developed functional prototype of gesture control of an ultrasound scanner with Kinect sensor.

Developed Android tablet applications for enhanced ultrasound workflow.

Software support for R&D research scientists. CAD tools support for ASIC development.

Co-authored 2 pending patents related to medical ultrasound innovations.

Broadcom (formerly Emulex Corp.) Bothell, WA

10/06 - 4/08 (18 months)

Senior Principal Engineer, Embedded Systems Firmware group.

Design and development of an automated firmware test system for InSpeed family of fibre channel switching ASICs. Design and development of firmware update utilities for Emulex fibre channel host bus adapters. Design and development of test application firmware for SAS expander ASIC.

**Siemens Healthcare (formerly Siemens Medical Solutions Inc. Ultrasound) Issaquah, WA
8/92 to 9/06 (14 years)**

Principal Software Engineer – June 2006 to September 2006

Senior Manager, Engineering – January 2006 – June 2006.

Principal Software Engineer – June 2004 to January 2006

Senior Staff Software Engineer – May 1996 – June 2004

Staff Software Engineer – August 1992 to May 1996

Architect for product diagnostic software for Siemens medical ultrasound systems. Put together the initial team of engineers and provided technical leadership for the group. Five months experience as functional manager of the diagnostics group.

Designed and developed a general purpose web based diagnostic U/I based on HTTP.

Applications and driver development under Windows.

Object-oriented analysis, design and implementation of C++ software for engineering, production and field service diagnostics. Extensive experience with IEEE 1149.1 boundary scan. Diagnostics included both hardware built-in test and system test capabilities. Creation of field updates for diagnostics, firmware and device drivers.

**Acer America (formerly Altos Computer Systems), San Jose, CA
7/89 to 7/92 (3 years)**

Staff engineer, Firmware and Diagnostics group. Development and maintenance of stand-alone diagnostic programs for engineering, manufacturing and field maintenance of Intel microprocessor based computer systems in C and Intel assembler. Developed CPU firmware for Altos' first 80486 system. Team Leader for multi-processor EISA system diagnostics Team leader for MIPS R4000 RISC system diagnostic development. UNIX, MS-DOS, C, MIPS RISC and Intel assembler. Configuration management under SCCS and PVCS.

Numerous assignments to Taiwan R.O.C. for joint projects with Acer Corp. Test Engineering group.

**ROLM Telecom , Santa Clara, CA
4/87 to 7/89 (2+ years)**

Advisory engineer, Software Engineering group. Development and maintenance of telephone call processing system for Motorola 68020 and 68030 based PBX systems. Team leader for software support for country specific interface H/W for European project. Implemented handlers for processor ECC memory. Participated in defining firmware/software communication protocol specification.

Schlumberger ATE (formerly Fairchild Test Systems), San Jose, CA
7/79 to 3/87 (8+ years)

Senior S/W Engineer, Analog Division. System S/W support for component test options on Data General ECLIPSE based analog component test systems. Project leader for digital signal processing option. Data General AOS/VS and assembler, Pascal, FACTOR.

Diagnostic Programmer, Analog Division. Development and maintenance of stand-alone diagnostic programs for engineering, manufacturing and field maintenance of analog component test systems. Developed and presented a course on programming of mixed signal test options for ATE applications engineers. Data General AOS/VS and assembler, Pascal, FACTOR.

System Test Specialist, Digital Division. Manufacturing test and repair of digital component test systems. System level trouble-shooting to component level on analog, TTL and 10k ECL logic. Developed and presented assembly language courses for recruits on proprietary FST computer system.

Education

Santa Clara University, Santa Clara, CA
9/81 to 6/88

Master of Science in Computer Science and Engineering

Completed MSCSE in June 1988. Course work included software engineering, computer architecture, operating systems, microprocessors, digital signal processing, and digital controller design. Undergraduate courses in physics and electromagnetic theory. Pascal, C and LISP.

DeVry Institute, Chicago, IL
7/76 to 6/79

Bachelor Science Electronic Engineering Technology

Complete BEET in June 1979. Continuous 3-year program concentrating on electronics hardware design including digital logic, operational amplifiers, RF electronics and microprocessors. FORTRAN and Intel 8085 machine level programming.

United Township High School, East Moline, IL

9/71 to 6/76

Graduated 1976. Vocational electronics , honors math , honors English.