

RICHARD D. SCHLOTFELDT

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SUMMARY

Skilled in implementation of software using C/C++, Java and assembly; and hardware modeling and simulation using Verilog. Developed compilers, GUIs and embedded systems. Master's degree in Computer Science.

SOFTWARE DEVELOPMENT

- Replace a proprietary communication protocol with one based on XML. Developed an API to enable remote Windows client programs to access servers via the XML protocol.
- Participated in development of "Java NetBackup" for automated backup and restore operations and "Global Data Manager" to facilitate enterprise-wide control and monitoring of backup operations.
- Performed object-oriented design and implementation of the firmware for the System Management Unit of the Chen Systems CS-1000 computer, a Pentium SMP enterprise server. This real-time firmware monitors and controls machine operation; including power, cooling, physical security, system console, remote access and clustering.
- Designed and developed a circuit compiler which automatically synthesizes gate level models from high level functional descriptions for accelerated simulation on the Zycad Logic Evaluator. Modified other Zycad software for simulation of designs as large as 12 million gates. Participated in the standardization of VHDL 1076. Used VHDL to develop behavioral models for a simulation accelerator.
- Developed Verilog behavioral model of the memory management unit ASIC for a new RISC architecture. Developed a Verilog parser.
- Used the Intel 80960MC for development of time-critical, fault-tolerant, embedded kernel for the inertial navigation system of the Boeing 777. The kernel includes hardware test and redundancy management.
- Used Motorola MC68HC16 assembly language to detect aircraft stalls and initiate warning or recovery actions. Wrote design specification and code. Performed system integration testing.
- Developed real-time and transaction processing programs for air traffic control, airline applications, and mission-critical NASA telemetry and spacecraft control center applications. Worked with NASA project management to develop system requirements and operational procedures. Assisted spacecraft controllers during critical mission activities.
- Developed the Transaction Testing System for interactive development and execution of test scripts for transaction programs. Automatic verification of test results facilitated detection of regression errors at the Unisys Airline Development Center for more than ten years.

EDUCATION

M.S. degree in Computer Science, University of Maryland
B.A. degree in German with minor in Mathematics, University of Portland

LANGUAGES AND OPERATING SYSTEMS

- C/C++, Java, Pascal, Ada, Verilog, VHDL, HILO, ZILOS, UNIX, Windows NT/2000, OS-1100
- Used Java for three years, C for more than nine years, C++ for three years, and numerous assembly languages. Used both UNIX and Windows NT/2000 as development platforms.

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PROFESSIONAL EXPERIENCE

RIMAGE CORPORATION

2000-2001; Software Engineer.

Introduced the use of XML into Rimage products. Developed client program for remote access and control of Rimage CD-R Replicators and implemented protocol into Replicator as a server.

VERITAS SOFTWARE CORPORATION

1997-2000; Software Engineer.

Performed Java GUI development using AWT and Swing. Used OptimizeIt to identify opportunities for performance improvements. Developed common GUI components. Wrote product identification specification.

IMATION CORPORATION

1996-1997; Software Engineer.

Provided software support and maintenance for the DryView Laser Imager, which uses embedded processors to process digital image data.

CHEN SYSTEMS CORPORATION

1994-1996; Software Engineer.

Responsible for System Management Unit firmware development. Designed and developed real time embedded software using serial, analog and digital I/O to monitor and control power supplies, fans, temperature sensors, communication devices, and interlocks. Implemented command interpreter and binary communications protocol.

CONTRACT SOFTWARE ENGINEER

1989-1994, 1996.

Consultation, design and implementation for various clients, including Unisys, Benchmark Laboratories, Honeywell, Zycad, CINA Corporation, CPI, and Rosemount Aerospace.

- Embedded software to prevent aircraft stall and warn pilot of near-stall conditions. Rosemount Aerospace.
- Development of software to monitor and control implantable defibrillators. CPI.
- Implementation of kernel for the navigation system of the Boeing 777 using redundant embedded Intel 80960MC microprocessors. Evaluated C compilers for Intel 8051. Honeywell.
- Developed module test plans for a medical infusion pump. Benchmark Laboratories.
- Benchmarked IKOS and Zycad simulation accelerators. Developed Verilog behavioral model of memory management unit. Developed real time device driver for IBM-compatible PC. Unisys.

ZYCAD CORPORATION

1985-1988; Manager, CAE Software Development.

Managed translator development department. Responsible for HILO to ZILOS and Tegas to ZILOS translators, EDIF-based incremental compile software and alpha test of VHDL. Developed hardware models in VHDL.

SPERRY CORPORATION

1967-1984; Associate to Principal Programmer.

Supervised development of a compiler and simulator for a hardware description language. Also used Ada to develop a functional simulator for the AN/UYK-43.

Developed transaction processing applications. Provided on-site support to SAS and Lufthansa. Designed and developed a shell for testing interactive transaction programs with input capture to facilitate script development.

Designed and programmed real time systems for Apollo Project and scientific satellite control centers for NASA at Goddard Space Flight Center. Provided compiler and operating system support. Developed a cross-assembler.