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PROFILE

I am an architect-level software engineer with extensive experience in computer systems development, with a concentration in low-level kernel components and embedded consumer electronics. My technical leadership, communication skills, and effectiveness in dealing with everyone from engineers to management to customers and peers in industry groups are well established and demonstrated over the course of my career.

I am seeking a challenging senior-level position as a software architect or technical leader at a company which desires to turn technology into industry leadership, and which rewards a team-oriented, competitive spirit.

EXPERIENCE

Architect, Sezmi, Inc., Belmont, CA December, 2006 present

Responsible for asset delivery and network security for a complex media service, including conditional access (CA), digital rights management (DRM), securing proprietary protocols from tampering and snooping, and ensuring that content is properly and accurately distributed. Developed and implemented a secure mechanism for factory provisioning of set-top boxes, including certificates and other proprietary authentication mechanisms. Implemented high-availability secure CA/DRM server system based on the SecureMedia Encryptonite ONE™ System and integrated it with the ingest workflow in the Sezmi network operations center (NOC). Primarily responsible for related vendor relationships including server vendors, network operations center vendors, CA/DRM vendors and geolocation services. Integrated CA/DRM system on MIPS Linux based set-top system using the Sigma Designs 8634 SOC. Designed in-home network architecture for households with multiple set-tops allowing automatic configuration and discovery, as well as streaming based on DLNA® UPnP™ protocols. Project lead for content distribution development team.

Office of the CTO, SavaJe Technologies, Inc., Chelmsford, MA March, 2003 - October, 2006

As the first member of the Advanced Technology Group (ATG), I was instrumental in building the research and development group responsible for new technologies to be used by the company for future versions of the SavaJe OS. Reporting directly to the CTO, I acted as project lead and senior member of ATG, involved in many aspects of R&D within the company. Member of the company's architecture team.

Responsible for chipset and evaluation platform support for new processors prior to their release, such as the Intel PXA27x "Bulverde" and "Monahans" XScale processors, TI OMAP 1510/1610/730 processors and other processors, as well as ports to new handsets from a number of handset manufacturers. Ports were all from bare iron to full function, including all low level OS functions, such as interrupt handling, memory management, and power management, to peripheral device drivers such as flash, keypad, graphics, camera and other drivers. Code was primarily in C, with low level functions implemented in assembler, and upper layers of the OS in Java. Experience with the internals of Sun's CDC-HI implementation.

Led three person team in “start-up” mode in an isolated office to develop new OS technologies. Became member of the Office of the CTO developing a next generation 3G mobile operating system to perform follow-on work.

Technical Director, Metro Link, Inc., Ft. Lauderdale, FL Feb. 2000 - Mar. 2003

Responsible for driving the technical direction of various product lines within the company, developing product architectures and project plans, overseeing software product development, and contributing to projects as the principal software architect. My role as technical director required that I be a key player in all aspects of product development, from initial product design, development, marketing and sales support, to final customer support.

As Technical Director for Operating System Development, I was responsible for the development of the Metro Linux operating system, which was targeted toward embedded applications such as residential gateways and set-top boxes with high definition DVR functionality. Developed complete kernel support (MIPS based) for the ATI Xilleon™, including an original EIDE device driver, front panel driver, serial and USB device drivers. This operating system was deployed as part of the ATI Xilleon reference design package, and is the basis for products from US Digital Television, Roku, and others. Also responsible for kernel development of Metro IPWorks, Metro Link's Xinu based microcontroller embedded operating system, which served as the OS basis for Zilog's EZ80 product.

Also served as Technical Director of Metro Link's Automation Technology Division. Responsible for the all aspects of two product lines in the automation market, based primarily on the Universal Plug and Play protocol, including full UPnP protocol stacks in C and Java, both geared towards the highly embedded market. Performed preliminary design for gateway between UPnP and HAVi and OSGi components.

Developed and contributed to various aspects of company development and strategy in the automation and embedded operating system marketplaces. Built and maintained technical strategic relationships with customers and partners. Represented the company in industry open standards organizations. Participated in sales and marketing activities, including the development and delivery of many demonstrations at trade shows including CEDIA and CES.

Provided technical leadership to project leads and individual contributors across the organization.

Served as Metro Link's representative with the UPnP Forum, and Consumer Electronics Association (CEA) R7.4 working groups.

Senior Member of Technical Staff, Design Engineering, SGI, Mt. View, CA Oct. 1996 - Feb. 2000

Technical project lead for the SGI Linux Environment distribution. Responsible for all aspects of distribution development, including boot and installation environment, kernel integration and development. Also responsible for developing technical release plans. Developed automated SGI Linux distribution build process. Position required a great deal of interaction with third party software developers and high-profile customers.

Project lead for SGImeeting collaborative computing product involving ITU-T T.120 protocols. SGImeeting is a standards based collaboration tool for the SGI IRIX operating system, and maintains compatibility with the Microsoft NetMeeting product for Windows platforms.

As a member of Web Publishing Group, developed an HTML browser widget for tight web integration with the Silicon Graphics IndigoMagic desktop. Responsible for developing support for Netscape compatible plugins, JavaScript library and object model implementation, and other features for the browser. Represented the company at the World Wide Web Consortium (W3C).

Principal Software Engineer, Digital Equipment Corporation, Nashua, NH 1988 - Oct. 1996

Held senior technical leadership role in the X Window System Group for both Digital UNIX and OpenVMS operating systems, specializing in the X Window System Server. Responsible for software design and development, strategic planning, formal evaluation of technology, and contribution towards industry standards development.

Earlier position within the company (1988-1990) was in the OpenVMS Engineering group, as a Support Engineer, providing critical customer support for OpenVMS DECwindows, compilers, and run-time libraries.

Other accomplishments at Digital include:

- Technical Leader and Architect, Digital UNIX X Server Group (including OpenVMS X Server)
- X Consortium Technical Advisory Board representative for Digital
- Designed and developed DPMS Extension Standard for X11R6.3
- X Technical Conference Program Committee, 1994, 1996
- Developed and implemented commodity graphics strategy for Digital UNIX.
- Designed and developed X Implementer's Kit, a development environment and API for third parties who need to access X Server internals
- Responsible for producing the world's first X/Open XPG4 branded X Window System Server two years before any of our competitors.
- Led and contributed to port of X11R6 to Digital UNIX, personally responsible for many early 64-bit X Server contributions to X Consortium
- Participated in development of Alpha Linux X Window System environment
- Designed and directed the implementation of a loadable X Input Extension mechanism

Software Programmer, Lockheed Sanders (now BAE Systems), Nashua, NH 1984 - 1988

Responsible for the development of software required by the company for internal use and for contract work for the US Government. Software written primarily in Ada and C. Projects included the development of a real-time environment simulation using Silicon Graphics IRIS workstations and GL (forerunner of OpenGL), Sun Microsystems workstations, and Ingres based database applications using Digital VAX processors running VMS. Also held a position within the company as a system administrator for VMS systems. Taught company education courses in VMS at night. Held SECRET security clearance.

EDUCATION

Bachelor of Science, Computer Science/Mathematics, Rivier College, Nashua, NH, 1991

PROFESSIONAL AFFILIATIONS

Justice of the Peace, State of New Hampshire
Chair, St. Christopher Parish Pastoral Council, Nashua, NH, 2007-present
Board of Directors, St. Christopher School, Nashua, NH, 2007-present
Board of Directors, Children's Winter Garden, Nashua, NH, 2006-2008
Chair, Greater NH Linux Users Group, 2002 2005
UPnP Forum representative, 2000-2003
Consumer Electronics Association (CEA) R7.4 Committee, 2001-2003
ACM SIGGRAPH Creative Applications Lab Committee, 1998, 1999, 2000 (chair), 2001
ACM SIGGRAPH 2000 Program Committee member
X Technical Conference Program Committee, 1994, 1996
X Consortium Technical Advisory Board, 1993-1996