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Senior Software Integration Engineer

Passion for software integration, design, performance and testing. Extensive experience developing cable set-top boxes, network addressable storage and home and industrial control products. More than 20 years of experience working in large companies and start-ups. Strengths include the ability to harden new products, and take vague product requirements and create carrier-class products. Other distinguishing strengths include:

* Quickly adapting to and learning new environments for increased productivity and innovation
* Practitioner of ego-less programming which solicits others to challenge assumptions and solutions
* Bold and positive entrepreneurial spirit for new product ideas
* Process-driven development for achieving product quality
* Meticulous, thorough and tenacious work ethic

Technical Skills

Languages/Protocols: C/C++, UPnP, DLNA, SOAP, GENA, SSDP, MoCA, ReSTful, DHCP, HTML

OS/Platforms: Linux (Ubuntu, Busybox), Windows, QNX, VxWorks, UNIX, iRMX, DOS

Processors: ARM, x86, PowerPC, MIPS, UltraSPARC

Tools: Wireshark, DeviceSpy (UPnP), Virtual Box, Netbeans, Eclipse, Jira, Git, SVN, Mercurial, JMeter, Jenkins, Visual Studio 5, Visual Slick Edit, Code Collaborator, Rational Team Concert (RTC), Qt, Synergy (SCM), tcpdump, DUMA, OProfile, GDB, ROM Emulator

Student of: PHP, Bash, Perl, JavaScript, HTML5, Java, Android SDK

GitHub Projects: https://github.com/swruler/project

Professional Experience

**Western Digital Inc.**, Content Solutions **2012 – present**

Sr. Staff Software Engineer

DLNA point person for Western Digital’s (WD) ARM/PowerPC Linux Network Addressable Storage (NAS) product lines.

* Provided DLNA guidance to QA, Marketing, User Experience, and Project and Program Management teams.
* Led the evaluation and integration of various open and closed source DLNA stack vendors such as Packet Video.
* Strategized and contributed towards the DLNA roadmap.
* Created a DLNA/UPnP lab for pre-certification and functional testing.
* Created documents, procedures and scripts for DLNA performance and vendor acceptance testing.
* Co-authored a pending patent for a novel way of organizing and retrieving media using the UPnP standard.

Sustain the NAS ReSTful APIs used by WD Mobile Apps.

* Hardened the NAS’s remote accessibility C code for streaming media to mobile clients over the Internet.
* Identified and corrected over 100 Linux command injection security vulnerabilities in the NAS’s PHP ReST code.
* Updated NAS Bash startup scripts for supporting staging environments and retrieving relay server addresses.
* Created and updated design documents for analytics and for integrating with OEMs.

**Access Systems America (contractor)**, Mobile Technologies **2012 – 2012**

Sr. Software Engineer

* Provided technical support for WebKit browser integration into Panasonic’s in vehicle infotainment system.
* Responsible for assembling and delivering the SDK for the next generation NetFront NX Browser.
* Responsible for setting up the GitHub and RTC repository and engineering onboarding process.
* Wrote design document for browser bookmarking.

**Cisco Systems Inc. (formerly Scientific Atlanta/PowerTV)**, Service Provider Video Technology Group **2001 – 2011**

Sr. Software Engineer

Key contributor in a diverse, multi-location team deploying $1B in advanced digital set-tops every year for 10 years.

* Co-authored patent 8,161,388 as it relates to voice assisted setup of HD capable set-top boxes.
* Lead C/C++ developer and point person for Cisco’s first Linux MIPS based set-tops’ UPnP/DLNA device discovery interface. Utilized SOAP and GENA networking protocols for LAN, OCAP compliant, MoCA capable DVRs for Time Warner Cable, Cox, Comcast, Verizon and other cable companies.
* Ported Intel's Flash File System APIs into the set-top's file system style APIs.
* Team leader for developing Time Warner’s Video-To-Go DVR set-tops for a Portable Media Device solution.
* Implemented the DHCP standard client for DOCSIS capable set-top boxes.
* Lead Closed Captioning developer and subject matter expert. This required near real-time multi-threaded EIA 608 and 708 Closed Caption protocol parsing and subscriber settings APIs, written in C, for all high definition set-top boxes (10s of millions at the time).
* Integral team member for performance improvements, multi-vendor interoperability, and product hardening.

**Flashpoint Technologies Inc.**, Digital Camera Software Platform, San Jose CA **1999 – 2001**

Sr. Software Engineer

Contributed toward the C++ GUI application framework software for the first consumer digital cameras.

* Lead Engineer for development of lowest cost consumer digital camera in the Hewlett Packard camera series.
* Wrote application framework APIs for HP and Kodak digital cameras.
* Designed, enhanced, reviewed and fixed software bugs using WindRiver’s VxWorks Tornado tools.

**CIDCO Inc.**, Web Phone Manufacturer, Morgan Hill CA **1997 – 1998**

Sr. Member of Technical Staff

Contributed to the specification of an all-Java enabled wired Internet screen phone.

* Researched and evaluated the Java byte engine hardware (pico Java), Java OS and Java browser platform for application development.
* Helped specify the user interface look-and-feel for applications such as the message center, address book, web browsing and e-mail.

Performed release testing and GUI development for the first generation Internet screen phone.

* Used HTML to implement the phone’s UI for international advanced call features.
* Implemented a DOS GUI manufacturing test utility in C for transferring telephony data between a PC parallel port and the company’s next generation controller board.

**Unity Systems Inc.**, Home Automation Systems, Redwood City CA **1994 - 1997**

Automation Systems Software Engineer

Startup and leader in residential energy control products for monitoring and controlling energy use.

* Solely developed prototype GUIs for Verifone and Philips screen phones using C++ and C for AMX and TXO real-time OSs.
* Implemented Consumer Electronic Bus (CEBus) Common Application Layer (CAL) messaging.
* Used the PROMICE ROM Emulator and Paradigm symbolic debugger to diagnose and resolved issues with the company’s Universal Controller CEBus product.
* Developed an RS-232 serial port program for sending and receiving CEBus data.

EDUCATION and AFFILIATIONS

**BS Computer Science and Engineering** University of Texas, Arlington TX

Member IEEE (CES Society) Institute of Electrical and Electronics Engineers

Tau Beta PI and Upsilon Pi EpsilonEngineering Honor Societies