**KENNETH SCHARF**

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**SYSTEMS**  **APPLICATION DEVELOPMENT**  **SOFTWARE ENGINEERING**

Expert in software engineering and development with over 20 years of experience designing and implementing embedded systems for a wide range of products and hardware. Adept at developing firmware according to hardware requirements and design specifications, with a focus on minimizing cost while enhancing performance. Proven history of identifying the root cause of problems and deploying swift solutions. Strong track record of using the latest technologies to deliver products that meet and exceed expectations.

Systems Programming  Software Engineering  Application Development  Embedded Software

Product Development  Hardware & Software Design  Troubleshooting & Debugging  Problem Solving

Software Analysis  Systems Implementation  Emerging Technologies  Process Improvements

Team Building  Cost Control  Interface Development  Reverse Engineering

**TECHNICAL SKILLS**

**Programming/Languages/Development:** C, C++, C#, Perl, PL/M, Assembler (Intel, Atmel), Microsoft Visual Studio (MSC, .NET)

**Tools:** Embedded Microcontroller Hardware/Debugging Equipment (JTAG, ICE), Intel**/**Atmel**/**ARM Microcontrollers, PC hardware, PVCS, CVS, ClearCase Software Configuration Management, Rational Rose OMT

**PROFESSIONAL EXPERIENCE**

**BlackBerry f/k/a Research in Motion, Sunrise, Florida  October 2012 to May 2015**

*Developers of enterprise ready mobile computing solutions*

**Embedded Systems Software Developer**

Part of the development team for the BlackBerry 10 “A series” Z30, Z3, Classic, and Leap smart phone products.

* Developed and tested factory interactive test software. Added support for altimeter sensor to the test framework.
* Modified tuning parameters for USB interface to maximize performance. Worked with hardware engineers to verify correct settings and integrated the changes into the code base.
* Performed system analysis on power consumption profiles to fine tune system management of both clock speeds and thread scheduling to maximize battery life.
* Performed sanity checking on new software builds to verify the stability of each new code merge. Used software configuration management tools to backtrack breakages and identify the point at which each occurred.
* Worked on developing a Web based diagnostic interface for an IOT device, using CGI scripts, Slinger and Apache2 web servers.
* Conducted software configuration management duties using Perforce, SVN, GIT, Gerrit, and Repo.
* Provided on site factory software support for first time bring up of new hardware.

**ISAAC DANIEL GROUP, INC., Miami, Florida**  **February 2010 to October 2012**

*Developers of cutting edge technology product designs for commercial and government applications*

**Senior Firmware Engineer**

Developed firmware for AVR XMEGA based design using GPS and IEEE 802.15.4 ISM band radio equipment.

* Adapted a basic 802.15.4 MAC layer sample design package from Atmel to the needs of the product.
* Supported hardware design of product, wrote test code for both battery monitor subsystem and GPS NMEA parser.
* Supported sales team with software modifications during demonstration trials.
* Researched MAC layer protocol extensions to support simple routing transport layer.

**NILES AUDIO CORPORATION, Miami, Florida**  **2004-2009**

*Developers and retailers of high-end audio-video equipment*

**Senior Software Engineer**

Programmed and deployed firmware for company products, including user interfaces for hardware prototypes. Contributed to hardware design for a special project involving building the optimal user interface for minimal cost. Supported offshore product testing through cooperation with product engineers. Integral in launch of the first company product to use the Zigbee wireless network system. Created a user interface to radio modules and integrated a self-testing feature. Communicated with internal customers to find solutions to any product problems. Took part in support software development for several products.

* Resolved an issue with a malfunctioning LCD display by researching the controller and uncovering a hardware issue with connections for the LCD power supply.
* Cut $1 from the cost of manufacturing each unit of a particular device by determining a way to replace an external hardware latch with existing microcontroller IO lines.
* Reduced the high return rate of a productby participating in a quality improvement initiative to increase its battery life and implement new battery testing features.
* Supported the company in achieving gross sales of $10 million over three years through development of features for the ICS product line, including a method for simple Ethernet communication via Zigbee wireless network technology.
* Fixed a power-restoration problem with the IC2 remote unit by uncovering a hardware problem caused by use of incorrect interrupt lines on the key-press microcontroller and redesigning the keyboard interface.

**BECKMAN-COULTER CORPORATION, Miami, Florida**  **2002-2004**

*International leader in biomedical testing*

**Software Engineer**

Contracted with Coulter to lead an instrumentation upgrade project for LH500 equipment. Managed integration of new algorithms into the instrument. Developed solutions for speed problems with the algorithm, with a focus on achieving the target number of samples processed per hour.

* Successfully increased speed for the LH500 algorithm by eliminating programmed hardware constraints and pipelining instrument operations around software analysis.
* Eliminated bugs that had carried over from the previous instrument to the new design.
* Supported the Flow Cytometry group in designing new instruments, including deploying a USB interface for a microcontroller and building a Windows USB driver from a commercial package.

**VERSAMED, INC., Fort Lauderdale, Florida**  **2001-2002**

*United States division of an international manufacturer of medical equipment, including a portable respirator*

**Senior Software Engineer**

Spearheaded development and implementation of multi-language support for the human interface portion of the company's primary respirator product.

**PARKSTONE MEDICAL INFORMATION SYSTEMS, Fort Lauderdale, Florida**  **2000-2001**

*Innovators of a hand-held computing application containing patient medical and prescription history*

**Senior Product Development Specialist**

Integral in the launch of the flagship product via system development and programming in a Windows CE environment for the handheld device.

**BECKMAN-COULTER CORPORATION, Miami, Florida**  **1989-2000**

**Senior Software Engineer II**

Programmed embedded software/firmware for the new MAXM hematology analyzer instrument and its Data Management System computer interface.

**FORMAL EDUCATION**

**Bachelor of Science, Electrical Engineering/Computer Engineering**

Polytechnic Institute of New York, Brooklyn, New York