James H. Price

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Summary

- Strong team-building and organizational skills, excellent mentor.
- Excellent methodical troubleshooting skills, very strong as a HW/SW system integrator.
- Very competent C programmer, with experience in C++ and MFC, interest in OO technologies.
- Experience programming in a variety of operating systems, including, DOS, Linux, Unix, QNX, OSE, pSOS, and Microsoft Windows, as well as proprietary embedded environments.
- Core competency in realtime system design and data communications.
- Experienced with 8051, 68302, 68020, 68040, PowerPC, Coldfire 5272/5282 microprocessors, Rabbit RCM 3000/3700, TI 430, microcontrollers, as well as PC architecture.
- Special interests in data communications and in wireless technologies.

Work History

Wavetrix, Richardson, TX (Aug 2002- Present)

- Director, Software Engineering – Responsible for oversight of all software/firmware activities at Wavetrix. Implemented revision control system, and set policies for configuration management. Created proposals for customer projects, and managed schedules, ensuring on-time and under-budget delivery of a variety of systems. Developed real-time communication systems using TI MSP430, Motorola ColdFire, Rabbit RCM3000/3700. Developed software for Linux-based home network appliance, including browser-based configuration UI. Developed firmware for low-cost large-format LED display system. Project lead for stoplight vehicle detection system. System architect for Wavetrix's family of Traversix™ connectivity products, and developed embedded product firmware, as well as Windows applications and utilities.

Uniden, Ft. Worth, TX (September 2001 – Aug 2002)

- Software Development Manager / Director of Engineering – Responsible for directing the transition of the software development effort from Broadband Gateways to Uniden after Uniden's purchase of Broadband Gateways' intellectual property. Managed a team of eight software engineers implementing both voice and data features of the EVOLO product. Product feature set included voice and data over ADSL, SNMP management, PPPoA, PPPoE, NAT, stateful-inspection firewall, DHCP client and server, web browser based local configuration and server-based firmware upgrades and management. Responsible for determining software requirements of the product, creating development schedules, assigning tasks to individuals. Contributed to team effort by finding/fixing bugs in the IP stack and internal web server. Also personally developed user interface using C, HTML and JavaScript. Personally developed diagnostic utilities and build environment utilities using C and C++. Primary development for OSE (RTOS) on Motorola PowerPC in the GreenHills Multi environment, with tools development in Microsoft Visual C++ and Borland C++ on Windows 2000 NT and '98.

Broadband Gateways, Inc, Plano, TX (July 2000 – July 2001)

- Data Systems Software Manager - Responsible for managing a team of developers implementing data and user interface features in Broadband Gateways' residential broadband gateway product (EVOLO). Product feature set included voice and data over ADSL, SNMP management, PPPoA, PPPoE, NAT, stateful-inspection firewall, DHCP client and server, web browser based local configuration and server-based firmware upgrades and management. Responsible for optimizing product for data throughput and balancing CPU loading between voice and data services. Responsible for scheduling development activities for added feature sets and for support of cost-reduced platforms. Personally developed user interface using C, HTML and JavaScript. Performed compatibility testing between purchased firewall software and applications such as FTP, NetMeeting (H.232), LimeWire (Gnutella). Personally developed diagnostic utilities and build environment utilities using C and C++. Primary development for OSE (RTOS) on Motorola PowerPC in the GreenHills Multi environment, with tools development in Microsoft Visual C++ and Borland C++ on Windows 2000, NT, and '98.

Stick Networks, Dallas, TX (February 2000 – July 2000)

- Embedded system and wireless protocol software architect. Responsible for software design for embedded systems and proprietary communication protocols for Stick Networks' next-generation connectivity products. Produced protocol prototypes using Microsoft Visual C++ under Microsoft Windows, selected embedded development tools for the StrongArm SA1110 processor, decomposed work into manageable tasks, and assigned to developers.

Intermec Technologies, Amtech Systems Division, Dallas, TX (September 1996 – February 2000)

- Manager of Toll System Software Development, November 1998 – February 2000. Responsible for managing team of fifteen developers (twelve permanent employees, three contractors), currently developing lane controller systems, plaza computer systems and RFID-related subsystems for electronic toll collection. In addition to contract-funded projects, responsible for an extensive R&D budget for new toll-related products, and for preparing proposals for new contracts. In addition to performing administrative responsibilities, worked with development team at technical level to make system architecture decisions and to design interfaces. Personally developed communication protocol libraries and associated tools in C under Microsoft Windows 95/98/NT.
  Represented Amtech to industry standards groups, and acted as principal author and editor of the device-driver API portion of a forthcoming ANSI standard for non-contact information systems (i.e., RFID tags and tag reader systems).
- Senior Design Engineer (group lead), June 1997 - October 1998. Responsible for design and implementation of a lane controller for the SunPass electronic toll collection on Florida's Turnpike. Worked with customer to determine requirements and with key team members to develop an architecture that would satisfy those requirements. Assigned components of the system to team members (four permanent employees, two contractors) for development under QNX (a realtime Unix-like operating system). After system was lab-tested, performed further system integration and tests at Amtech's test track in North Richland Hills. Product successfully passed field test at customer's site in Florida, and is currently in operation. Throughout the development and testing process, maintained close communication with customer through daily/weekly status reports, teleconferences, in-person meetings, and by developing a status-reporting web site (still in use).
  Also developed protocol analyzers and realtime simulation tools under Windows 95 and DOS for lab testing. Design of simulation tools was organized to permit development of common, reusable software, including portable software modules for implementing the proprietary data communication protocol used on Florida's Turnpike.
- Senior Design Engineer, September 1996 - June 1997. Responsibilities included developing proposals for new automated toll-collection and automated vehicle identification systems. Also worked with subcontractors to ensure on-time delivery of in-work contracts on a variety of systems, including a real-time data and video storage systems.
- Ancillary responsibilities at Amtech include acting as part-time Unix system administrator, and extending network infrastructure to remote locations. Also helped set up the company's Internet firewall and have worked IP routing issues on an as-needed basis, as well as setting up FTP and web sites for internal use and customer communication. Also established procedures and tools for monitoring network devices and notifying engineers in event of failure.

Pinpoint Communications (startup), Dallas, TX (January 1992 - August 1996)

- Lead, Application Development, February 1996 - August 1996. Responsible for leading a team that developed custom mapping and data communication applications under Microsoft Windows 3.1 and Windows '95 for the Pinpoint vehicle location and wireless data network. Also responsible for maintaining relationships with third-party application developers, and for productizing Pinpoint's Software Developer's Kit. In addition, created web-enabled applications that monitored system performance through the company's intranet, maintained the company's LAN and developed the company's external web site.
- Senior Software Engineer, January 1995 - January 1996. Designed protocols for Pinpoint's second-generation wireless data and vehicle location network, and high-level architecture of the firmware for the second-generation base station and mobile radio. Developed protocol simulation software for the network under Windows and DOS. Developed firmware for the mobile radio's interface to the mobile data terminal operating on the 68302 microprocessor. Assisted in the integration of the base station and mobile radio firmware with other components of the network.
  Represented Pinpoint with the PCCA (Portable Computer and Communications Association) Modem Standards Committee. Contributed to PCCA standards STD-101 and STD-201. Principle author and editor of Annex D to PCCA STD-101. Also represented Pinpoint with TIA TR-30.
- Software Engineer - January 1992 – December 1994. Designed communications protocols for the infrastructure (both wireless and wireline) of Pinpoint's first-generation mobile data and vehicle location network. Developed simulation tools under MS-DOS for protocol testing. Also developed protocol engine software for the base stations and mobile radio portions of the network. Integrated the protocol engines with prototype hardware, helped debug prototype hardware, and assisted with installation and field-testing of a demonstration network in Washington D.C. in the summer of 1993. Developed sample applications, and demonstrated operation of the network to members of the news media during press conferences.

Compaq Computer Corp. Dallas Engineering, Plano TX (December 1989 - January 1992)

- Firmware Engineer. Developed firmware for Compaq's first V.32/V.42/V.42bis modem, using C and assembly language for the 68302 processor. Specified firmware development tools, developed embedded debugger firmware and I/O drivers for this product, and was a key contributor in hardware/software integration. Responsible for specification of the DTE interface for the product, and worked with sub-contractors on the compression and error-correction engine. Also developed firmware to emulate the Hayes AutoSync feature, which permitted emulation of synchronous protocols (such as HDLC) over an asynchronous interface.
  In addition, developed MS-DOS software for testing legacy modem product lines, performed software- and hardware-compatibility testing, and worked as a liaison between product development, customer support and factory test groups.

Texas Instruments DSEG, Lewisville, TX (August 1987 - November 1989)

- Software Engineer, January 1988 - November 1989. Developed a realtime operating environment under pSOS for VMEbus systems in a software test and simulation facility. Responsibilities included hardware/software integration and testing with symbolic debuggers and in-circuit emulation. In addition, contributed to user interface development under UNIX using X-Windows.
- Software Engineer, August 1987 - December 1987. Developed data reduction / data analysis software for the HARM missile program, using Pascal under DEC VMS.

Education

M.S., Computer Science, Mississippi State University, August 1987, G.P.A. 4.0/4.0.

- Thesis Research Topic: Feasibility of a connection between the mainframes at M.S.U. and the BITNET educational network.
- Courses included: Advanced Systems Programming, Software Engineering, Teleprocessing, Compiler Design, Advanced Database Systems, Knowledge Representation and Knowledge Bases, and special topics in Robotics and in Data Communications.

B.S., Computer Science, M.S.U., December 1984.

Interests

In my free time, I enjoy cycling, walking and jogging. I also do LAN consulting, as well as graphic arts and web-page design on a contract basis, and host multiple Internet domains from my home, including JimPrice.Com. I have produced several shareware/freeware utilities for Microsoft Windows (both 3.x and 95/98/NT/2000/XP), I'm also interested in sound and digital music.

Contact Information

For references or for further information, please contact me via e-mail at: Jim@JimPrice.Com or by telephone at 972-661-5652 (home) 214-697-6481 (cell).