

## Résumé of Software Engineering and Management

Software engineering professional with 25+ years of experience in the design, development and delivery of outstanding software for systems, databases, networks, telecommunications, virtual enterprises, applications and user interfaces. Quickly masters and applies new technologies and methodologies to achieve measurable results. Possesses superior communication skills; has authored several books and courses and is adept at delivering presentations and instruction. Cultivates collaborative work environments to encourage innovation and maximize productivity. Excels in leading teams to complete complex projects on schedule and within budget for both small businesses and Fortune 500 corporations.

### TECHNICAL SUMMARY

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**Programming Languages:** C/C++, Perl, PHP, Assembly (x86 and others), SQL HTML, XML, CSS, JavaScript, *sh/ksh/bash/awk* scripting, and many others.

**OS Platforms:** UNIX (Linux, BSD, Darwin, Solaris, AT&T, others) PC/Windows, Mac OS X

**Protocols:** SMTP, AMTP, HTTP, FTP, DNS, TCP/IP, sockets (Berkeley and Windows), Ethernet

**Hardware:** Trained as an electronics engineer. Recent experience with servers, embedded systems, Ethernet (wired and wireless), routers, switches, etc.

### SELECTED HIGHLIGHTS

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- Recoded selected subsystems in a web server farm, increasing production server efficiency by 300-500%. Reduced the system footprint and improved code stability, allowing the farm to host 3-5 times as many concurrent users with concomitant enhancements in scalability, usability and security.
- Founded and operated *WebMonster Networks*, specializing in high-volume web and email hosting. Designed and deployed an extensive e server farm and developed the necessary extensions to both Linux and Apache to accommodate web server volume. Delivered exceptional return on investment to stakeholders by divesting the hosting business four years later.
- Wrote, maintain and distribute the BW Whois client (<http://whois.bw.org/>) evolving into the most full-featured *whois* client available, providing features such as self-detecting CGI mode and SQL database caching while maintaining a simple command-line interface.
- Authored the draft specification for Authenticated Mail Transfer Protocol (AMTP), designed to replace Simple Mail Transfer Protocol (SMTP) as a solution to reduce the incidence of unsolicited bulk email (UBE); generated the reference coding solution in C++ and Perl.
- Designed and developed a new type of database (Polymorphic Database); was granted US Patent #7,003,524. Wrote the first application using this new technology, *webmusicdb.com*.
- Contributed code to the Apache web server, the Linux kernel, the FreeDOS project, and wrote or contributed to device drivers for Linux and other operating systems.

## Career History

### THE BEARHEART GROUP LLC

#### System Consultant, Software Engineer

2000 to present

**Technology Summary:** *Linux, Perl, C/C++, JavaScript, PHP, HTTP, DNS, SMTP, XML, HTML, CSS*

**Specific Expertise:** *Design and coding of systems, applications and mail policies; Online course development; Polymorphic Database patent; Systems development for a client base operating high-volume (100k-1M/day) email delivery systems; Open-source software, server farms and web & database applications; SRS & Whois systems.*

Served as a contract programmer, web application developer and technology/systems design consultant specializing in web services, databases and email solutions. Designed and coded applications and mail policies for a client base (subject to nondisclosure agreements) operating high-volume email delivery systems. Performed systems development, focusing on open-source solutions, server farms and web/database applications. Led teams comprised of as many as 20 business/systems analysts, developers, programmers and software/hardware engineers. Rana a high-volume email list distribution service for former employer, *WebMonster Networks*.

- Assisted 20+ enterprises in implementing email and security best practices as well as avoiding the distribution of spam, or unsolicited bulk email (UBE).
- Wrote and published several patches to resolve problems with *qmail* servers.
- Created a new database technology and was granted U.S. Patent (No. 7,003,542, *Polymorphic Database*).
- Wrote and continue to maintain open-source *BW Whois* application (<http://whois.bw.org/>).

### IPOWER INC

#### Senior Software Engineer

2006 to 2008

**Technology Summary:** *Unix (BSD & Linux), Perl, C/C++, JavaScript, PHP, HTTP, DNS, SMTP, XML, HTML, CSS*

**Specific Expertise:** *Network efficiency and cost minimization; systems architecture and tool development (including hack-proofing); project managed system migration to a new hosting platform.*

Functioned as a senior developer for the third-largest web-hosting provider in the US to resolve all legacy issues with server performance, stability and security. In a matrix management environment, led or participated as a team member for 5-7 concurrent projects. Served on the developer recruitment committee that vetted 100+ candidates and hired 3. Trained and mentored junior developers.

- Recoded much of the legacy hosting platform thereby increasing production server efficiency by 300-500%. Reduced system footprint and improved code stability, usability and security. Enabled the company to host 3-5 times more users with no new investment in hardware.
- Enabled the use of the latest version of Apache web server by recoding the Microsoft FrontPage module, an effort vital to the security and scalability of the server farm.
- Project managed the migration of customer email and data to a new hosting platform following the merger with Endurance International Group.

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## WEBMONSTER NETWORKS

**Founder, CEO, CTO**

**1995 to 2000**

**Technology Summary:** *Linux, Perl, C/C++, JavaScript, HTTP, DNS, SMTP, XML, HTML, CSS*

Established and developed a web-hosting enterprise specializing in high-traffic sites. Held day-to-day operational responsibility for all related technology. Completed consulting engagements with major clients in many industries, including transportation, entertainment and financial services. Designed and wrote custom SaaS and hosting applications.

- Facilitated the protection of intellectual property by writing the *mod\_localref* module for the Apache web server.
- Designed and coded web sites custom web applications for clients such as MGM and Citibank.
- Contributed to RFC 2616 and the Apache web server project, as well as other open-source efforts.

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## BUSINESS COMPUTER SERVICES

**Founder, CEO, CTO**

**Prior to 1995**

Served as an electronics/software engineering consultant, assisting major clients including NASA, IBM, Xerox, SAE, Moog, Infinity (Audio), Rusco Systems, Snap-on Tools, Bank of America (Security Pacific), Bank of New Zealand, the State of California and the U.S. Navy.

### Some Highlights

- Designed and built a fiber-optic subsystem for the *Voyager II* spacecraft.
- Designed a microprocessor instruction set for a programmable cardiac pacemaker.
- Coded embedded card reader system for *Rusco*.
- Designed the input stage for SAE's P50 & P300 sound reinforcement amplifiers.
- Designed and built a voice interface for a synthesizer for blind musician Stevie Wonder
- Built and operated modem-based BBSs from the late '70s thorough the early '90s.
- Designed and coded an early Windows interface for a commodities trading system.
- Built a successful white-box computer manufacturer that achieved industry-leading reliability records.

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## PUBLICATIONS

**Author:** Internet draft: AMPT, a new email standard designed to reduce the impact of spam (in progress); The CGI Book (1995, the first book published on the subject); OS/2 for Programmers (1986)

**Co-Author:** Creative HTML Design (1st Ed., 1998; 2nd Ed., 2001)

**Contributing Author:** Designing Web Animation (1996); Webmaster's Professional Reference (1986)

**Technical Editor:** Deconstructing Web Graphics (1997)

**Online Course Author:** Lynda.com (6+); Digital Think (3)