

# ROBERT B. WOODSIDE

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## EXECUTIVE SUMMARY:

A consultant with over 20 years' software engineering experience ranging from mainframes to Unix servers/workstations to PC's, seeking challenging consulting engagements in which to apply that breadth of expertise.

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## CONSULTING CLIENTS:

My consulting clients have included:

- IBM
  - New York Life
  - Document Systems, Inc.
  - Arthritis Foundation
  - Pepsico
  - Forest Investment Management
  - American Diabetes Association
  - Prevent Blindness Connecticut
  - Visiting Nurse Service of New York
  - QFS Asset Management, L.P.
  - Brookfield Technology Center
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## PROFESSIONAL EXPERIENCE:

1987 to **Woodsway Consulting**  
Present **Danbury, CT**

**POSITIONS HELD:** Consultant/Partner/President

## **PROJECTS:**

- I developed an AJAX-based Web front end for an investment firm's trading and risk management system, using JavaScript and XMLHttpRequest objects to provide a fluid and responsive interface to the back end via an XML message protocol. I also worked on the server side, using Smalltalk servlets under the Visual Wave application server and an MS SQL Server 2000 data store. For the front end I developed a browser-agnostic wrapper object and a queueing/dispatching and cross-page sharing infrastructure for the XMLHttpRequest, and a fast, native JavaScript implementation of the DOM 2 Traversal interfaces (*i.e.*, the TreeWalker) for DOM-challenged browsers like Internet Explorer.
- I developed a Web based savings analysis and reporting system for a software start-up, targeted at healthcare providers and their participating physicians. It was written in pure Tcl/Tk and including an embedded Web server, virtual filesystem, and PDF generation functions, wrapped as a Telkit/Starpack binary executable. Though targeted at MS SQL Server users, it could support various database servers via an ODBC layer.
- I developed XML-based TCP/IP servers (C/C++) and remote client interfaces (Java/Swing) for a software vendor, to interface to their legacy MVS batch applications under OS/390. The primary general-purpose server was a portably designed POSIX-style program, with compile options to allow it to be runnable either on Unix systems or under OS/390 as a batch job or started task. Under OS/390, non-POSIX extensions were used to handle tasks such as dynamic allocation and manipulation of MVS datasets, submission of internal reader jobs, etc. I also assisted the client with installation and configuration of OS/390 under FLEX-ES, debugging of the FLEX-ES software, and general system administration of their SCO Unix server.
- I developed an XML-based interface for a software vendor's external client programs to access legacy 3270-based CICS BMS applications via the CICS Web and 3270 Bridge facilities. This involved modeling the 3270 data stream, BMS entities, and the application data in XML structures to allow the client programs to concentrate on data manipulation and interaction, rather than presenting them with an old-fashioned "screen-scraping" interface. The project involved components written in C, C++, Assembler, and COBOL.

- I developed a generic TCP/IP listener and transaction router running under CICS for a major insurance company. This allowed the client to eliminate several intermediate layers of routing between user applications and remote CICS transactions, and greatly improved performance. Indeed, throughput was increased so much that I had to implement a user-settable transaction rate throttle, because some other system components could not handle the resulting speed.
- I have developed MS Office-based applications for several clients, utilizing MS Access, Excel, and Visual Basic, using both native Access databases and external database sources accessed via ODBC.
- I have developed numerous scripts in VBScript, Tcl/Tk, Perl, Unix shell, and PHP to automate or simplify various Windows and Unix system administration functions, such as monitoring of critical services, firewall configuration, intrusion detection, and reporting of Web server, mail server, and other network activity.
- I have been a Linux specialist since 1994, building numerous standard and custom systems, either based on standard distributions (RedHat, Ubuntu, SUSE, Debian, Slackware) or custom-built from scratch. I am expert at configuring Linux systems as network gateways, firewalls, and database servers in heterogeneous networks, and have done occasional kernel and module hacking (for the vfat file system and Tulip Ethernet drivers).
- I worked on the development team for an e-mail based distributed expense-reporting system under Windows and OS/2, written in C and interfacing with Exchange/MSMail, Lotus Notes, and GroupWise; and subsequently worked on a cross-platform re-implementation of that system, written in pure Java and independent of any 3<sup>rd</sup> party communications mechanisms, to run on the PC, Macintosh, and Unix systems. I also installed and administered the group's Solaris and AIX servers, and served as Unix consultant to the development group.
- I served on the design team for an *n*-tier, client/server application infrastructure to support a major new payroll system and to allow interoperability between legacy code and new development; developed the low-level portable system components and APIs, enforcing an object-oriented middleware approach within a conventional C programming environment; and also developed an infrastructure for developing "Y2K-safe" applications, and tools for testing Y2K-compliance - 10 years before it became fashionable.
- I was responsible for a CICS emulator for a major software firm - a standalone VTAM application that mimicked the CICS Command Level API to support the company's online products.
- I was one of the first to use mainframe C in RACF user exits (for an internal security project for IBM). I was also one of the first to use C under CICS, circa 1989 – before it was supported, which required some reverse engineering and building an assembler framework to mock up the C runtime environment and functions called by the compiler-generated function prologue and epilogue code.
- I worked on a redesign of IBM's Cryptographic Subsystem for MVS, and worked with the RACF development group.
- I have developed and conducted courses for clients in programming languages, telecommunications protocols and access methods.

#### **GENERAL:**

Principal in independent consulting business, specializing in telecommunications, operating system internals, portable software design, and networked client-server solutions.

I maintain a full Unix (Linux, Solaris, and FreeBSD) and Windows development environment on the company's intranet, including 2 Apache servers (Versions 1 & 2), an AOLserver, 2 Visual Wave Smalltalk servers (Windows and Linux), and the Macromedia Studio suite for Web development; SQL Server, PostgreSQL, MySQL, Sybase, and Oracle; the standard suite of Linux/Unix development tools (gcc, gdb, etc.), and Visual Studio for Windows development in C/C++, VB .NET, and C#.

I am regularly involved in Web site development projects, using Apache & IIS, Perl, PHP, and JavaScript, on Solaris, Linux, and Windows platforms, and Access/VBA development.

#### **OTHER ACTIVITIES:**

Author of **TkZip**<sup>®</sup>, a popular graphical archive/compression utility for Unix and Windows systems, (<http://woodsway.com/TkZip>). Built in Tcl/Tk for ease of maintenance and portability, it is arguably superior in many ways to its better-known Windows-only counterpart, WinZip<sup>®</sup>, and has been included with various Linux distributions.

I have been a member since 1998 of the development team for **FVWM** (<http://www.fvwm.org>), the most powerful and flexible window manager available for the X Window System, yet less resource-intensive than most.

I have contributed to many open source software projects since 1996 (see <http://www.woodsway.com/opensrc.php>).

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**1985 to 1987 Canaan Computer Corporation  
Trumbull, CT**

**POSITIONS HELD:** Senior Software Engineer

Unix-derivative OS kernel, virtual machine emulation, and microcode development for a manufacturer of IBM mainframe compatible computers.  
*Details available upon request; or at <http://www.woodsway.com/Resumes/bresume1.html#Canaan>.*

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**1978 to 1985 TSI International  
Wilton, CT**

**POSITIONS HELD:** Manager of Product Integration, Manager of Software Engineering, Product Technical Manager, Senior Product Specialist, Customer Support Representative

Various software development and management positions for a software vendor, whose products included TaskMaster (online transaction processor, a competitor of CICS in the 1970's & early 1980's), Key/Master (data entry system), Docu/Master (document storage, search and retrieval), and Data Catalog 2 (data dictionary).

*Details available upon request; or at <http://www.woodsway.com/Resumes/bresume1.html#TSI>.*

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**1975 to 1978 Associated Credit Services  
Houston, TX**

**POSITIONS HELD:** Senior Programmer, Programmer, Senior Computer Operator, Computer Operator

Various operations and programming positions for an online credit reporting service company.

*Details available upon request; or at <http://www.woodsway.com/Resumes/bresume1.html#ACS>.*

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<b>EDUCATION</b>	BA, English, Lamar University; Graduate study, Duke University
<b>HARDWARE</b>	IBM 360/370/390/z-Series, RS/6000, Sun, PC's, Intel processors, Motorola processors
<b>PLATFORMS</b>	Unix, Windows, Vmware, MVS, OS/390, z/OS, VM/CMS, FLEX-ES, CICS; TCP/IP, VTAM/SNA
<b>LANGUAGES</b>	C/C++, VB .NET, C#, VBA, VBScript, Java, Perl, Smalltalk, HTML/CSS, XML, SQL, PL/SQL, Unix Shell (Bourne, Korn, C), Tcl/Tk, REXX, PL/x family, COBOL, JavaScript, PHP, CGI programming, X Window & Motif programming, IBM 370/390/z-Series Assembler, Intel Assembler, Motorola 68000 Assembler
<b>SOFTWARE</b>	Apache, AOLserver, Visual Wave, IIS; ODBC, DB2, MS SQL Server, MS Access, PostgreSQL, MySQL, Oracle, Sybase; Macromedia Studio