



MICHAEL MAYFIELD

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Senior Solutions Architect · Senior Software Engineer

Software	Web/Internet	Platforms
C#/C/C++ · VB · Java · SQLServer · SharePoint · CRM	ASP.net · XML/XSL · HTML/DHTML · WebServices · JavaScript · VBScript	Windows · Android · Intel/AMD · PIC · VAX · Alpha · PDP-11

Summary of Qualifications

- **Exceptional Experience:** Over 30 years of professional experience and success in Information Systems and Technology. Experienced in architecture, design, development, and management of successful software products. Rated #4 Architect Evangelist world-wide by Microsoft.
- **Proven Results:** Architected and managed over 40 successful software development projects, with budgets ranging from \$10K to \$3.7M.
- **Consistent Success:** President/CEO of Northwest Digital Software, Inc. since 1979. Responsible for all aspects of business operation, including P&L, marketing, personnel management, and project management.
- Consistently produce exceptionally high quality results on schedule and within budget.
- Industry-leading expert and mentor in software development in .NET 1.1 – 4.0, Visual C#/C++, Visual Basic.NET, ASP.NET, SQL Server v6.5-2008R2, JavaScript/VBScript, and Win32 API.
- U.S. Federal Expert Witness in computer science and advanced programming.
- Developed four Top-10 products: DroidTV, WORD-11, RPM, and The LINK. Impeccable, proven track record.
- Top industry award winner, including sweeping IACA's *Best of the Web* in every category. This had never been done before and has not been repeated since.
- Excellent communications skills bridge the gap between management and developers. Work equally well with Board of Directors of a Fortune 100 company or manager of a small startup.
- Popular speaker on three continents. Author of three popular technical books and dozens of technical articles in several major computer industry magazines.



Objective

- Key position in project architecture, design, development, or management for technically challenging software development projects.
- Provide elegant and professional solutions to client needs.
- Work with your team or build a team for you to ensure successful project completion, on time and within budget.

Skills

- **Languages:** Visual C#/C/C++ v1.1-10, Visual BASIC.net v1.1-10, ASP.net, JAVA, JavaScript, VBScript, COM/DCOM/ActiveX, HTML/DHTML, XML/XSL, SQL, ADO.net, UML, DCL, PIC Assembler, x86 Assembler, VAX Assembler, Alpha Assembler, PDP-11 Assembler, MC68000 Assembler
- **Web:** ASP.net, ASP, HTML/DHTML, CSS, JavaScript, VBScript, sockets, TCP/IP protocol internals
- **Tools:** Microsoft Visual Studio.NET, .NET Framework 1.1 thru 4.0 (*including internals and beta tester for future versions*), Eclipse, Android SDK, Microsoft Office (*Word, Excel, PowerPoint, Outlook, Visio, Project*), Microsoft WinFX (*including Presentation Foundation, Workflow Foundation, and Communication Foundation*), Microsoft FrontPage, Microsoft Visual Source Safe, LLBLgen, PhotoShop, Internet Explorer, FireFox, RoboHELP, RoboHTML, Crystal Reports
- **BackOffice:** SharePoint (WSS/MOSS), Microsoft CRM, Internet Information Server (*IIS*), Visual Studio Team Suite Server, Microsoft Message Queue Server, Exchange Server, Proxy Server, BizTalk
- **Database:** Microsoft SQL Server (*6.5-2008R2*), ODBC, ADO/DAO, Microsoft Access, OLEDB
- **Operating Systems:** Windows 7, Vista, XP, Server 2000-2008R2, OpenVMS, RSTS/E, MacOS
- **Platforms:** .NET 1.1 thru 4.0, Windows-32/64, Android, x86, MicroChip PIC, Alpha, PDP-11, MC68000, VAX, Macintosh
- **Documentation:** Created architectural, functional, design, and technical specifications, use cases, user documentation, and online help for dozens of projects and products. Author of three popular technical books and dozens of technical articles
- **Interpersonal:** Excellent communications skills provide efficient bridge between management and developers.
- **URLs:** <http://mobile.msn.com>, <http://www.studentambassadors.org>, <https://fortress.wa.gov/ini/arts/Menu/MainMenu.asp>, <http://www.dol.wa.gov/unfc/uccfront.htm>, <http://www.SweepsWizard.com>, <http://www.Gateway.com>.

Products and Services

- **Expert Witness:** Provided expert witness analysis and testimony on multiple patent infringement actions. Accepted by the 9th Circuit Federal court as an expert in computer technology. (*Floyd & Buss, LLP: 06-12/2009*)
- **US Pentagon – Task Management Tool:** Solutions Architect and senior developer on the Task Management Tool (TMT) project. The resulting product is in use by the Multinational Force in Iraq (MNFI), US Air Force, and US Marine Corp and is now being planned for use across all branches of the US military. Received award for technical excellence. Technologies include Microsoft CRM with custom C#/ASPX/SQL extensions. (*Ascentium: 09/08-01/09*)
- **DroidTV:** Application that turns an Android phone into a DVR and TV, allowing network television episodes to be legally recorded from web sites and viewed on a user's Android smart-phone. (*PVRCom LLC: 06/2010-Present*)
- **Scuba Diving Computer:** Designed and implemented hardware and firmware for a talking dive computer with inertial navigation for scuba divers. (*Digital Dive Tech: 01-06/2010*)
- **Washington State, Public Works Board (CTED):** Solutions Architect responsible for design and implementation of the new PWeB loan management system. The resulting product was found to be substantially more flexible than anticipated and is now being planned for use by several other state agencies. For more information, see <http://www.pwb.wa.gov> (*WA Public Works Board: 08/06-12/07*)
- **Microsoft MSN Mobile:** Senior Developer (SDE4) responsible for various infrastructure enhancements for the core and reporting services of the MSN Mobile web site. Improved identification of wireless carriers by over 80%. (*Microsoft Corporation: 08/05-12/05*)
- **Ambassador Programs, Unified Database:** Senior Architect responsible for complete re-architecture and replacement of all major in-house systems. Ambassador Programs is an educational travel and student exchange organization founded by President Dwight Eisenhower and chaired by every sitting president since that time. This was a high-visibility, mission-critical project with a \$3.7M budget. (*Ambassador Programs, Inc: 03/03-07/05*)
- **Washington State, Department of Labor and Industries:** Architect and team leader for the ARTS Apprenticeship Registration and Tracking System project. After 15 months of an 18 month project, I was brought in to recover this failing project. In three months, the project was redesigned from scratch and developed within the original schedule using a team I built. The project was delivered within the original deadline under a fixed bid. For more information, see <https://fortress.wa.gov/lni/arts/Menu/MainMenu.asp>. (*WA Dept. of Labor and Industries: 08/02-11/02*)
- **Washington State, Department of Licensing, UCC:** Architect and team leader for complete re-engineering of all Uniform Commercial Code (UCC) activities. Replaced an IBM mainframe system with an enterprise-level, client/server solution. One of the largest projects in Department of Licensing for 2001. The resulting solution was "better than we ever dreamed", with typical processing times reduced from over two weeks to less than one day. Received IACA's *Best of the Web 2001* award in every category. For more information, see <http://www.dol.wa.gov/unfc/uccfront.htm>. (*WA Dept. of Licensing: 10/00-08/01*)
- **Microsoft Home:** Showcase home of the future used by Microsoft to explore home-based technology. Bill Gates first introduced this "home" in a live video feed at CES in Las Vegas. It is used to highlight Microsoft's vision of future computing to industry VIPs in Microsoft's Executive Briefing Center. I was responsible for designing and creating middleware that provided access to all the hardware in the home by making the hardware look like an integrated XML structure. Written in JavaScript and C++, plus associated programming in Visual Basic, DHTML/JavaScript, and

ASP/JavaScript. For more information, see the article in [USA Today](#) or [Yahoo](#) or visit <http://www.microsoft.com/mshome>. (*Microsoft: 10/99 – 6/00*)

- **WORD-11/WS-11:** The industry-standard program for word processing on DEC VAX/Alpha OpenVMS and PDP-11 RSTS/RSX/RT11. This was a Top-10 program several years in a row and was still in use in many sites after a 25-year life. WORD-11 was originally determined by HP/Compaq-Digital to be impossible to write for the target environment, but has since gone on to generate millions of dollars in sales. Written in DEC C and assembly language. (*Data Processing Design: '77-'79*)
- **The LINK:** Provides tightly-coupled multiprocessing for PDP-11 RSTS/E systems. Up to 15 computers can be clustered to increase the potential number of users supported from 63 to 945. Written in PDP-11 assembly language. This was a Top-10 product and enjoyed a 90% market share. (*Northwest Digital: '85-'95*)
- **RPM:** The RSTS Performance Monitor. Artificial Intelligence techniques are used to automatically analyze system performance, identify the cause of problems, and suggest a solution in the form of an easy-to-read report. Problems are identified down to individual system calls within specific programs. This was a Top-10 product. (*Northwest Digital: '89-'95*)

Work History

Northwest Digital Software, Inc.

1979-Present

61 Bigfoot Road, Newport, WA 99156, 509-447-5631

President/CEO

Founded the company in 1979 to provide quality in-house software development and outside consulting services. This software development and consulting company has lead the industry with a record of extremely high quality and exceptional customer satisfaction. Responsible for all corporate activities, including P&L and management of employees. During over 30 years of continuous operation I have been directly responsible for many successful in-house and consulting projects and products, including four Top-10 products. I have also received several national awards for excellence, including sweeping IACA's Best of the Web in every category.

Much of the work history shown below was undertaken under contract to Northwest Digital Software Inc.

PVRCom LLC

06/2010 - Present

61 Bigfoot Road

Newport, WA 99156

Solutions Architect

Designed and implemented DroidTV, an application for Android smart-phones that legally records and plays television shows on Android smartphones. It works similar to a DVR, recording from Internet web sites. Top-10 app in the Android Market, with nearly a million downloads. Architecture provides for use by millions of users, accessing multiple, geographically distributed servers. Program was written using Android SDK, Java, C#, SQL, and ASP.net. Designed and implemented hardware infrastructure distributed internationally across three facilities.

Inland Northwest Health Services**09/2010**

*PO Box 649
Spokane, WA 99210
Solutions Architect*

Provided analysis and optimization of SQL Server 2005/2008 performance on an in-house multi-server farm. Developed tools for display of medical data on dashboards.

Parallel Networks LLC**05-06/2010**

*100 E Ferguson St, #602
Tyler, TX 75702
Expert Witness*

Provided technical analysis and expert witness report on patent infringement claim. The specific patent information is confidential.

Digital Dive Tech**01-06/2010**

*61 Bigfoot Road
Newport, WA 99156
Solutions Architect*

Designed and implemented the hardware and firmware for a talking scuba diving computer. This computer calculates safe depth and time limitations for divers and uses inertial navigation to continuously determine the user's location relative to their entry point so they know the course needed to get back to the boat. Hardware uses PIC32 microprocessor and various gyroscope, accelerometer, and compass integrated circuits. Firmware written in PIC-C.

Floyd & Buss, LLP, Attorneys at Law**06-12/2009**

*5113 Southwest Parkway, Austin, TX 78735
Adam Floyd, Senior Partner, 512-681-1500
Expert Witness*

Provided technical analysis on multiple patent infringement claims. This required deep research into the internals of the .NET Common Language Runtime (CLR), .NET Just-in-Time (JIT) compiler, and proprietary source code for the CDMA protocol used in the firmware of most cell phones. On Dec. 11, 2009 I was accepted by the 9th Circuit Federal court as an expert in computer technology and testified as an expert witness in Talton v. Qualcomm, Verizon, Nortel, et. al.

Ascentium**12/2007-01/2009**

*518 W. Riverside, Spokane, WA 99201
Kim Pearman-Gillman, Director 509-209-2228 Kim.Pearman-Gillman@ascentium.com
Solutions Architect*

As a Solutions Architect, I researched and helped clients envision possible solutions to their current and future technical needs. I designed and specified the software and hardware architectures needed to implement the chosen solutions, ensuring robustness and the ability to handle future growth and changing requirements. I then worked with an Ascentium or combined Microsoft-Ascentium team to ensure consistent best practices for delivering projects that bring the needed disciplines together.

Projects included software architecture design, advanced programming development, and strategic technology roadmap planning for various clients. As an expert in many technical disciplines and Microsoft product stacks, including SharePoint and MS-CRM, I provided a trusted resource for customers and internal Ascentium teams. My TMT project was awarded the Pentagon's highest award for technical

excellence. Customers gave every project I was involved with a perfect 10 out of 10 rating. Ascentium is Microsoft's #1 CRM consulting partner worldwide.

Washington State, Public Works Board**08/2006 – 12/2007**

Olympia, WA. 98504

Terry Davis, Finance & Policy Manager, 360-586-4124, Terry.Davis@pwb.wa.gov

Architect, Lead Developer, PWeB Project

The PWeB project was a complete redesign and replacement of the Public Works Board's loan and grant management system. The application was a mixture of ASP.net 2.0 web and Office (Word/Excel) form data extraction. The web site consists of over 600 screens, plus automated backend processes and services. A custom library of web controls was developed that allowed creation of web pages with automatic generation of database access and business rules to reduce or eliminate the need for code-behind programming. A dynamic query builder and report merge allowed creation of reports by non-technical users without programming. Development was in C# v2.0, SQLServer 2005, XML, and DHTML.

Washington State, Department of Labor & Industries**06/2006 – 07/2006**

Tumwater, WA. 98504

Mark Delaplaine, L&I Chief Architect, 360-902-5892

Architect, Smart Client Project

Responsible for designing the enterprise-level architecture for Smart Client mobile computing for all future Labor and Industries projects. Deliverables included:

- Occasionally-Connected Smart Client design and specification
- Definition of reference application to be developed by LNI

Microsoft – Architect Evangelist**01/2006 – 05/2006**

One Microsoft Way, Redmond, WA 99052,

Warren Wilbee, ISV Architect Evangelist, 719-232-7810, wwilbee@microsoft.com

Architect Evangelist Level 4

As an ISV Architect Evangelist I was responsible for improving partner satisfaction and accelerating Microsoft platform adoption by providing architectural guidance for 80 of Microsoft's Top-2% managed ISV partners. The position required an intense knowledge of overall architectural and design best-practices, with an emphasis on new, about-to-be-released technologies. Technologies emphasized included Visual Studio 2005/2008, SQL Server 2005, Windows Vista and Longhorn Server, Office Enterprise 2007, WinFX (*now Windows Presentation Foundation (WPF)*), *Communication Foundation (WCF)*, and *Workflow Foundation*), SharePoint, BizTalk and other emerging Microsoft platform products. All ISV partner contact was with key technology decision makers, typically at the CTO or CEO level. Within four months, I became the #4 evangelist in the world for FY06, eclipsing other evangelists that had worked for the entire year.

Microsoft – MSN Mobile**08/2005 – 12/2005**

One Microsoft Way, Redmond, WA 99052,

Zankar Thakar, SDE Lead, 425-706-1028, zankart@microsoft.com

Software Development Engineer Level 4 (SDE4)

Senior software developer on the MSN Mobile server system. This system provides all access to MSN Mobile for all cell phone access world-wide.

- Designed and developed an ASAPI filter to identify the carrier for all cell phone transactions using MSN Mobile. Improved identification of wireless carriers by over 80%. Programming was in C# v1.1 and v2.0, plus unmanaged C++.
- Used by 10 million users, world-wide.
- Goal was to not impact performance by more than 10%. As implemented, the impact was so low it was not statistically measurable.
- Responsible for various infrastructure enhancements for the core and reporting services of the MSN Mobile web site (<http://mobile.msn.com>).

Ambassador Programs Inc.

04/2003 – 08/2005

Dwight D. Eisenhower Building, 110 S. Ferrall St., Spokane WA 99202, 877-787-2000

Robert Folie, Vice President, Information Technology, robert.folie@ptpprograms.org

Senior Architect, Lead Developer

Responsible for complete re-architecture and replacement of all major in-house systems, including personalized mass-mail marketing, travel reservations booking and services, customer relations management, incident response management, and delegate assistance.

- Designed and specified all portions of these programs
- Created or prototyped most of the user interfaces and supporting libraries
- Developed the most critical portions of the programming

Ambassador Programs is an educational travel and student exchange organization founded by President Dwight Eisenhower and chaired by every sitting president since that time. They send an average of 30,000 students and professionals on international, educational travel each year. This was a high-visibility, mission-critical project with a \$3.7M budget. The resulting products from this project have already been responsible for a 20% increase in revenue.

The project was completely .NET based, with a combination of VB.net, C#, and JavaScript using ASP.net and Windows forms, plus Interop with custom C++ libraries.

Washington State, Department of Labor & Industries

01/2003 – 06/2003

Tumwater, WA. 98504, 360-902-5954

Tom Cresia, Project Lead/Manager, tcresia@dol.wa.gov

Architect, Lead Developer, ARTS Project

The Apprenticeship Registration and Tracking System (ARTS) system provides comprehensive automation support to the administrative arm, L&I's Apprenticeship Program, serving apprentices in over 100 occupations and 270 apprenticeship programs. The application was developed using Microsoft Visual Studio (DHTML, ASP, VBScript, JavaScript) and MS SQL Server 2000. Several custom objects were used to assist in page creation, look-and-feel, database access, and validation. Took over this failing 18-month project. Re-worked entire project and completed in 6 months, meeting the original deadline.

SayNoToSpam

10/2001 – 07/2002

Northwest Digital, Newport WA, In-house, Architect/Developer

Completely eliminates spam and viruses from Email using a technology I patented. Responsible for all phases of technology, including architecture, all programming, web site design, and web development. Lead a team of two web developers and one business developer. Wrote primary server code, critical sections of the ASP code, and an ATL OCX. Lead a team of three people in development and coordinated with business development and marketing. Written in C++ with web support in DHTML/JavaScript and DHTML/VBScript. Marketed on the Internet at <http://SayNoToSpam.com>.

Washington State, Department of Licensing, UCC
405 Black Lake Blvd #2, PO Box 9020, Olympia WA 98502
Janie Peterson, 360-664-6538, jpeterson@dol.wa.gov

10/00 – 09/01

Architect, Team Leader

Complete re-engineering of all Uniform Commercial Code (UCC) activities. Replaced an IBM mainframe system with an enterprise-level, client/server solution. One of the largest projects in Department of Licensing for 2001. The resulting solution was "better than we hoped for", with typical processing times reduced from over two weeks to less than one day. Received IACA's *Best of the Web* award in every category (*the only time this has ever been achieved*). For more information, see <http://www.dol.wa.gov/unfc/uccfront.htm>.

Microsoft – Microsoft Home

10/1999 – 06/2000

One Microsoft Way, Redmond, WA 99052,
Jonathan Cluts, Lead Program Manager, 425-936-4048, [jnc@microsoft.com](mailto:jonc@microsoft.com)

Software Developer (SDE3)

Showcase home of the future used by Microsoft to explore home-based technology for the future. Bill Gates first introduced this "home" in a live video feed at CES in Las Vegas. It is used to highlight Microsoft's vision of future computing to VIPs in the Executive Briefing Center. Responsible for middleware that provided interface to all hardware in the home by all user interfaces by abstracting all hardware into an integrated XML structure. Written in JavaScript and C++, plus associated programming in Visual Basic, DHTML/JavaScript, and ASP/JavaScript. Part of a team of six developers and three hardware support engineers. For more information, see the article in [USA Today](#) or [Yahoo](#) or visit <http://www.microsoft.com/mshome>.

Sample Customer List

- Microsoft
- State of Washington
- Ambassador Programs, People to People
- Times Publishing
- Ford Motor Corporation
- British Aerospace
- Ronald Reagan, President of the United States
- US House of Representatives
- US Air Force, US Navy
- Uncle Bens of Australia
- HP-Compaq-Digital
- Taj Mahal
- The United Nations
- Over 100 others

Education

- BS Computer Science, *cum laude*, (Minor: Electronics Engineering), University of California, Irvine
- Masters, Business Administration (partial), University of California, Irvine
- Taught computer science at University of California, Irvine and Spokane Community College, Spokane WA



References

- **Adam Floyd**
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512-681-1500, AFloyd@fblawllp.com
- **Warren Wilbee**
ISV Architect Evangelist, Microsoft Corp.
One Microsoft Way, Redmond WA 98052
719-232-7810, wwilbee@microsoft.com
- **Jonathan Cluts**
Lead Program Manager, Microsoft Corp.
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509-534-6200 x7402, Robert.Folie@ptpprograms.org
- **Tom Cresia**
Project Lead/Manager, Washington State Department of Licensing
Tumwater, WA 98504
360-902-5954, tcresia@dol.wa.gov
- *Letters of recommendation and additional business and personal references available on request.*