

## **Resume**

Gary Frederick  
gary.frederick@jsoft.com

### **Summary:**

Web Applications: XML, XSL, XHTML, SVG, CSS, XPath, W3 DOM, Java, JavaScript, AJAX, JSP, Dynamic Web pages, Web Servers.

Languages and tools: Javascript, Java, Subversion, C, C++, Objective C, Python, PHP, Perl, NetBeans, Eclipse, IDL, UML, Modula 2, Ant, various others.

Middleware: JAX-WS, WSDL, CORBA, J2EE Application Servers, Apache, Tomcat, WebLogic 5.1, jBoss 2.1, jms, jdbc, Tuxedo, Visibroker CORBA, proprietary ORBs, IIOP, MQSeries, JMS, DCE.

Misc: MySQL, Informix, DB2, Oracle.

Other experience: Distributed Computing Architecture, Security, Application Management, Project Management, Mentoring/Training, OOP/OOD, various Linux, Solaris, Windows NT Server, RMI, Samba, ldap, ssl, kerberos.

### **Work Experience:**

#### ***Jefferson Software, Consultant. 2001-Present***

Consulting, primarily small businesses and non-profits, helping them set up or enhance their web sites and advising in other aspects of computers for their businesses. Demonstrate ways to use their setup more efficiently and introduce them to technology tools and resources. Teach them how to create web pages and how to use various tools including calendars/photo albums, blogs, info feeds.

Implemented website/email/DNS and computer applications/tools including spreadsheets for reporting non-profit activity. Used DNS and system management tools to set up their site. Discussed ways for non-profit to advertise their sites and network with various resources in their area. Demonstrated various ways to set up web pages such as bilingual web pages for ESL, job training services, volunteer/sponsor forms and other pages. Discussed benefits of online newsletters, blogs.

Migration of small business to different provider including dns/email, cleaned up existing website, added photos, php forms, better site navigation. Advised on install and set up of accounting/CMS software.

Assisted small cottage business with computer set-up, email configuration. Demonstrated how to use calendars and photos tools to use on their web site.

Web developer creating and debugging web pages that used hand coded HTML, JavaScript and JSP. This was a short contract. The client needed some help right away. I stepped in and helped them with minimal input on their custom system.

Helped the client with understanding how to use Java Messaging Service (JMS) and Web Services (Java JAX-WS and WSDL). Wrote a WSDL that could interface with the customer's SOAP servlet by generating clients in Java and a limited client in C#.

Designed and wrote a client view for a hotel reservation system. The client worked with a custom API and generated XML that was sent to a web page. The web page took the XML and used XSLT and JavaScript to

display a complex calendar of information. The code on the server was Java.

Designed and wrote a light weight chat client for use in a help desk system. The client uses JavaScript, XML and DOM and communicates with a Java servlet web application running in Tomcat on a server. Developed several test systems including a servlet, a php/MySQL server and a test setup using XML files. This enables clients to see various ways to use the software.

Worked on an open source, multi-platform (Windows, Linux, Mac) educational software tool that will help others learn about programming, and can translate programs in one language into various others. It will use Eclipse IDE or can be viewed in an XML/XSLT/SVG supported web browser.

Taught Robotics classes at Montgomery Community College and a private school youth camps, and mentored local Robotics Teams.

Project Manager and contributor on open source projects. These included Groupware for the OpenOffice.org and Mozilla projects. I initiated an open source project to define an XML application used to program in a visual language and be viewed in Java, C, and other computer languages.

Designed a web site to display qualifications for employees using XML to describe information, XSL for site generation, pdf for creation of identification cards, and JavaScript/Java/e-mail web pages to provide database functionality without a server.

Consultant for an organization to upgrade outdated business software to use current technology. The new version will also support future additions of new technology. The solution involved replacing the database engines that parsed business logic with ones that support like functionality while working with web services. The presentation side uses web technology to present information to the users.

### ***International Interactive Commerce, Senior Architect. 2000-2001***

Team Lead and Mentor, assisting others build reference applications in various environments including b2b, p2p, and distance learning. Helped consultants apply a reference application using WebLogic/ DB2/ Cocoon as a front end and jBoss/Tomcat/Cocoon as client applications. J2EE/EJB was utilized for session and entity beans, and Java localization to provide multi-lingual support targeting HTML, PDF and WML clients. Developed in Java and XML and deployed on Solaris and NT.

Guided the use of J2EE/EJB and jsp/servlet technology and provided application debugging and resolution of configuration issues. Led the software resolution team for a Boeing project.

Senior Solutions Manager for a seven member, multi-national team building J2EE applications, successfully delivered ahead of schedule. Managed the training and certification effort for professional services using software interfaced with distributed applications. Using primarily WebLogic/DB2, teamed with the Korean customer to gather valid requirements with a graphic artist web designer to make more useful interface developed in Java and deployed on Solaris and NT.

### ***Petris, Senior Architect 1999-2000***

Developed an application for oil and gas exploration companies. Resolved basic design flaws and those in CORBA middleware, enabled system deployment, and teamed with two other senior developers on new system design and framework. The framework was scalable and components could restart to give the system

fault tolerant characteristics. The components used CORBA in the middle tier and were designed to be easy to modify to add to a EJB system. Used Java, XML and C++. Developed on Solaris.

Petris was not a large company. When the developer that was responsible for a major portion of their web site left, helped by taking over his work until they found a replacement.

Also provided input on the architecture of other software applications including those impacting Y2K issues, and general areas such as application servers and security software. Researched XML and related technology and reported findings to the developer and marketing staff. This enabled them to make more informed decisions without spending a lot of time researching issues individually.

### ***Bank Of America 1998-1999***

#### **Vice President Middleware Technology Specialist**

Primarily person responsible for CORBA based middleware within the domain of Global Commercial and Investment Banking's (GC&IB) software development. This included the ORB and software directly related to ORB functionality and had a major impact on all middleware. Used Java and C++. Worked with groups using HP/UX, Solaris, NT, AS400.

Responsible for setting the education strategies including setting-up appropriate hands-on training for developers, operations personnel, and management that enabled them to understand the impact, use, and management of middleware to ensure that implementation of middleware in the various departments was a coordinated effort. Developed a mentor relationship with the various teams.

Identified and made recommendations on middleware standards. Worked with the various groups to achieve consensus on standards and was to document and publish the standards.

Worked with developers or production support to help troubleshoot problems. Helped identify and resolve problems. Documented and published the information and worked with vendors to make information from the vendor available.

Responsible with others for vendor coordination. Was primary contact with the ORB vendor, setting priorities and scheduling follow up activities with them to assure timely resolution of problems.

Responsible for overseeing licensing requirements. Met with the various teams to determine development and production needs and help ensure development and deployment went smoothly.

Worked with the group building management software, production support team and vendors to build a comprehensive plan to manage middleware in the bank's production environment.

Was the most senior member of the Technical Architecture team in respect to middleware and helped other members of the team. Provided help with MQSeries and application server middleware.

### ***Worldcom Inc. 1994-1998***

#### **Project Lead Domain Component Servers 1997 - 1998**

Responsible for project management of a team developing servers to vend domain components in the group that was the most successful at deploying systems with new technology. Responsibilities included planning the development and deployment schedules, identifying problems and proposing solutions, and determining the support organization requirements to enable a smooth transition of the project to those groups after

deployment. Worked with users. Designed interfaces in IDL. Built example interfaces for the developers to use. Modeled the system, both for internal and external use in UML.

Prototyped Tuxedo, to solve issues with the middleware and with security.

Suggested improvement to the business analysts, both process and content.

Interfaced with vendors, both for project and for enterprise wide licensing and deployment.

The components were developed with C++ and primarily deployed on AIX.

### **Facilitator 1997 - 1998**

In addition to assigned duties, initiated brown bag lunches to discuss technical and business topics. Helped others give talks about their areas of interest and expertise. Gave talks about middleware, IDL and interface specifications and the architecture of components. This was a very satisfying experience. It did not have any support from management, but management was ready to help in any way they could if we had wanted more than we could do ourselves. Part of the satisfaction came from bringing together different parts of the company. Would find someone doing business analysis and bring them in to talk with developers. It gave everyone a better feel for what those people in the other parts of the building were doing and built a sense of team that did not come about from the company picnic. Performed similar activity in other jobs.

### **Member of the Technical Staff 1996 - 1997**

WilTel was acquired by LDDS and the company became Worldcom. Member of the Enterprise Architecture Group that was formed to explore the general direction of technology uses and assess the potential impact on Worldcom. These technologies included:

#### **CORBA**

Worked with ORB vendors, primarily NeXT, Iona and Sun and gave input from a customer point of view on the NeXT ORB. Coordinated with Sun to help a team of developers learn about Sun's ORB and to give input on how we would like to combine the benefits of our proprietary ORB with Sun's OR. Also served as Worldcom representative to the OMG until company changed their focus to MQSeries.

Built a prototype IIOP bridge that allowed a standard CORBA ORB to communicate with our proprietary ORB for the CORBA 2.0 spec release. Learned the IIOP protocol, understood the architecture of an IIOP protocol test tool and built the IIOP 'half bridge' in Objective C in under three weeks. The bridge was not a full implementation, it was to be used as a reference to build a full implementation.

Proposed and facilitated a project to put Iona's Orbix ORB on IBM's MQSeries message oriented middleware. This included working with Iona, IBM and consultants. The company had selected IBM's MQSeries as the primary middleware. Proposed using Orbix on MQSeries to provide all the standard interfaces that CORBA had on the messaging middleware MQSeries provided.

Evaluated existing and emerging security technology.

Worked with various RSA toolkit, building security prototypes to evaluate security issues. Worked with Netscape servers evaluating issues with LDAP and web based security. Designed and prototyped some authorization software. This was to look at solutions to replace an existing system and to provide a path into security needed by both distributed systems and web based applications.

Evaluated the impact of web technology on Worldcom's server architecture

Worked with Netscape's servers, evaluating the aspects of web technology that was similar to our server architecture. Worked with JavaSoft's Java Web Server (JWS). This was to get a feel for JWS and to gain some understanding of servlet technology. Worked with LDAP, both slapd and the Netscape Directory

Server.

Evaluated DCE and initiated a project to evaluate if Worldcom should move to DCE.

Set up a team that prototyped DCE. Provided some input to the team once they were underway. Although the team didn't complete their recommendation, the project was still worthwhile. Helped summarize some of the results of their research. Evaluated Kerberos briefly as part of the security evaluation. Evaluated modeling methodologies

Determined that Use Cases were a technology that was going to become standard and recommended Worldcom add them to the development process. Helped set up a presentation by Ivar Jacobson. Evaluated other modeling methodologies and made recommendations to the methodology team.

### **Lead of a team that built and supported a proprietary ORB 1995**

Team Lead for a group had developed a proprietary ORB. Determined the direction the department should go with middleware. Planned a migration from the proprietary ORB to CORBA. I worked with NeXT on issues common between our ORB and NeXT's ORB. Coordinated with Sun to move from our ORB to their CORBA ORB.

### **Tool developer 1994**

Developer in the Advanced Technology Group of WilTel group that worked on issues related to the development environment.. This group was one of the first to develop software to work with NEC ATM switches. The software was primarily on NeXT computers. This enabled the applications to be very innovative and they were a leader in object oriented technology both for the rest of the company and in general. The NeXT platform was innovative, but many tools were not available and we worked on everything from a project to transfer the ATM technology to Nippon Telephone and Telegraph (NTT) to working on configuration management software to working with vendors to integrate tools such as the Paradigm Plus CASE tool into our environment.

### **Pencom 1993 - 1994**

Brought up some tools that evaluated object code to determine if it was standards conformant by looking at what libraries it linked and at other aspects of standards conformant code. For example, it tested that calls were made following the standard calling convention for that chip. The original software was written for the Motorola's 88K, our contract was to convert it to HP's PA-RISC architecture. Came up with a better architecture for doing the job. It turned out it was similar to what sun had independently done to test their SPARC chip.

Helped with a proposal to a standards body to do something similar for IBM's RISC chip.

Also help finish writing a ToolTalk class for a contract with Sun. Had to teach myself ToolTalk and learn how to write tutorials that conformed to Sun's standards in less than a month. Taught one class.

### **Consulting 1992 – 1993**

Consulted on the AMD 29K RISC chip family. One consulting engagement was with a company providing hardware and software tools for people doing both the AMD RISC chip and others.

Worked with the company that was providing AMD's third party training, helping to update the training to reflect more current software engineering practices.

Worked with a company that was programming the controls on machines that built computer boards for Motorola and others. I helped them learn some more modern software engineering practices.

Helped a company that built fuel depots. They were using OS9 to provide the real time controls. Cleaned up a system and helped them learn some more modern software engineering practices.

### **Honeywell Commercial Flights 1989 - 1992**

Started as a contractor working with the team developing the displays for Honeywell's collision avoidance system. Created a simple language to generate the machine code for a custom Intel graphics processor and helped design parts that interfaced with the voice alarms. Helped other members of the team, mentoring them in software engineering and development. Assumed role of team lead when the team lead was gone.

Team lead

Converted to a full time employee to become part of a team that was to work on an Ada compiler that targeted the AMD RISC chip family. Soon took over team lead for the team that was supporting C tools. Honeywell had a very big contract to do the controls, the 'wire', for Boeing's 777 project. Selected a compiler and tools that would provide the extensive information the FAA required. I was one of the people working with AMD and developed a good working relationship with them, even when I pointed out a serious problem with their plans to migrate to an architecture that would not fit into Honeywell's plans.

### **Consultant Jefferson Software 1985 - 1988**

Licensed Wirth's Modula 2 compiler and modified it to run on personal computers such as the Atari ST. The target market was developers that wanted a more advanced language than the C or Pascal compilers that were available at that time. Also learned other aspects of the business while developing.

### **Genrad 1983 - 1984**

Genrad was designing a hardware box, an ICE, to monitor and debug members of the 80xx family. It would be used by technicians in the field to debug hardware problems. The language was an interpreted C. It was designed to be very easy to use, with technicians modifying existing testing software in the field to analyze hardware that was a little different from standard hardware. The development was done on Vax computers and downloaded into their hardware boxes to run.

### **Honeywell PMSD 1982**

Responsible for Pascal compilers that targeted both a proprietary chip set and the Motorola 68020. The compiler was derived from an existing compiler and Honeywell contracted the port. Helped development teams when they had problems. Taught myself Pascal and the technology used in the Pascal compiler as part of the job.

### **Capex 1979 - 1982**

Programmer. Capex has written software tools to monitor IBM's IMS database. Learned IBM assembler and would implement designs that added new functionality to the IMS monitoring software. I was not given much input on how to actually write the software, I had to discover how to do that myself. I learned a lot about debugging while working on this project.

Capex started when some developers wrote what was the second spreadsheet to be commercially available. They missed being first by a few weeks. They decided to build the next generation of their modeling software on a new workstation that HP was about to release. I was given the job of designing and developing major parts of the new modeling software. I discovered features in the HP workstation and problems with the language HP developed for the workstation. HP invited us to their labs to learn more about their system.

### **Access Data Systems 1978 - 1979**

Access was a small company that provided on-line accounting software for credit union companies. Was hired to write software for the company. Taught myself COBOL and an Algol like systems programming language that Burroughs used to write the operating systems. Learned about managing the lines to the remote systems with monitoring hardware. Because we were so small, helped with everything from operating the computer to collating monthly reports when nobody else had the time.

### **Del Webb 1977 - 1978**

Del Webb owned casinos in Nevada. They bought 4 Phase hardware to run their accounting software. The system would collect data from the casinos in Nevada and send them to Phoenix. Hired as a computer operator. I read the manuals and wrote a set of programs to transfer the information that were much more efficient than the existing setup. They replaced their software with mine and promoted me to computer operator. I learned to operate a Burroughs mid range system at that time.

### **Other:**

Gave talks and provided a mailing list for the software engineering community in Houston. The talks were given to the ACM group on CORBA, IIOP and security.

BS Math/CS Arizona State University 1982