Shawn Sheldon

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**Professional Summary**

Senior Software Engineer/Architect with nearly 20 years of professional experience working in both public and private sectors. Mix of business applications development as well as highly technical domains. Technical domains include telecommunications (advanced automated testing at AT&T) and bio-tech (Computational Biology Group at Pharmacia and TPS group at Monsanto). Business experience includes web and IVR/CTI application development. Have built web applications with a myriad of technologies throughout my career and have stayed very current in Java technologies, C#/.net, Android and the emerging Ruby/Rails side of the fence.

**Strengths**

* **Strong team player**
* **Experienced and highly capable technical/team lead**
* **Excellent researcher and problem solver:** Typically the go to guy for solutions to difficult technical problems.
* **Architecture (HLD and DD):** Have participated in and led the architectural design for many software systems--from billing systems to complex automated testing systems to IVR systems and web sites. Continue to remain very much involved with the actual coding as well. Generally, my designs are at least proto-typed and other team members trained in them if I’m not actually working side by side with them and mentoring/influencing along the way (usually the case). I firmly believe architects should be actively involved in projects even if not coding. In my most recent positions, I took on the architect responsibility (while concurrently serving as the technical lead) for both projects at Elsevier.

**Technical Skills**

# **Languages**

Java (update to current version 7) , Ruby, C/C++, Visual C++ and C# 5.0/6.0/.Net, STL, HTML, JavaScript, JSTL, JSP, UNIX Shell Programming (sh, ksh, bash, AIX), Perl, Lotus/VB Script, Modula-2, X/Motif, XML, VoiceXML, XQuery and XPath, XSLT

# **Methodologies**

Test Driven Development (have had on-site training in this in addition to work experience—used at Asynchrony, Monsanto, Express Scripts and Elsevier), Agile Development, and traditional (i.e. waterfall). Most projects tended to be a mix of Agile within the development team and that interfaced to waterfall at the business level—some call this iterative development.

# **Hardware**

IBM PC & Compatibles, IBM RS6000, Sun Spark Stations (5, 20), Token Ring, Ethernet, Cisco Routers, Dialogic, TI micro boards

# **Software/Platforms**

IntelliJ (all versions since 7), Eclipse (up to date), Eclipse CDT plug-in (for C/C++), Groovy/Grails (pure Java alternative to Ruby on Rails), Rails (current), Code Composer Studio (for TI micro board integration of C programs), ThinkMap SDK, EASE CT, Lotus Notes (Client, Designer and Administrator), Visual Café, JBuilder Foundation, Enhydra, FrontPage 97/98/2000, Visual Studio 5.0 to current, CVS, Subversion, ClearCase, Microsoft Visual Source Safe, MKS (Tracker, Toolkit and Source Integrity), MS Office and MS PowerPoint, Rational Rose, Visio, Netscape Enterprise Servers, IIS 2.0/3.0/4.0, Apache/Tomcat, Pronexus VB Voice 5, ASP2.0/3.0, Borland C++, VXML platforms (VoiceGenie, Voxeo, BeVocal), WebLogic, WebSpere, WebServices, SoapUI

**Design Patterns**

Use design patterns and refactor to patterns as a regular course of work. Some of the most common used include: Simply Singleton, Facade, CoR, Observer, Composite, Strategy, Proxy, Adapter, Decorator, and, of course, Inversion of Control (constructor DI).

# **Operating Systems**

Windows, Solaris, AIX, Linux (many flavors – Ubuntu, CentOS4 and 5, RedHat, Fedora, etc.)

# **Databases/Tools/Middleware/Abstractions**

Microsoft SQL Server, Informix 2.0, Oracle(old and current), Oracle Lite, MongoDB, Microsoft Access, mySQL, postgres SQL, Java DBs including Apache Derby, squirrel, toad, SQL Enterprise Manager, Hibernate 2.x to current

**Frameworks**

Spring/MVC/REST (have used other REST technologies as well) and @MVC/Webflow, have experience with xml, annotations and java-based spring configuration (direction of Spring currently). Android SDK (2.2-current)

**Build Tools/Continuous Build Platforms/Collaboration Platforms**

Maven, Ant, make / Team City, Hudson/Jenkins, Cruise Control, Bamboo/Confluence

**Cloud Technologies**

Very current in most Amazon SAAS/PAAS technologies

**Design/UX**

Balsamiq

**Certifications**

Mirth Connect

**Professional Experience**

**Elsevier**  **Feb 2011 – Oct 2013**

**Technical Lead and Architect**

OrderSets

Lead the technical development effort for a new software system/product intended for medical professionals and clinicians. The product is now in Beta with several hospital systems. The system is for the creation and maintenance of OrderSets within hospitals. It is an editorial and workflow system (SAAS based) and handles all aspects regarding the research, development and publishing of evidence-based OrderSets that are topic/condition-based.

As Technical Lead and Architect, I worked closely with the product team and participated in workshops to help our team gain a strong understanding of this relatively new domain area (for Elsevier). I worked with the product team for several months via recorded WebEx meetings and many trips to their Philadelphia offices to help refine requirements. At the same time, I interviewed and handpicked the entire development team, setup the basic overall framework and data model and trained the new team members in it all. Early in the project we lost our Solutions Architect and so I assumed that role as well and participated in cross-functional meetings to ensure technologies were well aligned across the organization and that the move to Cloud technologies went smoothly. The front-end was done in ExtJS (subset of our team) and was done as an independent client to our REST API layer.

Migrated data and model from Mongo back to Oracle DB again as the data proved too relational and the leadership wanted transaction support and more atomic operations.

This project, while having very complex and evolving process workflow requirements, was at the end of the day a web application with persistence. I designed the original system to persist to Oracle (via latest Spring Data framework with Hibernate as the provider—later we moved to JPA), then (by request from project leadership) experimented with MongoDB before returned to Oracle as the original relational model was better suited for the application. Web controllers for REST, HTML and JSON requests/responses were configured with latest Spring (3.x). Velocity Templates were used for HTML responses.

**Main technologies used:** Latest Java/Spring/MVC/REST (all java-based, not xml), Jetty and Tomcat, nginx, Oracle 11g (RDS on cloud), MongoDB with replicasets (for document data),mockito/junit, maven, Jenkins, and the Amazon cloud technologies (EC2, Route53, RDS, Cloud Formation Templates, Puppet and more).

**Actionable Updates**

Previously lead another R&D project at Elsevier. It was a system to manage the creation and dissemination of Actionable Updates within the clinical setting. It relies on a sophisticated and custom rules engine approach to handling data, facts and business logic in order to find correlations between patient information and applicable updates regarding patient care. I wrote a custom layer on top of JBOSS’s Drools (rules engine) to allow for dynamic/data-driven types, facts, and rules to be submitted for processing and return of satisfied conditions (requests and responses where JSON). In addition to the rules engine service tier (Spring controllers that called out the rules engine peer), the application also had an admin web interface (also Spring/MVC) for configuring facts/rules via a custom DSL to data drive the process.

**AgilePros** **April 2013 – Current**

**President**

Mediprocity (now in maintenance mode)

Developing a new application that is now in production and ramping up. The application is to help hospitals, doctors and clinicians to stay in-line with regulatory guidelines around HIPAA compliance regarding secure communications and handling of patient information. It is a secure messaging service and collaboration tool. The application has both web and mobile interfaces and an API. I have mostly worked to solidify the previously developed web (C#/.Net) and mobile (Android-2.2 to current/Java development) applications and add enhancements.

Android development included rewriting all the security and networking to be more secure and stable. The application had to self-heal its connections (login id/cookies) as users could be in and out of wireless/mobile networks. As part of a security audit, I documented all security aspects of the application regarding specifically encryption and caching. From that a plan was formed to increase the security and handling of data which I implemented. I also implemented new features such as: A Google-like search, screen rotation, addition of avatars for colleague lookups, filter views and much more. Additionally, I added upgrade features to clear data/preferences on upgrade where the model or encryption strategy changed between releases. Finally, I added a feature to allow archiving of conversations and to accept or deny colleague connection requests.

#### Express Scripts May 2010 – Feb 2011

#### Senior Java/IVR Developer - SCRUM Master

Returned to Express Scripts to continue with the project I was originally contracted for (see below). The job description and accomplishments are lengthy so I’ll just hit main areas with some bullet points after a brief description of the project.

The goal of this project is to rewrite ESI’s existing IVR system. A vendor will be providing the front-end call flows while our team is providing a middleware interface to the front-end that wraps, aggregates and simplifies our multiple web service interfaces and shared libraries. The system is being rewritten while also more than doubling in terms of features.

* Participated in the front-end vendor selection process. Evaluated and provided feedback on the three candidates. Worked with business owners to develop selection criteria and implement a fair assessment process.
* Reversed engineered the current IVR system.
* Took initial gross estimates from product engineer and worked with PM and BAs to develop a project plan/timeline—phased and iterative approach. Trained participants on agile development process in order to incorporate agile methodologies within an organization that is still primarily operating according to waterfall.
* Created initial prototype and architecture for new system. Used Spring 3.0.2 and Hibernate 3 (both java-based configurations--now available in core Spring), Java 1.6, JUnit 4, Mockito (latest version), maven-developers can use Eclipse or Intellij as the project build is completely maven based.
* Performed project setup tasks in first iteration before developers were assigned to project. Tasks included: setting up project structure, cvs project, maven project, continuous integration—Hudson (with clover, pmd, and checkstyle reporting and auto notifications)
* Setup Rally project to manage user stories and developer/QA tasks.
* Completed second iteration while attempting to train the developers initially given. The team’s skills/experience proved to be insufficient and I was allowed to actually directly interview new candidates and re-staff the team. Personally interviewed nearly 30 candidates and selected a new team (actually was split into two teams with separate scrum leads. I led a team of six and another scrum master lead the other team of six. Still, I led both teams of in terms of technology, design and architecture.) Continue to mentor/lead both teams in terms of development best practices and strategy. Teams both have two week iterations and are offset by one week.
* Developed JUnit and UAT testing strategy. This including creating a way to supply a mock Spring configuration with mock property and DAO configurations.
* Developed project guidelines for the development process.
* Trained new team on project structure/architecture/guidelines, TFD/TDD, Agile, and source control management best-practices.
* Continue to mentor team members on JUnit testing (TFD), and how to incorporate and refactor to patterns (design patterns).
* Setup project wiki to document shared information related to our project.
* Conduct demos along with QA and BAs to obtain sign-off on our iteration work products/deliverables.
* Work with BAs (Business Analysts) to develop user stories (agile methodology), organize and lead iteration planning sessions and help developers understand business rules/implications and task out stories.
* Continue to work with project managers and program director to keep project on track and adjust time-lines and schedule iterations for the release.
* Work with QA team—Designed and developed the test platform for QA to use utilizing FitNesse. Designed and implemented the basis and first examples for the test fixture approach needed to integrate with the FitNesse system.
* Work on Java coding tasks 50 percent of time—still hands on.
* Conduct code reviews and continue to drive the direction of coding standards via team meetings (collaborative), pair programming.
* Provide API documentation and tutorials for our consumer—front-end vendor.
* Work on all aspects of IVR middleware integration; including working with other teams at ESI on web service integration points and vendor collaboration/training on our interfaces/API.
* Work with application engineering team (full-time architects) to ensure our new system complies with standards for our organization and is in-line with higher level/overall strategy. Preparing for reuse of some components of the new IVR system by way of publishing new web services.
* Work with product engineer on HLD input.
* Worked with Platform Engineering team on application deployment plan and process.
* Finally, the project has been successfully released several times now. We are maintaining high code quality and test coverage (over 90 percent and sometimes approaching 100 percent), low defects and quick resolution of defects. The teams and all members worked working very well together. They project is scaling down now and will be supported by minimal off-shore resources.

#### Monsanto Feb. 2010 – April 2010

# **Senior Java Developer**

Returned to Monsanto, for a third time, for a short-term project. Participated in a large and very fast-paced web development project. Together with a team of about 20 strong java/spring/web developers we built the majority of a new common interface for their commercial seed business. This was a heads-down TDD/Agile/Extreme development project with very little room for error/time slippage. Was not in a lead role on this project, but did provide technical direction and also advice on agile development/TDD. The bulk of the work was to take web page mock-ups (JSPs) and to wire them as Views in a Spring/MVC application. I participated in finishing JSPs, building controllers, commands and DAOs. Worked directly in all aspects of the application. Also, helped to clean up and make common much of their javascript code.

Primary skills used: Java 1.5, Spring/MVC and @MVC/Webflow 2.5.6, javascript, JSTL, JSP.

#### Express Scripts June 2009 – Dec. 2009

# **Senior Java/IVR Developer**

Worked on the IVR (Interactive Voice Response) team to complete year end, business critical enhancements to the legecy IVR system. The system is fairly mature and is coming to the end of its life cycle. However, the system is still in plan and an important part of the continued growth and effeciency of the company. Nearly all of the main business initialives have to be addressed in IVR. Our team provided the backend access and business logic to support the front-end provided and supported by Avaya. The purpose of IVR is to provide automated access to benefits information and prescription management for ESI’s members.

The IVR team is currently positioning for its technology refresh and will transition into a VoiceXML Portal. As a team we evaluated the pros and cons of integrating Avaya Dialog Designer into our development environment. We chose to use the Avaya Voice Portal but not the Dialog Designer as it did not fit with our continuous interation setup or our test driven development methodology. We also wanted the project to stay as open technology-wise as possible with no proprietary tools to be attached to. In addition to evaluating and providing architectural direction, my part and has been to improve the build and deployment process while also preforming development tasks. I have been successful in this endeavor and have, by leveraging the strengths of maven, improved/streamlined our ‘assemblies’ or deployments considerable. This has reduced a task that once took one to two weeks into a trivial exercise. I employed the maven assembly concept to manage the many configuration differences between environments. Development tasks have included merging code from other teams and standardizing with common code base within our organization, enhancements to our code base, refactoring and improving test coverage and adding new business logic over the last four software releases. I also consolidated two processes and removed CORBA dependencies by converting CORBA calls into Web Service calls targeted for Web Sphere. I also worked closely with the operations staff to debug Web Sphere configurations in our test and production environments. Lastly, I created a bottom-up bean web service to proxy/hide our legacy IVR backend—with the idea of migrating business logic to this new service over time. The IVR team is ready for its next stage of development as a result of this and the considerable efforts of the team. I started working on a VoiceXml (xml) to XHTML converter using XSLT right before cuts were made at ESI to contractors.

Lastly I mentored the team on several levels over the past few months to help it become more agile and effective—as it has grown recently and the dynamic has changed greatly. This has included coaching our new scrum master on how to make our team more agile in the hibred and transitioning environment at ESI. This includes, but is not limited to, the subjects of organizing effective stand-ups and interation planning meetings, effective story writing, unit testing, and managing our codebase—specifically, I gave recommendations on CVS branching strategies and checkin policies/conventions. Our team was already highly talented. Now it is improving and is starting to work in a much more self organized fasion as agile methods intend.

#### Monsanto Jan. 2009 – June 2009

# **Senior Java Developer**

Worked on high visibility applications in the Technology Pipeline Solutions group at Monsanto. This included applications and web services in the cloning pipeline. The team employed Test Driven Development strictly and adhered to some of the main GO4 design patterns—especially IOC (specifically dependancy injection as most new development used Spring/Hibernate/MVC to a high degree). Our main development tools where IntelliJ 8 with maven integration, cvs and TeamCity. There was a high level of expectation for code quality at Monsanto. The first part of my assignment there was to increase junit test coverage (as reported by Clover). I improved one application or over 90 percent coverage.

The rest of the work was been more challenging scientifically. Just being a good coder was not enough, I had to really dig in on the science to understand the implications of the new requirements. I was able to do that to a high degree of success by very rapidly climbing the massive learning curve.

The pipeline at Monsanto that I worked on was a fairly complex and lenghthy flow of web services and other proprietary systems. Some of the integration testing was very difficult. To help validate the frequenty massive XML bodies of SOAP returns from web services, I employed XQuery/XPath.

#### Asynchrony Solutions, Inc. July 2005 – November 2008

# **Senior Java Developer/Technical Lead**

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* Boeing API Working Group – The API Working Group was formed to oversee the direction and progress of the SOSCOE (System of Systems – Common Operating Environment) API for the Army as part of its FCS (Future Combat Systems) program. FCS is a multi-billion dollar project with spin offs planned as far out as 2015. The API (SOSCO about a 200 million dollar project) is of great importance to the success of the program. It must work well, conform to government standards and be very well documented and communicated. I was one of a team of POCs (points of contact). The POCs tracked the progress of certain families or areas of functionality of the API. Our job was to track and present changes, deletions, and additions to the API to stakeholders (Boeing, Army POCs, third-party vendors, etc.) To that end, we thoroughly analyzed any and all modifications to the PRM (Programmers Reference Manual). We presented anticipated and realized updates. We also developed tools to parse the PRM and to report on updates and compliance with standards. The position required excellent communication and presentation skills and the ability to work with technical and non-technical participants.
* Boeing Formal Qualification Testing – Worked with several teams over two years (twice as the team lead) to develop, integrate and deploy functional tests for the SOSCOE API. The work required each team member to have well-rounded skills in Core Java, C++, Linux, bash, CVS, ClearCase and Eclipse. It also required incredible attention to detail and the ability to provide clear and accurate reporting of progress and results to Boeing management staff. As lead, I was responsible for reporting weekly and even daily to Boeing FQT leads. The position required traveling frequently (and sometimes for several weeks at a time) to their location on the west coast to participate in formal testing with the Army and to work with Boeing developers to improve the quality of the tests and the API. The tests we developed were highly complex—requiring up to twenty pages to describe and there where hundreds of them. Each test exercised many requirements, all of which had to be tracked for passing/failing results for any given build. It should be noted that even though we were writing ‘tests’, these were in reality small applications in their own right.
* Boeing Conformance Testing – Developed tests in C, C++ and Java to verify that the SOSCOE API behaved precisely as described in the SOSCOE PRM. This included testing all valid and error conditions. The main goal was to improve the quality of the PRM and to that end we reported the slightest conformance deviations to Boeing in order that the PRM or the API implementation could be updated to bring them into agreement.
* API Tracking System – To keep up with the demands of tracking the results of conformance tests and API updates, our team developed a web-based tool. The tool was initially developed as a JSP application running on Tomcat—Spring/Hibernate was also used. Later another team member and I endeavored to make all future additions and modification using the Grails platform. The result was a much more workable system. We developed the application with Eclipse 3.3.2 and Grails. The programming language of Grails is Groovy. Using the Grails command line tools we also built new controllers, views, GSPs (JSP equivalent) and database tables. Grails has a powerful scaffolding design which allowed us to quickly proto-type new screens and related database elements. Grails has excellent integration with Hibernate-the best I have seen yet. Very simple Groovy files can define objects that translate into database elements and relationships. Anyone who ever used Hibernate in the past (as I have) will appreciate the ease of Grails—it beats the annotations method in pure Java (as of 1.5) hands down, and certainly the old xml definition method. I also proto-typed another related (but completely new) application with Groovy/Grails in just three days that allowed POCs to have a web-based tool for tracking API updates. The Grails platform finally delivered on promises of database independence and abstraction that I have yet to find sufficiently elsewhere. It proved to me that I could build an entire application with very little data modeling while focusing almost totally on object modeling. I always liked the idea of Hibernate before, but Groovy/Grails has finally made it enjoyable and robust.
* Tactical Chat Application – Worked on a purely TDD (test driven development) project with a small team to build a secure communication tool for the Navy. The GUI application was built with the Eclipse (Java) plugin architecture. The application (both client and server elements) was built entirely with Java. We also instrumented the server to allow ease of gathering performance/run-time metrics. As this was a purely TDD development process and Agile, all team members shared equally in the development. There was no code ownership.
* ThinkMap Application Development – Developed and maintained existing ThinkMap applications for several clients. Projects involved working with clients to determine what existing data was to be mapped and how the visual presentation should appear. ThinkMaps are just dynamically rendered relational data (like a spider graph in 2D or 3D) with added context menus. Technologies used: ThinkMap SDK, Java 1.4.2 and 1.5, Tomcat, WebSphere Akamai.

**SBC Services, Inc. June 2002 – June 2005**

**Technical Architect**

Managed a specialized team that designed, implemented and supported complex, distributed, semi and fully automated circuit testing systems for high capacity special services (SONET, ATM, Frame-Relay, DSL, HDSL, DS1, DS3, DDS). Our client server processes were built in C and C++ for AIX platforms and some Linux deployments. I developed the core system that remotely communicates on behalf of client applications and automated processes to network elements (switches, digital cross-connects, multiplexers, legacy mainframe systems, etc.) on SBC’s secured transport network. While developing the core system I utilized industry standard XML and developed a new scripting language (TXML) to script communications to any device which provides an ASCII terminal interface (VT100, TL1, etc.). TXML began the process of being patented by our legal department—not sure if the patent process completed after my departure. I also developed a template approach to screen scraping to alleviate the coding tasks of writing custom parsing logic. The two techniques applied together provided a means of rejuvenate existing legacy systems with more modern user interfaces and APIs.

Developed a custom application gateway or pass-through server process (also began the process of being patented) to proxy direct terminal access to devices on our secure network. This allowed us to control critical network element access at the application level from one centralized security application as opposed to supporting hundreds or thousands of user (network center and operations staff) accounts within the secured network and hosts. This has saved the company a tremendous amount of time and money as more remote access is needed by maintenance and provisioning technicians (a requirement due to our support centers standardizing and being centralized across SBC’s 13 state footprint). One case in point is a Java Applet application I built to allow remote access to some of our intelligent network elements to gather testing information used in our maintenance processes. A vendor solution was investigated but our internal solution was deployed in just a few months and integrated with many other systems and saved the company 1.3 million dollars over purchasing the vendor product. An additional 250K per year savings was realized in unneeded vendor support fees not to mention the untold savings of not needing additional development to integrate with our numerous sub-systems.

**AgilePros Feb. 2005 – Present**

**DBA**

This is a DBA company I started to experiment with technology on a product idea I had at the time. AgilePros developed and marketed an IVR Survey application for small and mid-sized companies. The platform was totally web driven/managed and developed in ASP3.0/SQL Server 2000 and used industry standard Voice XML consumed by VoiceGenie, Voxeo and BeVocal platforms. System was deployed on HostLane web hosting service and was managed completely by MS FrontPage (including database). The system was intended mainly for internal use by companies that provide survey solutions to their client base, but an eCommerce version was also started to allow individuals or companies of any size to self manage their own telephone based surveys from a web browser. AgilePros developed and maintains all rights to this system. It would take minimal effort to make it live again. I also developed a Java version to render the VoiceXML by compiling VoiceXML into reusable and extensible Java classes using the Enhydra platform.

**Meganet Builders, Inc. (MBI) June 2000- Dec. 2003**

**President/CEO**

Operated a web and CTI/IVR development company. Services provided include: project management, Java front-end and back-end development, website development, MS SQL 6.5/70 DBA work, Enhydra application development, all aspects of website development/deployment and maintenance, and IVR/CTI applications development/deployment.

* Online website promotion tool - A trend in the direct marketing sector at the time was to provide one-stop shopping or access to save users countless hours submitting or searching information from numerous sites. This is often referred to as aggregation. MBI succeeded in building a full eCommerce web promotion tool for eDirect Publishing LLC that allows users to submit their site to 2500 search engines and link lists. This was accomplished on a very tight budget with an equity sharing arrangement ($15,000 to build the entire web presence). Technologies used were MS NT server 4.0 sp6a, IIS 4 (options pack), SSL, Enhydra server and director, XMLC, DOM (Document Object Model), MS SQL server 7 sp2, JDK 1.2.2, Signio (Versign) Java API for credit card processing, Java Mail API, iNet Opta2000 (class 4) JDBC pooling database driver and Criptix32 Java API for application data encryption. Using solid open source products such as Enhydra reduced a great deal of costs.
* Candidate Search Module - Recruiting/Head Hunting companies are always looking for tools and products to give them an edge in the marketplace. Morgan Kennedy Services, Inc. contracted MBI to construct the first of several modules to assist in the location, handling of contact info, and tracking of responses/communications from potential recruits and employers. The first version has been completed at a cost near $10,000. It is the core module to which additional modules can be added. This client believes the tool developed by Meganet Builders will help their recruiting business greatly as well as being a product that they could sell to other companies. The same technologies were used in this product as #1 above. MBI has now developed a very workable and reusable system and strategy for building most conceivable high-end web applications.
* Inbound/outbound IVR System - PCS (Public Communications Services), Los Angeles offers pay phone and calling card solutions for inmate facilities throughout North America. PCS contracted MBI to develop two separate IVR applications. The first is an outbound calling system to notify users of high-toll amounts. This scenario is currently in production and meeting all expectations. The second scenario is an inbound system for users to inquire about general account information and balances and to change PIN information. It is completed as well and went live in early October 2001. Technologies used: EASE CT for IVR run-time platform running on NT 4.0 sp6, mySQL running on Red Hat Linux for all database needs.
* SURPASS - Simple User Ready Phone Automated Survey System - MBI marketed the first (Service Bureau) version of this product. It empowers clients with minimal marketing budgets to perform complex phone-based surveys while completely managing the process from a web browser. While completing the first version of this product MBI has developed a highly reusable architecture for voice enabling most websites with minimal interfaces additions/enhancements. It is totally based on standard open source java technologies and requires absolutely no proprietary third party tools to implement the generation of dynamic VoiceXML. MBI targeted the best VoiceXML platform at the time - VoiceGenie (Toronto, Ontario Canada). Technologies used: The architecture is generic for all XML apps (HTML, vxml, or any other). MS NT server 4.0 sp6a, Enhydra server and director, XMLC, DOM (Document Object Model), MS SQL server 7 sp2, JDK 1.3, and iNet Opta2000 (class 4) JDBC pooling database driver.
* TDSS - Built an IVR System with Pronexus VB Voice and MS Access to manage the movement of patients and items within a hospital.
* AmericanFone - Built a Windows GUI based check-printing program to perform batch check runs. Application supports custom drag-and-drop field placement and alignments (typesetting). Data supplied from MySQL database.
* ION Systems - Developed two XML converters. Open eBooks (IBM) to Braille and MobiPocket (palm pilot) formats. MS Visual C++ used on both projects.
* Monsanto/Pharmacia - Provided all programming support for the Computational Biology Group. This included developing web sites and applets for the visualization of bioinformatics data. Three experiments viewers were developed. I also built a protein-protein interaction applet. I can explain more in general terms but most of the work is confidential. This job was perhaps less challenging in terms of actual programming but required good communication skills and the ability to quickly understand scientific information. I spent most of my energy researching in order to communicate with scientists on genomics and proteomics topics. Additional research projects included a functional category schema for protein, enzyme and gene classification and a hybrid approach to interfaces and data management (mix of relational, AI and neural network approaches). I also proto-typed a human genome browser.
* Epic Integrations - Contributed to the successful deployment of the stlouisbestjobs.com website. Provided team leadership, built the job seeker area of the site, centralized and brought standards to development process. A letter of recommendation from AAiM/michener GAINES is available upon request.
* SBC Communications - Developed a filter DLL for MSIE to auto-login users and populate initial page load. Developed testing tools for special services (DS1, DDS, DSL, DS3) to aid in the manual and automated testing of circuits.

**MasterCard, Consultant May 1998-June 2000**

# **System Analyst**

* Developed a web content access system for MasterCard International using MS IIS 4.0 and MS Proxy 2. Developed a custom security module that linked in with the web server and proxy, which allowed only a customized browser to access content.
* Developed template-based CGI programs in Microsoft Visual C++ which generate a content menu system dynamically from an Oracle 7.3.4 Database. All HTML code was created with FrontPage 98 and other HTML editors and no static content came from the CGI programs.
* Integrated a hosted ActiveX control (IE 4.0) into a Win32 application, which was customized to browse internal MasterCard web sites.
* Implemented a custom integrated dialer module. This module interacted with the RAS32 API and provided programmatic access to Dial-up Networking.
* Developed several Lotus Notes/Domino applications. Was the first at MasterCard to use Java on the front and backend to enhance Domino application features and it’s performance. The result was an architecture that has since been repeatedly used. I built MasterCard's Expert Advisor system (trouble ticket system) with this architecture to allow member bank offices around to world to work through a centralized system and to greatly enhance to performance over the current failing system. With project was completed with great success and is in use today.

**Intertech Management Group 1996-May 1998**

# **Developer**

* Managed and Implemented a Web-Based Long Distance Service that provided Account Management, Customer Care (including trouble ticket management), Rates Comparison, 411 Directory, on-line Interactive Billing and Industry Reports over the Internet. Managed the product through all stages of development. Microsoft Visual C++, STL, HTML, CGI, FrontPage 97 and 98, SQL Server 6.5 and IIS 2.0 were all used in the development.
* Performed all the duties of a Microsoft SQL Server 6.5 DBA over two years time.
* Designed and implemented a complete subnet including Cisco routers, hubs, CSU/DSUs, Centri's (now Cicso's) firewall, proxy servers and all other network elements.
* Built various business objects in C++ for an NT Billing System.
* Managed and implemented the development of an Accounts Receivable System through all stages of development.
* Designed and implemented various GUI modules for an on-line interface into the NT billing system.
* Prototyped and started the implementation of Intertech's intranet with the purpose of centralizing all company and client information including: projects, schedules, training, requirements, documentation, testing, departmental information, standards and practices, people, discussion groups, idea boards, numerous reports, and etc. Microsoft Interdev and FrontPage 98 were used to quickly build accesses into SQL and Access databases.
* Implemented the company’s first source control management system for managing the code-base, database, requirements and documentation. Laid the groundwork for a complete Configuration and Change Management System, which included defining certain policies and procedures as well as finding and implementing the proper SCM tool (MKS Source Integrity).
* Proposed the implementation of two additional Internet sites including an updated retail local and long distance service and a Sales Force Automation tool for the NT Billing system.
* Proposed the implementation of a complete Internet security system including firewalls, proxy servers, router security, additional application and session gateways and additional policies and procedures.

**Southwestern Bell Telephone 1995-1996**

**Process Specialist**

* Developed a GUI productivity tool for the core workforce administration mainframe legacy system to provide testers with a centralized trouble ticket system.
* Built a GUI ISDN Testing Interface.
* Developed the framework for an on-line Intranet information database and an interactive training tool. (Netscape Enterprise Server and Informix 2.0 were used in the development)
* Implemented training for testers in Special Service Maintenance Centers.

**SB Communications 1994-1995**

# **Student Manager**

* Developed skills in Client/Server programming and GUI design while working on an integration tool for circuit testers.
* Developed skills in advanced networking and PC configuration while performing hardware, network and software installations and support.
* Responsible for analysis, design, development, implementation, integration and maintenance of multiple layer software application with data management system. Work together with business analysts and IT management to research, formulate and define technical solutions to meet with business requirements.

**Education**

**Southeast Missouri State University**

B.S. Computer Science, Cape Girardeau, MO