

## Bill Richardson

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### PRINCIPAL SOFTWARE ENGINEER

#### Systems Analysis, Project Architecture, Software Design and Development

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Multifaceted, resourceful Project Architect/Software Engineer with a distinguished career developing business related custom software to support a wide range of industries including E-Commerce, Manufacturing, Education and Finance. Highly successful in engineering efficient solutions to complex business problems. Expert at leading project development teams to a successful finished product on time and on budget. Over 30 years experience with the Software Development Life Cycle.

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C# • VB.Net • Visual Basic 6.0 • MS SQL Server • IBM DB2 • Oracle • MySQL  
.Net Framework (1.1 – 3.5) • Web Services/WCF • XML/XSL • ASP.Net • HTML  
OOD • Agile Methodology • Test Driven Development • Design Patterns

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### PROFESSIONAL EXPERIENCE

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**CHARLES SCHWAB – Phoenix, AZ**  
**Lead Software Engineer**

November 2007 – February 2009

**Key Technologies:** C#, WinForms, .Net Web Services, RPC Web Services, WCF, Oracle, DB2

In this position, I aggressively re-engineered a poorly converted trader exception processing system. Early in this project, the tech lead left the company, and I was asked to become the tech lead. As part of my responsibilities, I worked with the Architect to define key performance improvements, and mentored several software engineers.

#### The Challenge

Re-engineer a previously converted .Net application that has been unused for 3 years due to significant performance issues, add over 30 enhancements, and increase performance such that the existing legacy application can finally be retired.

#### Significant Achievements

- Quadrupled the performance of the re-engineered application by removing asynchronous calls that were masking performance issues, removing complex data structures in favor of custom datasets, improving database access code and Oracle stored procedures, and converting all code to best practices.
- Improved the import routine by a **factor of 100** by improving the data access code, and better managing database connections.
- Added over 30 new features, which allowed the traders to stop using legacy screens
- Improved the Trader Group's workflow by removing the need for daily manual reports, which saved an estimated 6 man hours per day.
- Architected and developed a web service to add functionality to receive FIXML messages from Schwab Institutional's FIX engine, process the data and insert into an orders database for further consumption by the Mercury Trader Exception system. This web service utilized WCF in a .Net 3.5 environment.

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**PING GOLF – Phoenix, AZ**

May 2007 – November 2007

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## **Senior Software Engineer**

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**Key Technologies:** C#, WinForms, TerraData database

Ping Golf is an international leader in the design and manufacturing of high-end golf clubs and golf accessories. They utilize “mass-customization” to allow for a golf club that is efficiently manufactured and responds like a product customized to the buyer. The key to their success in manufacturing is a custom Order Management/Inventory/Shipping Management application written and maintained in-house.

### **The Challenge**

Ping had a rather large backlog of defects related to their Internal Order Management/Inventory/Shipping Management system. Plans were underway to rewrite the system utilizing best practices into a more n-tier approach. Over the years, the system had been enhanced with very little documentation. Therefore, the backlog of defects had to be significantly resolved so that functional analysis/decomposition could be done prior to the re-engineering.

### **Significant Achievements**

- Quickly and efficiently resolved a backlog of over 200 defects.
- Developed a common instrumentation class to be used in the re-engineered code for better real time Business Intelligence.

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**LPL FINANCIAL – San Diego, CA**

November 2004 – May 2007

**Lead Software Engineer/Project Architect**

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**Key Technologies:** C#, .Net 2.0, Web Services, XML, XSL, MS SQL 2000, DB2, ASP, ASP.Net, VB6, VB.Net, JavaScript, AJAX

During my tenure at LPL, I converted existing internal applications from ASP to ASP.Net, componentized many business functions and moved them into remoted services to support a Service Oriented Architecture (SOA) platform, created an enterprise level email processing system, and supported a corporate-wide upgrade of sweep account functionality.

### **The Challenge**

Re-engineer the existing architecture to support a Service Oriented approach, while improving efficiency across the Enterprise.

### **Significant Achievements**

- Successfully led a team of 3 engineers in developing a remoted service that automated the previously manual steps involved in closing a brokerage or advisory account. This system involved de-networking mutual funds, restricting activity on accounts, cancelling automatic distributions and contributions, and various other steps involved in closing active accounts.
- Improved trading efficiency by developing a system that allowed for straight-thru processing of fixed-income trades from the company’s trading desk to Thomson Financial Systems’ centralized data systems via a 3<sup>rd</sup> party trading system from The Muni Center. I led a team of 4 engineers in this effort.
- Managed a team of 6 engineers to support a corporate-wide upgrade that generated more than \$10M in new income in 6 months by enhancing a system that reported on the activity involved in a newly implemented sweep account system which distributes available cash in to up to 10 FDIC insured accounts.
- Provided advisors with enhanced reporting by engineering new access to a client based reporting system for clients whose advisors did not allow them full reporting capabilities.
- Significantly resolved corporate email handling and virtually eliminated “spam” complaints by architecting, engineering and developing an enterprise level centralized email system that handles synchronous and asynchronous delivery of email, the ability to validate emails based on rules, a centralized “opt out” and “bounced” database, and an email audit system. This email system was developed using Test Driven Development, which resulted in over 600 automated unit tests.
- Served as the company expert and mentor on Test Driven Development (TDD). I have delivered several training presentations on TDD using NUnit, and the use of TDD in .Net 2.0 using Visual Studio.

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**PROFLOWERS.COM – San Diego, CA**  
**(now Provide Commerce)**  
**Principal/Lead Software Engineer**

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May 2000 – November 2004

**Key Technologies:** C#, MS SQL 2000, ASP.Net, SQL Reporting Services, MS SharePoint, Chutney Object Based Database

Proflowers.com was only a few years old when I joined the team, and they were experiencing growing pains due to rapid growth. I was brought on to help re-engineer the overall architecture and design of the order taking and fulfillment systems to allow for the anticipated growth of the company, and to allow for the extension of the platform to support the sale of other perishable products.

### **The Challenge**

Architect and develop an order process that would allow for rapid rebranding to support other perishable product companies, strengthen existing fulfillment systems to allow for the expansion of the fulfillment chain, and create a flexible system overall to facilitate a fulfillment platform which could be used for any company.

### **Significant Achievements**

- Led the team that architected, engineered, implemented and tested an updated version of the online Order Process. Order Process was converted from ColdFusion to ASP.Net, which substantially increased the reliability and scalability of the system.
- Re-factored Order Process to allow for the rapid “skinning” of the site to support new businesses such as Martha’s Flowers, or Sears Flowers.
- Engineered a site-wide state management system that allowed for the reduction of servers in the web farms, and increased efficiency of the entire online process.
- Enhanced fulfillment pipeline by adding the ability to utilize both FedEx and UPS as carriers.
- Served on the team that created a centralized configuration system which allowed for the rapid changing of configurable information without requiring a rebuild. This supported the marketing department’s need to perform product testing on a real time basis.
- Successfully implement SharePoint into the IT department to greatly enhance the documentation and collaboration amongst development teams.
- Introduced a process which transferred data to reporting servers and used SQL Reporting Services to alleviate the load on OLTP database.
- Assisted the QA Manager in modifying the QA testing methodology from a waterfall style to a more iterative approach to support a more agile development pipeline.
- Authored the company’s code merge and deployment procedures to allow for multiple project pipelines as well as real time content changes.

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**CREATIVE LEARNING SYSTEMS – San Diego, CA**  
**Principal/Lead Software Engineer**

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September 1996 to May 2000

**Key Technologies:** ASP, VBScript, ActiveX, JavaScript, SQL Server 7.0, Macromedia Shockwave/Director, Java Applets, ADSI, Commerce Server, Site Server, Streaming Video

In this position, I was responsible for all facets of Information Systems relating to this leading provider of immersive learning environments for middle school through college level students.

#### **The Challenge**

Add to the immersive experience of all product users while advancing the technology used and increasing efficiencies in the development life cycle.

#### **Significant Achievements**

- Led the engineering and integration efforts related to Microsoft NT networks in the company's multi-million dollar immersive learning environments.
- Administered a cross-platform enterprise network consisting of a 50 client corporate network, over 400 30 client learning labs, and 5 80 client learning plazas.
- Led the development and integration effort of a web based learner support system utilizing Microsoft Internet Information Server, Active Server pages, ActiveX components, Java applets, JavaScript, Visual Basic Script (VBScript), SQL Server database connectivity, and Macromedia Shockwave components.
- Developed graphic database connectivity, and other multimedia content in support of the development effort.
- Utilized Microsoft Commerce Server 3.0 and Internet Information Server 4.0 to deliver personalized, secure content to existing customers via Extranet.
- Saved the company over \$24,000 per learning plaza due to a re-engineering of the streaming video system.

### **EDUCATION**

**University of California at San Diego • 2000 to 2003**  
Continuing Adult Education in Information Technologies  
**University of Texas at Dallas • 1987 to 1988**  
Information Systems Technology  
**Roosevelt University, Honolulu, HI • 1984 to 1987**  
Computer Information Systems

### **REFERENCES AND RECOMMENDATIONS**

References are available upon request.

<http://www.linkedin.com/in/billrichardson>