

Steven Clark, Application / BI Architect

TECHNICAL EXPERTISE

- MS SQL Server 6.5/7.0/2000/2005 /2008/R2, MS Analysis Services, MS Access, Oracle
- MS DTS, MS SSIS, Informatica
- C#, VB.NET, Visual Basic, XML/XSLT, SQL, MDX, PL/SQL, VBScript, JQuery/Javascript, HTML/CSS, Java, PowerBuilder, C++/C
- ASP.NET, .NET 1.1/2.0/3.0/3.5/4.0, ASP.NET MVC, ASP, WinForms, MFC, COM, SharePoint, WCF/Web Services
- Visual Studio 2003/2005/2008/2010, TFS, Subversion, Git, VSS
- Entity Framework, Enterprise Library, SubSonic, Moq, SpecFlow
- MS Reporting Services, MS Excel, Business Objects, Crystal Reports, Cognos
- Windows (NT, 2000, 2003, 2008, XP, 7), Unix

FUNCTIONAL EXPERTISE

- Data Architecture
- Data Modeling
- Application Architecture
- Business & Systems Analysis
- Design & Build Methodology Selection
- Tactical Design & Build Leadership
- Development Team Leadership
- Client Management / Relations

INDUSTRY EXPERIENCE

- Healthcare
- Financial Services
- Retail
- Gaming
- Pharmaceutical
- Supply Chain Management
- Customer Relationship Management
- Real Estate
- Power Metering and Control

EDUCATION

Bachelor of Aerospace Engineering and Mechanics, Cum Laude
University of Minnesota

Certifications: MCSD, MCSE

Steven is an accomplished, senior-level Software Engineer, specializing in **Application Architecture** and **Business Intelligence**. With over 17 years experience, and a formal engineering background, Steven offers a unique and valuable set of talents to his clients.

Steven has extensive experience in implementing data and application architectures using a variety of methodologies, including the Test Driven Development and Agile methods. Steven has experience with large scale data warehousing architectures in addition to a variety of multi-tier application architectures within client-server, object-oriented, and web based environments. Steven is also an excellent communicator, allowing him to better discern client needs, yielding clearer requirements and high-quality deliverables.

Steven seeks an opportunity to use his software architecture skills and experiences in implementing customer-focused solutions. His accomplishments include:

P R O F E S S I O N A L E X P E R I E N C E

Data Warehouse Architect/Developer, Young America Corporation

** Consulting Engagement

April 2011 - Present

Steven served as the Data Warehouse Architect and Developer for Young America's data warehouse effort, in order to provide a 360 degree view of consumer activity regarding their clients' customer loyalty programs. The solution allows Young America personnel to view data across the enterprise, while allowing its clients (via an extranet) to securely view their individual data.

- Utilized the Microsoft 2008 R2 BI stack to deliver the solution, including MS SQL Server, SSAS, SSIS, and SSRS with Report Builder 3.0. The solution also included custom web pages hosting dashboard items and web-based pivot tables.
- Design included partitioning of MS SQL fact tables and Analysis Services cubes, to allow for scalability and methodical archiving of aged data.
- Design included flexibility to easily implement custom-specific data points and data sets. For example, a custom fiscal calendar or a custom sales region hierarchy.
- Made use of Kerberos technology to allow extranet users to securely access the back-end data stores, with full audit capabilities.
- The solution is architected such that SharePoint and Excel Services can be easily added as a front end.

Lead Architect / Developer, Landis+Gyr

** Consulting Engagement
August 2009 - March 2011

Steven served as a Lead Architect and Developer for a major release of Landis+Gyr's flagship product, a set of server based applications that communicate with and control its proprietary power meter network. Steven worked with security and cryptography engineers to design and implement a communication protocol that allows a power meter network to communicate in a secure and scalable fashion.

- The application is built on the Microsoft platform (VS2010 and .NET 4.0), supports MS SQL Server and Oracle databases, and utilizes other Microsoft technologies such as MS Message Queue, IIS and WCF.
- Needed to understand threat mitigation tactics as well as cryptography nomenclature and algorithms, including symmetric and asymmetric encryption/decryption, message signing and non-repudiation, and transfer of trust processes.
- Utilized agile methods to work within a larger team, to implement functionality into a multi-layered architecture, requiring constant coordination with other teams on the timing of deliverables.
- Because most of the functionality resided in applications with no user interface, strongly leveraged unit test platforms, including Visual Studio Test, NUnit and SpecFlow.

Lead Architect / Developer, BSwing

** Consulting Engagement
October 2008 - June 2011

Steven served as the Lead Architect and Developer on web-site projects for BSwing, a local web design firm. Steven was responsible for designing different architectures to meet client's requirements, including functional, non-functional, and budgetary. When the client's budget was lean, utilized the SubSonic data access library to speed development. For a client building a public facing web-site, ensured the architecture was robust enough to survive rapid changes, as well meet the performance requirements of the web traffic.

- Architected and built web sites, and supporting applications to meet clients' requirements, both functional and non-functional.
- Utilized code generation tools and agile methods to build applications, resulting in a higher return on investment.
- Implemented an e-commerce site, complete with personalization, which was integrated with Microsoft Dynamics.
- Performed web stress-testing when required, and subsequent re-factoring to meet performance goals.
- Technologies: ASP.NET 2.0, VS 2005, C#, MS SQL 2005/2008, SSIS, XML/XSL, SubSonic, Subversion, Web Application Stress Tool

Lead Architect / Developer, Eli Lilly

** Consulting Engagement with HighJump Software
July 2006 - September 2008

Steven led a development team in implementing an Inventory/Warehouse Management application, using HighJump Software's Supply Chain Advantage suite of applications. Working in an intense environment with high customer expectations and tight deadlines, Steven worked with the client and team to ensure that the primary modules of the application were built solidly and swiftly, giving the project momentum, providing testable code to the downstream QA teams, and giving the customer a sense of progress in meeting expectations. The rest of the project was built out in a strategic manner, maximizing resources, ultimately delivering the project on time. After project delivery, Steven served as primary Architect and Developer for change sets, new features and enhancements, in which an incremental, regular release cycle was used (a la Rational Unified Process).

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- Architected, designed and implemented custom warehouse/inventory management solution, using a combination of database, web and proprietary tools.
- Designed and built custom data exchange interfaces to communicate with several 3rd party systems, using a variety of methods including Windows Shell scripting, automated FTP scripting and VBScript.
- Because of the limitations of the HighJump development environment, the solutions required creative and complex design work, both in the database and in the application.
- High transaction volumes required performance considerations, including benchmarking during testing.
- All projects required excellent customer contact, interaction and management, to ensure expectations are met and that and scope and budgets are maintained.
- Technologies: HighJump Software's Advantage Platform, MS SQL Server, Oracle PL/SQL, ASP.NET, .NET Web Services, ASP.NET User Controls, C#, Windows Server 2003, Windows Shell Scripting, VBScript, FTP Scripting, XML\XSL, Crystal Reports.

Enterprise Architect / Developer, Grand Casino

** Consulting Engagement with Cornerstone Consulting
January 2003 - June 2006

Steven led a team to define and build the Grand Casino Data Warehouse architecture. Steven was responsible for gathering requirements from several disparate teams, and synthesizing a single solution from those requirements. Steven designed and built the overall architecture, using Enterprise Data Warehouse Bus methodologies, yielding a robust dimensional model representing the client's business. Steven also designed and implemented the ETL strategy and code, so as to be self-healing in case of source system errors or outage. Finally, Steven designed and implemented creative, cost-effective client reporting solutions, including MS Reporting Services, MS Analysis Services, Excel pivot tables, SharePoint, and custom web applications.

Also, as part of the engagement, worked closely with a client vendor, IGT, a gaming manufacture and software vendor, to identify and resolve client issues with IGT's software.

- Architected and designed the client's data warehouse. Worked with business users to define and design the dataset and the reporting methods.
- Initially populated their warehouse with a player tracking data mart, giving insight the Marketing, Player Development and Gaming departments.
- Developed the entire solution (Stage and Publishing DBs, ETL, Client apps) using the Microsoft SQL Server, .NET, SharePoint, and other Microsoft development tools.
- Ensured scalability over time, by implementing windowing and auto-archiving. To meet performance goals and custom reporting requirements, solution included partition views, indexed views, and custom aggregation tables.
- Published data using Excel-, OWC-, and DHTML-based pivot tables. Also published and delivered reports via MS Reporting Services, and built custom web applications.
- Technologies: MS SQL Server, MS Analysis Services, DTS, SSIS, MS Reporting Services, SharePoint, C#, ASP.NET, MS VS2003, MS VS2005, MS Excel Pivot Tables, Melissa Data (3rd Party Address Validation).

BI Architect / Developer, Target Corporation

** Consulting Engagement with Cornerstone Consulting
June 2002 - December 2002

Steven was selected to be a member of a Microsoft team, to design and build a high-profile, retail marketing analytics application, based on the Microsoft BI stack. Deliverables included a multi-source star-schema data mart, a set of Analysis Services cubes, a complete ETL application and an Excel-based application. Given the large data volumes, a special focus

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was placed on performance, ETL load times, and query response times. To improve query performance and usability, special techniques were employed, such as Analysis Services cache warming, and executing MDX queries asynchronously.

- The team used Microsoft's SQL Server Accelerator for Business Intelligence, designed and developed MS Analysis Services cubes for consumption by end-users. Steven helped overcoming source data obstacles and requirements by designing creative solutions that met user's needs, while meeting project deadlines.
- Steven designed, developed and delivered the entire user front end. Solution was packaged in Excel XP, and included pivot table based, and custom MDX based reports.
- Steven designed and implemented an asynchronous MDX execution engine, using the .NET Framework, C# and the XML for Analysis Web Service.
- Technologies: MS SQL Server, MS Analysis Services, MDX, MS DTS, MS Excel, .NET Windows Service, C#, XMLA, ASP.NET

Data Architect / Developer, Coldwell Banker - Burnett

** Consulting Engagement with Cornerstone Consulting
March 2002 - June 2002

Steven worked with the client to design and architect their next-generation web site, built on the .NET framework. Also, provider leadership and mentorship to the team regarding data import, cleansing and consolidation strategies, as well as application design and build methodologies.

- Mentored development staff on .NET topics from development techniques, to .NET capabilities, to team development strategies.
- Mentored the project leadership team on software development project issues, using Unified Process and UML concepts.
- Using the .NET framework, designed and developed intranet application components, and a web-based image gathering application.
- Technologies: .NET Framework, ASP.NET, C#, VB.NET, MS SQL Server, MS DTS, UML

Enterprise Architect / Developer / DBA, Private Accounts; E*Trade

** Consulting Engagement with Cornerstone Consulting
February 2000 - December 2001

For an internet start-up company, Steven led a team to architect, design and build an e-commerce web site, and supporting IT infrastructure, eventually to be acquired by a large company in the online financial services sector, E*Trade. In addition to being responsible for overall application architecture, Steve was also the primary development DBA, ensuring the SQL based artifacts were versioned and synchronized with the application artifacts. Steven also designed and implemented the data replication strategy from the three user-facing databases.

- Steven led the building, from the ground up, an IT infrastructure and two e-commerce product offerings for an Internet start-up, leading to their acquisition by a well-known financial services company.
- Worked with the business stakeholders to design, architect and implement their products on the Microsoft DNA platform, using ASP/IIS, VB and SQL Server.
- Provided the networking, database and user support infrastructure required for a new company, including providing the data interfaces to support the business and its products.
- Used MS SQL Server Replication Services to keep the data three database instances synchronized.
- Technologies: MS SQL Server, MS SQL Replication Services, ASP/IIS, Visual Basic, XML/XSL, Visual Source Safe

Architect / Developer, Life Time Fitness

** Consulting Engagement with SafeNet Consulting
September 1999 - February 2000

Steven provided leadership and mentorship for the company's club membership application, for the purpose of 'going paperless'. Steven also advised on architecture issues for the company's future BI and reporting platform.

- Provided early leadership on this company's drive to 'go paperless', to identify their business needs and help shape a solution that would achieve their goals.
- Extensive use of the Rational Unified Process, UML and Java to design and implement their initial architecture.
- Helped decision makers by designing and implementing a Business Intelligence solution, using SQL Server, OLAP Services and Excel. This was an initial, architectural effort, to be built upon as the business matured.
- Technologies: ASP, Visual Basic, Java, MS SQL Server, MS Analysis Services, MDX, UML

BI Architect / Developer, University of Minnesota Physicians

** Consulting Engagement with SafeNet Consulting
December 1997 - September 1999

Steven architected and built a BI solution, based on the Microsoft BI stack, for their billing and accounts receivable stakeholders. The solution acquired data from a legacy data source, scrubbed and transformed the data into consumable data marts, and distributed data via a custom intranet application.

- Technologies: SQL Server, DTS, Cognos PowerPlay, ASP/IIS, Visual Basic

Architect / Developer, Data Collection Systems, Inc.

June 1994 - November 1997

As part of the product development team, Steven designed and built a C++\MFC application, that served as the IDE for the company's proprietary application programming language. Also, led an effort to explore and architect an ASP based front-end to customer data that could be easily customized on a per customer basis. Finally, architected and built a VB-based front end to allow customers to manage orders, pick sequences and truck load configuration.

- Technologies: ASP, Visual Basic, MS SQL Server, C, C++, MFC

Acoustic Test Engineer, The Boeing Company

February 1991 - August 1993

Steven gained valuable experience as an Acoustic Test Engineer for The Boeing Company, working in a corporate laboratory setting, using various computing systems for data capture, analysis, systems controls and communication. Although the primary focus of the job was engineering, the computing experiences gained in that era are still valuable today.

- Technologies: Unix Shell Scripting, FTP, Lotus 1-2-3

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