

James Manning

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Employment History**Software Architect**

On Track Technologies, Inc.

January 2007–

Projects:

- **Central Command Center**

Architected and implemented SQL Server 2008 database and customer-facing secure ASP.NET 3.5 web services and AJAX-driven web site. Gathered requirements from CEO and President, designed and implemented initial version, then iterated to react to new and changing customer and business requirements. Site allows tracking and remote configuration and control of embedded tracking and sensor devices. Implemented customer alerting system via SMS, email, and web services. (C# 3.0, ASP.NET 3.5, AJAX, CSS, SQL Server 2008, JavaScript, Prototype, Scriptaculous, jQuery, Google Maps API)

- **M2M Device Data and Control Service**

Worked with hardware and firmware design teams to create a compact protocol for interchange of data and instructions between our embedded devices over TCP and UDP. Created multi-threaded server to gather data from devices (C# 3.0, WCF, LINQ-to-SQL)

Software Design Engineer

Microsoft Corporation

December 2003–April 2009

Projects:

- **Team Foundation Server - Version Control**

Joined team during development of the 1.0 version of Team Foundation Server. Worked primarily on the Version Control object model and command-line interface. Activities included design, specification, and implementation of API and client functionality, including creation of unit and behavior tests. Authored team C# coding guidelines for use by all Team Foundation Server developers. (C# 3.0, IIS, ASP.NET, T-SQL)

Connected with and helped customers of Team Foundation Server through my blog and TFS forums. Worked on high-priority projects and fixes directly with customers across the world.

- **Team Foundation Server - Administration/Operations Tools**

Joined as founding member of a newly created team to focus on the administration and operations experience of Team Foundation Server. Took over ownership of several tools and utilities from other teams and developers. Initial work during the Team Foundation Server 2008 release focused on bug fixing and the creation of some new utilities. Work on Team Foundation Server 2010 included a full rewrite of the install/setup experience to make it simpler and more robust. Created and owned the configuration engine that configures TFS, written with C# 3.0 and T-SQL. Team development done via agile methodologies, including daily stand-up scrum meetings, sprints, backlogs, and burn-down charts. (C# 3.0, IIS, ASP.NET, T-SQL)

Worked on the implementation of the Team Foundation Server Best Practices Analyzer including hosting the PowerShell engine in-process, PowerShell scripts, and C# code to analyze and diagnose the configuration of a Team Foundation Server.

Mentored other Microsoft developers on C# 3.0, .NET 3.5, LINQ, PowerShell V2.0 and SQL Server 2008.

Senior Analyst

PharmaNet, Inc.

August 2002–December 2003

Projects:

- **WebSys 3.0 Offline Use Tech Lead**

Took over the tech lead of the 3.0 release of the flagship WebSys product, the first with Offline Use capability implemented with Oracle replication. Wrote PL/SQL reliable data synchronization packages to perform online backups of Oracle instance data to user's CD-RW drive. (Eclipse, Oracle, Struts, Java, PL/SQL stored procedures)

- **Automated Test Harness**

Created multi-stage test harness for driving server-side migration away from COM+/ASP/ADO towards J2EE/JSP/JDBC. Two database instances started with identical data, MaxQ drives the same transactions through the old (ASP) and new (JSP) servers and the databases are compared afterward with some regular expressions used to prevent false positives. (Eclipse, Java, JSP, Tomcat, Apache, MaxQ)

- **Open-Source migration**

Created new Bugzilla server and migrated existing bug-tracking data from proprietary Soffront Track32 system. Created new CVS repository and migrated source from existing Microsoft Visual SourceSafe database. (Perl, XML, VSS, CVS)

Principal Engineer

Porivo Technologies (acquired by Gomez, Inc August 2002)

September 2000–August 2002

Projects:

- **Lead Developer - Web Services Integration**

Created encrypted web services for exposing real-time data feeds to customers. Created Unicenter integration package to consume the data feeds. (Eclipse, Apache Axis/SOAP, Unicenter SLM, tclsoap, tcllib, tclxml, SOAP, HTTPS)

- **Lead Database Developer - Real-time Alerting**

Created an alerting system based on customer-defined warning and critical events. Alerts sent emails, pages, and created tracking tickets. (Oracle Enterprise Manager, TOAD, PL/SQL stored procedures, Java stored procedures)

- **Lead Database Developer - Direct Peer Payment**

Converted existing sweepstakes-based backend to time+money tracking system. Payments generated based on multiple inputs (referrals, work processed). Payments sent monthly automatically via Paypal. (Oracle Enterprise Manager, TOAD, PL/SQL stored procedures, Java stored procedures)

- **Firefighter - Performance Improvements**

Performed analysis and fixes for performance problems in our Oracle-on-Solaris database backend. Fixed critical queries using suboptimal query plans via SQL hints. (tkprof, SQL*Plus, Solaris, itrprof)

- **Lead Developer - peerReview Web Applications**

Creation of customer-facing web applications for reporting/charting performance data. Created unit tests to provide component testing. (Eclipse, JSP, J2EE, EJB, JDBC, PopChart, JUnit)

- **Developer - Porivo Application Server**

Created server that communicated with rich clients via XML messages. Wrote database-connection pool including performance tracking, dead connection reap/cleanup, and run-time performance tracing. (Eclipse, JDBC, XML, SAX, DOM, Tomcat)

- **Lead Developer - Peer Swing GUI**

Wrote multi-threaded GUI to replace existing Flash-based UI. (Java, Eclipse, Swing)

Real-time Trace Tool Development

IBM PC Server Performance Development

January 1996–September 2000

Projects:

- Designed, simulated, tested and put into production FPGA and PCB designs for in-system trace gathering and storage into target ramdrives. (Verilog HDL, VHDL, Synplify, Xilinx Design Manager, Viewlogic, p-cad, Agilent logic analyzers, Infinium digital oscilloscopes, Texas Memory Systems ramdrives)
- Implemented a software+hardware system for data extraction from ramdrives. Debugged and provided fixes for vendor device drivers on Windows and Linux. Wrote data-streaming library and utilities for high-speed transfer of processor-bus traces. (ANSI C, Expect, minicom)
- Implemented code review and performance analysis of all department modeling software, resulting in speed improvements from 4x to 20x. Designed and implemented performance testing framework for RAID controller firmware modifications. Created Linux device driver for gigabit ethernet card. (ANSI C, Linux)

Lead Systems and Network Administrator

IBM PC Server Performance Development

January 1996–September 2000

Projects:

- Installed, configured, and performed performance tuning on Linux and AIX servers. Created hybrid hardware/software RAID arrays for high-performance data storage. Creation and performance tuning of fiber-based gigabit networks, web servers, and storage arrays. (AIX, Linux, Apache)

Senior AFS and AIX Systems and Network Administrator

IBM PC Design Tools Engineering

May 1995–December 1996

Projects:

- Ran 2 AFS cells of 16 total servers and 300+ AIX and Solaris clients. Performed network design and implementation. Implemented server and network monitoring via SNMP and HP OpenView. Wrote Perl and Perl/Tk programs for AFS/AIX/Solaris admin, tape backup, data mirroring, log processing, and monitoring. Setup and administered web servers. Tech support for all problems including networking, AIX, and printers. Created and managed a 100+ system LoadLeveler pool for chip design simulations. (AIX, AFS, Perl, Perl/Tk, SNMP, Korn shell, LoadLeveler, HP OpenView)

Software Skills

Programming Languages: C#, Java, SQL, PL/SQL, T-SQL, JavaScript, TCL, Perl, C.

Database: SQL Server 2005/2008, SQL Transact-SQL, LINQ-to-SQL, Oracle 8i/9i, DB2, PostgreSQL, MySQL, SQL, PL/SQL, Application development, web development, Benchmark tuning (TPC), Perl DBI, Java JDBC, SQL/J.

.NET Technologies: ASP.NET, LINQ, C#, PowerShell.

Java Technologies: J2EE, Apache Axis/SOAP, J2SE, VisualAge for Java, Together/J, JDeveloper, UML, Rational Rose, NetBeans, JSP 1.1/1.2, Servlets 2.2/2.3, EJB 1.1/2.0 (Entity, Session, MessageDriven), JDBC 2.0/3.0, XML 1.0, JavaBeans, Swing, JAAS, JSSE, JCE, COMM, IDL, CORBA/RMI-IIOP, RMI.

XML Technologies: SOAP, JAXP, jDOM, XSL, XSLT, XT, Web Services, SAX, DOM.

Operating Systems: Linux (Red Hat, Debian, Ubuntu), Windows 95/98/ME/NT/2000/XP/2003/Vista/2008/7, Solaris/SunOS, HP-UX, AIX, OS/2.

Networking: TCP/IP, MyriNet, GigaNet, SNMP, DHCP, BOOTP, Sockets, HTTP, HTTPS/SSL, OSPF, RIP.

Certifications: Sun Certified Programmer for Java 2 Platform, Certified ScrumMaster.

Hardware Skills

Hardware Design Tools: Synplicity Synplify, ModelSim V-System, Xilinx Design Manager, Xilinx Floor Planner, Viewlogic ViewSim, Viewlogic ViewDraw, Allegro PCB place/route, Cadence suite.

Hardware Design Methodologies: Verilog, VHDL, Schematic Capture, Hierarchical Schematic, HDL/Schematic Hybrid.

Certifications: Certified EIT - registered with NC Board of Examiners.

Education

MS in Computer Engineering, May 1999. Research Focus: Parallel Processing Systems design and implementation
NC State University

Overall GPA: 3.93 out of 4.0

Subjects: ECE 460 Digital Systems Interfacing, ECE 520 Digital ASIC Design, ECE 521 Computer Design and Architecture, ECE 592 Advanced Computer Microarchitecture, ECE 713 Digital Signal Processing, ECE 733 Physical Digital Electronics, ECE 744 Design of Electronic Packaging and Interconnects, ECE 743 High Performance Multicomputer Architecture, ECE 746 VLSI Design, ECE 748 Parallel Processing, ECE 791C Special Topics in Back-end Compiler Design.

BS in Computer Engineering (minor in Mathematics), December 1997. Senior Project: FPGA implementation of an RC5 encryption breaker
NC State University

GPA in Major: 3.98 out of 4.0

High School

North Carolina School of Science and Mathematics

References

John Coleman

Chief Executive Officer, On Track Technologies, Inc.

Email: coleman at on-track-technologies.com

Ryan Breen

Vice President of Technology, Gomez, Inc.

Email: ryan at ryanbreen.com

Sean McRae

Associate Director, IT Development, PharmaNet, Inc.

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Chase McCord

Lead Systems Engineer, President, AdaptiCom, Inc.

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Robert Horvick

Software Design Engineer, Microsoft Corporation

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