Instructor Resumé

SCOTT JOHNSON

Systems Architect, Consultant and Lecturer in Software Development,
Systems Design, Hardware Configuration and Data Analysis to
Technology Training, Inc.

Scott Johnson has over twenty years experience in system architecture, database design, software development with twelve years of project leadership experience and hardware configuration. His GPS and Telemetry Experience includes the development of a GPS telemetry abstraction layer that was based on a de-commutation server that Mr. Johnson had previously developed for NASA's X-Ray telescope testing facility. The abstraction layer was necessary due to the five unique vendor supplied mobile GPS devices used by the project. The GPS receivers used GPRS (General Packet Radio Service) for hosting a port on a static IP. The various GPS data sets were normalized by the abstraction layer into a binary data record for distribution to a real-time vehicle tracking system. The tracking system transformed the latitude and longitude elements for use by a third party mapping system. Epochs from the GPS UTC clock and the server's system NTP (Network Time Protocol) derived clock were stored at millisecond resolution. Timing deltas were captured for alerting users when GPRS system latency exceeded predefined thresholds.

Mr. Johnson also developed software to test underwater digital communication methods for the US Navy using the GPS UTC clock telemetry data along with a dedicated IRIG system clock. This was to precisely time the telemetry data from an underwater acoustics sonar array that was capturing signals being generated from a separate towed array or mounted to a research submarine. The measurements required coordinated time stamping at the microsecond level.

EXPERIENCE

2003–present   DIGITAL CROSSING, INC., Santa Barbara, California. *Systems Architect.* Designed and developed the Axium PayTrax Web on-line entertainment payroll application. Also designed and implemented a multi-threaded work queue batch management system for handling long running requests submitted by users.

1999–2003   SUPPLYSOLUTION, INC., Santa Barbara, California. *Systems Architect.* Led the server software architecture for the web application i-Supply. Responsibilities included leading the SSI Database Group and overseeing the Oracle schema design and development using Embarcadero's ER/Studio application for data modeling and schema management.

1998 - 1999   AVL Systems, Inc., Huntsville, Alabama. *Computer Scientist.* Led the architectural design and implementation of a commercial real-time vehicle tracking client server application. This multi-process, distributed application, archives and decommutates telemetry data packets received over wireless and physical networks. Lead the software development team and conducted on-site training courses.

1994 - 1998   QUALITY RESEARCH, INC., Huntsville, Alabama. *Computer Scientist.* Developed a Paperless Office application to enable Quality Research employees to access corporate information and submit digital forms. Conducted technical training courses for NASA and Quality Research employees, on C++, Java, Introduction to Unix and Object-Oriented Design. This involved creating lecture outlines and hands-on computer course work. The environment included Linux servers, GNU Tool set and Telnet.

Made a significant technical contribution to the NASA X-Ray Telescope testing facility. This involved designing, developing and testing (within a two month schedule) a de-commutation server for NASA telemetry. Established and implemented a C++ coding standard and a GUI "look and feel" style guide based on commercial standards.

1992 - 1994   GENERAL RESEARCH CORPORATION, Huntsville, Alabama. *Computer Scientist.* Designed and developed Ada and C support level code to control an Oracle distributed database. This involved using the Oracle C language interface kit to create a modular set of SQL libraries that enabled developers to work with SQL primitives and avoid the Oracle code-generator interface. The environment included Silicon Graphics Unix workstations, Convex Unix servers, Oracle, and the C and Ada compilers.

1991 -1992   SONATECH, INC., Santa Barbara, California. *Software Engineer.* Designed and developed C software for a real-time multi-process distributed data acquisition system for the U.S. Navy, involving real-time underwater information. This system collected large scientific acoustic data samples and archived the data to tape. The environment included Sun workstations, custom data acquisition hardware, and four 8mm helical scan SCSI tape drives. Developed embedded software for Navy Seal side-scan sonar.

1987 - 1991   GENERAL RESEARCH CORPORATION, Santa Barbara, California. *Research Assistant.* Designed and developed a payroll accounting system using dBase. This involved creating a scripted rule-set that performed complex payroll calculations over numerous employee database tables.

Technology Training, Inc.
Toll-free Tel: 866-884-4338 (866-TTi-4edu) · E-mail: Training@ttiedu.com · http://www.ttiedu.com

CONTRACTING—PROJECTS SINCE 1988

- Designed and developed a Scientific Display Manager for the International Space Station (ISS). This multi-threaded Java application supports the simulation and checkout of scientific payloads for the ISS. It includes a display layout editor and run-time rendering of Java displays based on user-defined layouts. The project involved using AWT for dynamically generating telemetry displays that send/receive real-time data from the payload test rack.

- Developed a Windows NT email client for a touch screen kiosk. This involved developing a Visual C+ + MFC application. The project included writing a C++ wrapper classes for POP3 and SMTP protocols that used my existing TCP C++ class.

- Designed and developed software to control a raw materials measuring system for tire manufactures. This involved hardware control of laser calipers that monitored material usage and provided real-time feedback to the machine operator. This software was written in C++ using a PC platform.

- Provided technical leadership on a software application for natural language translation for Intergraph.

- Designed and developed a doctor's office management system.

EDUCATION AND SKILL TRAINING

1987-1988 Santa Barbara City College, Santa Barbara, California.

Self-taught all languages used in software development

EXPERTISE AND EXPERIENCE.

Object-Oriented design and development of multi-process, threaded, Java and C++ applications for Unix, Linux, and Windows.

Twelve years of experience in relational database (Oracle, SQLServer and MySQL) web based client server application development.

Extensive experience in relational database schema design with emphasis on referential integrity and strict type checking.

Twelve years of experience with Visual C++ MFC based GUI development.

Ten years of experience in Java development with JDBC, AWT and Swing.

Thirteen years of experience in networking including TCP/IP, UDP, and local socket based development.

Core Competencies

• Software Design • Project Leadership • White Paper Development

• Database Schema Design • Problem Solving • Mentoring Developers

• Software Development • Database Migration • Code Optimization

Technical Proficiencies

Languages: Java, C++,C, Ada 4GL (PHP, JavaScript, Visual Basic, Python, XML)

Databases: Oracle, MS SQL Server, MySQL, FoxPro, dBase

Networking: TCP/IP, UDP, NFS, DNS, dynamic HTML generation via C++ CGI

Platforms: Windows 2000/XP/Vista, UNIX , Linux, Mac OS, Apache-PHP

J2EE Application Server: IBM WebSphere, JBoss, BEA WebLogic

Tools: Subversion, CVS, Ant, Eclipse, Emacs, ER/Studio

TEACHING ACTIVITIES

AVL Systems, Inc., Huntsville, Alabama: Conducted on-site training courses.

Quality Research, Inc., Huntsville, Alabama: Conducted technical training courses for NASA and Quality Research employees, creating lecture outlines and hands-on computer course work.

Technology Training, Inc.
Toll-free Tel: 866-884-4338 (866-TTi-4edu) · E-mail: Training@ttiedu.com · http://www.ttiedu.com