

# Jim Perkins

## Employment

2000-present Spacenet Communications, Inc. Marietta, GA

### **Manager, Software Development**

Manager and project lead of a team of 5 engineers developing applications in support of Spacenet networks. Spacenet provides high-speed Internet access via Satellite to the consumer and small business market. Responsibilities include overall system architecture, application design and development, system integration and product lifecycle planning. Led in the design, development and deployment of projects including:

- Ticket BCMS system. This is a project tracking system intended for use both internally by Spacenet personnel and externally by Spacenet partners. The system possesses a web interface with on-the-fly field customization, a customizable workflow system with external processing and ticket centric email processing for both SMTP and POP. The heart of the system is a highly optimized SQL 2008 database with full data redundancy.
- BAT / FAP system. The Bandwidth Throttling / Fair access Policy system is a network of servers and services that monitor and process tens of thousands of customer usage records in order to track and if need be limit network access based on a customizable usage policy. A SQL 2000 database system is relied upon to provide storage and management for this multi-million customer record processing system.
  - Internet Access Control system. This is a network access control system that utilizes a series of load balanced CISCO routers to limit access (based on source IP address) to only authorized network customers.
  - The StarBase system. This is a Call Center Knowledgebase intended for use both internally by StarBand Operations and externally by StarBand partners for customer support. This is an ASP.NET web based system using C# in the business and data access layers and SQL Server 2000 as the database. This system makes extensive use of XML both for article encapsulation and for interfacing between the system layers.
  - The Communications Center system. This is a system that provides StarBand Operations a means of messaging customers with service related information. The primary message delivery system is a .NET Web Service using a SQL Server 2000 message database and includes an ASP.NET message creation and administration system.
  - The Model 480 modem control application. This is a .NET windows forms application developed in C# using Sockets, framework multi-threading, and Windows Installer. This was one of the first large scale commercial .NET forms deployments.
  - The Model 360 modem control system. This application suit was developed in VC++ and required extensive knowledge of MFC,

COM, multi-threading, Sockets and Windows Installer technologies. This desktop application suite has been deployed to over 30 thousand customers and is currently in its 5th major revision.

- Countless utilities developed in support of Spacenet various systems.

1999-2000 Spacenet, Inc. Marietta, GA Senior Software

Engineer

Primary software development responsibility for Mallnet, a distributed multimedia internetworking facility for deployment in malls environments. Strong emphasis on SNMP-based network management, IP/multicast, Linux, Java and C++.

Implemented data transaction multiplexing using a “Socket Router” architecture, which can multiplex credit transactions from thousands of stores onto one or more server streams (C++/Linux).

Developed configuration, administration and instrumentation mechanisms for a network of hundreds of unattended servers, using templates and image files based on SNMP MIBs (C++/Linux/Java).

Developed an Object-Oriented TCP/UDP socket library based on Stevens, and an SNMP caching and persistence mechanism. Both made extensive use of Tools.h++ which required porting to the Linux OS.

1998–1999 Scientific Atlanta Atlanta, GA

Consultant

Developed the DataXcellerator Cable Modem Controller. A software component that is tasked to manage the Scientific Atlanta dataXcellerator Cable Modem. This application is a single software base, which is implemented in the JAVA language as both a browser supported applet and as a Macintosh standalone application. The project required extensive knowledge of JAVA applet security issues in an evolving browser environment.

1992–1998 AT&T Tridom Marietta, GA Lead Software

Engineer

Software implementation responsibility for network management evolution for VSAT networking, SNMP integration and proxy work, exploration of JAVA and Web-based network management.

Evolved a proprietary VSAT network management system (NMS)

towards a standards-based approach, involving an SNMP “whole-network proxy” server with an extensible MIB-based command translator.

Familiarization and use of the Bridgeway SNMP framework, Rumbaugh OMT analysis notation (UML), object-oriented programming in C++ and JAVA.

1985-1989 Tridom Corp./AT&T Tridom Marietta, GA Senior Software

Engineer

Project Lead for OSI standards based satellite network management software systems (first and second generation).

Significant product enhancements using C++, including development of a UNIX socket based IPC library and a network node commissioning tools.

Re-implementation of Database support using client / server paradigm. Database administration responsibility for both the first-generation and second-generation network control systems using Oracle RDBMS.

Developed an approach for using Commercially available, WAN capable RMON probes (NetScout) for monitoring AT&T's satellite-based communications networks

1987-1989 Computer Generation Atlanta, GA Senior Software

Engineer

Participated in extensive system re-design, enhancement, and maintenance for a real-time, centralized switch monitoring system.

Responsible for system enhancement and support for a real-time, telephone central office data collection system for call rating.

1984-1987 Technical Software Associates Atlanta, GA Software

Engineer

Responsible for test plan development and design support for the Air Force Rescue Coordination Center - Management Information System (AFRCC-MIS).

Participated in requirements analysis and design of telemetry analysis software for the search and Rescue Satellite Aided Tracking System (SARSAT).

## Education

BS Information and Computer Science, Georgia Tech, 1983. Graduate work in compiler design, theoretical computer science, program testing, AI.

Cisco Career Certifications CCNA 2009 (CSCO11569602)

Various additional courses including Oracle architecture and administration, Rumbaugh/OMT, UML methodology and JAVA.