

Daniel B. Sommers

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Summary

A proven software and systems engineering professional with experience in the communications, securities, internet, and government services industries. A highly analytical, technical leader and problem solver with a track record of successful project completions and deliveries.

- Unix/Linux/POSIX, Mac OS, Windows, others
- Python, Javascript, shell programming, C, C++, C#, Java, SQL, various microprocessor assembly languages, FORTRAN, Pascal, BASIC, others
- embedded, real-time, complex, and distributed systems and architectures; communications protocols; relational databases; systems engineering and configuration management systems and processes; web applications; cryptography; others

Experience

Science Applications International Corporation **2006–Present**

National Incident Manangement System Support Center **2006–Present**

- Brought development of Dashboard, a web application summarizing national emergency preparedness, in house. Led two releases successfully through requirements, design, testing, and deployment.
- Led development of Incident Resource Inventory System (IRIS), a distributed inventory system for emergency management resoures, through three major releases.
- Led development of the Supporting Technologies Evaluation Program (STEP) Website, a web application to help vendors through a program application process and to collect annotations and statistics for internal use.
- Developed and maintained the STEP Test Tool, an internal tool to collect, edit, analyze, and exchange XML messages with systems under evaluation and DM-OPEN (and later IPAWS-OPEN).
- Supported development of Electronic Simulation System (ESS), a GIS simulation of a state, county, and city used to train emergency responders and emergency managers.
- Developed the Integrated Public Alert and Warning System (IPAWS) Conformity Assessment Program, which tests products for conformity to the Common Altering Protocol (CAP) and the CAP USA IPAWS Profile in a test laboratory accredited by the American Association for Laboratory Accreditation.
- Provided the technical point of view as this organization developed its internal software development and other processes. Sat on the Change Control and Engineering Review boards.

Motorola* **1988–2001**

High Availability Platform **2000–2001**

- Led team to extract software requirements from marketing requirements, system engineering requirements, and ISO/CCITT/ITU recommendations. Produced textual and UML Software Requirements Specification.

- Led team to develop UML-based Software Interface Design Specification using Rational Rose.
- Participated in various configuration management process improvement efforts to help the department use Rational ClearCase and ClearQuest.
- Provided technical leadership for the High Availability Applications team, including Event Management, Alarms Management, Statistics Management, and Upgrade Management, through the first major release.
- Established future design and implementation directions for the Alarms Management application.

Uponus Techonologies

1999–2000

- Brought development of Mac OS and Windows compression and encryption software in house. Brought proofs-of-concept to market.
- Developed proprietary implementations of public and proprietary compression and encryption algorithms for comparison purposes.

Motorola*

1988–2001

Iridium Satellite Communication System, ECS

1997-1999

- Specified and designed advanced call processing features (e.g. call waiting, three-way calling, etc.) in text and in SDL, produced prototype, implemented and tested portions thereof.
- Led team to retrofit proprietary multi-tasking MC68040 operating system into another application fork.
- Specified and designed periodic polling and fault management of unintelligent fiber-optic daughter boards after redesigning and re-implementing the RS-232 communications subsystem.
- Developed many internal development tools, process improvements, high level design document standards, and C language coding standards.
- This organization earned the highest Software Engineering Institute (SEI) CMM rating of 5.

Iridium Satellite Communication System, OMC-R

1996

- Specified, designed, implemented, and tested SNMP manager and agent for Iridium OMC-R (Operations and Maintenance Center, Radio). The OMC-R was an SNMP agent to the Iridium OMC-G, and an SNMP manager to the Iridium ECS.
- Developed many build utilities and other SCM tools.

Network Services

1990–1995

- Led Specialized Mobile Radio (SMR) Network Administrator's Package (SNAP) development team.
- Gathered requirements, specified, designed, developed, tested, and deployed SNAP, a Unix-based Operations and Maintenance system for SMR networks. SNAP's primary functions were to maintain a local database of authorized SMR users, and to keep up to 1000 remote SMR controllers in sync with that database. In late 1999, SNAP's target platform was declared non-Y2K compliant; SNAP had been part of daily operations with neither maintenance nor support since mid-1994.
- Gathered requirements and specified SNAP's successor, and eventually supported third party with design, development, and deployment.

- Developed many in-house Unix-based utilities for various uses throughout the Network Services organization.

Control Centers **1989**

- Ported existing proprietary MC68000 operating system to newly designed MC68020 hardware. Worked with hardware engineers to debug hardware and low-level software.
- Specified, designed, implemented, and tested distributed database functionality (see patent, above).
- Specified, designed, implemented, and tested new communications drivers, stacks, and protocols for expanded packets necessary in a networked environment.

Trunking Systems **1988**

- Specified, designed, implemented, and tested CCROSS, a system for synchronizing multiple radio towers in a simulcast network. Developed our own protocols for use across half-duplex microwave and RS-485 networks.

American College of Surgeons* **1988**

- Designed and implemented software for grading college members' self-assessments in FORTRAN on an IBM 370.
- Designed, implemented, and tested software for extracting oncological information from a proprietary database for subsequent use in a DB/2 application.

CompuQuote **1985–1988**

- Designed, implemented, tested, and deployed multiple real-time and off-line stock, option, and future analysis software, including real-time pricing, historical graphs, and risk analysis and management. Worked with traders and trading staff to develop proprietary theoretical value models, custom graph types, and other analysis tools.

Byte Shop, B.I.E.S. Systems **1978–1982, 1982–1985**

- Built, sold, supported, repaired, and wrote and modified software for a variety of CP/M-based computers, Apple IIs, IBM-PCs, and other microcomputers of the time.
- Taught myself BASIC; Pascal; FORTRAN; C; and 6502, 8080/8085/Z80, MC680x0, and 80x86 family assembly languages.

Other

Bachelor of Science with majors in Mathematics and Physics, May 2006, University of the Cumberland, Williamsburg, Kentucky. Member in good standing of Kappa Mu Epsilon and Sigma Pi Sigma.

U.S. Patent 5,291,488, March 1, 1994 (co-author), Communication System Configuration Data Management. Abstract: System configuration data required for use by various interfaces can be obtained either directly via a data link that couples the interfaces to other systems, or by a down link from a system data manager configured as part of the interfaces' system.

Standing Stones, Electronic Arts, 1983 (co-author), a fantasy role playing game for the Apple II and Commodore 64 computers.

References

Available upon request.

*These work experiences were as a contract employee through Interactive Business Systems, Oak Brook, Illinois.