

Seth Robertson

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Areas of Expertise

System/Network Design and Architecture
Intellectual Property Development
Systems/Network Programming
Systems/Network Administration
Kernel Programming
Infrastructure Development
Scalable Programming
Security
Database Design
Remote Development
Systems Debugging
Worldwide System Rollout and Implementation

Current Languages

C, Perl, Unix shells
P/SQL

Current Operating Systems

Linux, OpenBSD
FreeBSD, IOS
BSD/OS, Solaris

Summary

Senior Architect for Unix Systems/Network Research and Development

Senior designer and technical leader for complex systems, programs, and problems, with over 15 years of experience with all aspects of TCP/IP and Unix—from administration to development to design. Goal-oriented methodology. Insightful analysis of protocols and products. Strategic vision for revolutionary new technologies and enhancements to achieve technological dominance.

Career Highlights

CounterStorm—New York City **Chief Architect**

August 2001 - Present

Lead Technologist for CounterStorm. Driving the technical design and implementation of CounterStorm, an Internet worm and attack detection and response appliance. Responsible for patents; senior technical liaisons; core code design, review, security, and integrity. Additionally responsible for technical management of DARPA Information Assurance/OPX (Operational Partners in eXperimentation) project involving other security companies and on-site deployment at governmental facilities and Homeland Security contracts for bot-net detection.

Product users include: New York Police Department, Warner Music Group, The Brookings Institute, McGraw-Hill, Columbia-Presbyterian Hospital.

HydraWEB Technologies—New York City **Chief Technical Officer**

September 1994 - May 2001

Lead Technologist for HydraWEB. Responsible for all technical evaluations, plans, designs, and technical customer proposals. Senior inventor, designer, and developer of HydraGPS (WAN client/server reliability and optimization system), HydraWEB (LAN client/server reliability and optimization device), Brimstone (firewall), and Proconsul (serial console middle ware). Responsible for patents, senior technical liaisons, plus core code design, review, and integrity. Additionally responsible for systems/network administrator and guidance for both the company LAN, the Internet connection, plus several large corporate clients with large Unix Internet-connected network installations dealing with Interactive TV and WWW hosting.

Product users include: Allen Bradley, Ascend, Associated Press, AT&T, Bear Stearns, Citicorp, Corel, DLJ, Deutsche Post, Dow Jones, JC Penney, Juno, MCI, Monster, Reuters.

Columbia University—New York City

March 1992 - August 1994

Systems Manager/Programmer, Center for Telecommunications Research

Solely responsible for all CTR systems, maintenance, and network operations for a network of 300+ users, 90+ Unix machines, and 100+ PCs, Macs, and X-terminals. Including requirement analysis, purchase, installation, and maintenance of all technical equipment and software. Compiled, installed, and maintained all normal Internet services such as DNS, sendmail, USENET, WWW, anonymous FTP, and IRC. Extraordinary duties included the total redesign, purchase and implementation of the network due to a move to a different building.

Additionally full and part time January 1988 - March 1992.

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Protocols

IP, TCP, UDP, UDP
NTP, SSL, HTTP, FTP
TELNET, SMTP, SMB
NNTP, RIP, OPFS
BGP, IPSP, SIP

Columbia University—New York City

Fall 1990

Systems Manager/Programmer, IBM SEN/PIP project, Department of
Computer Science

Responsibilities included management and maintenance of test-bed network including fixed and mobile Unix computers. Compiled AIX 1.x (nontrivial) for implementation of mobile protocols and performed Mach NFS debugging in the kernel.

Large Software Projects

CounterStorm-1, Antura
HydraGPS, HydraWEB
Proconsul, Brimstone
HUDB, Xkernel, chkpt
nfsspy, netdig, pcrack

Bellerophon Corporation—IL

May 1985 - August 1987, Summer 1988

System Programmer/Consultant

Duties included traditional application (AP/GL, etc.) development and documentation, modification of IBM packages such as CMAS and DMAS, S/36 and AS/400 systems administration and help desk support.

Full time, Summer 1988. Full and part time, May 1985 - August 1987.

Publications

Robertson, Seth, et al. "Surveillance Detection in High Bandwidth Environments." Information Survivability Conference and Exposition (DISCEX III), Washington, D.C., April, 2003.

Professional Organizations and Awards

ACM Member
Bronfman Scholar
Columbia University
Dean's List
Columbia University

Patent Applications

- System Detection: "Detecting Probes and Scans Over High-Bandwidth, Long-Term, Incomplete Network Traffic Information Using Limited Memory."
- HydraWEB Technologies: "Network Provisioning, Addressing Denial of Service Attacks, Reducing Network Bandwidth Arbitrage Fees, and Reducing Government Tariffs on Electronic Transactions"
- HydraWEB Technologies: "Method and Apparatus for Reducing and Optimizing Network Traffic"
- HydraWEB Technologies: "Method and apparatus of modifying performance of a load-balancing system using an extensible agent"
- HydraWEB Technologies: "Wide Area Network Server Load Balancing Using a Network Provisioning System"

Education

Columbia University, School of Engineering and Applied Sciences. B.S. in Computer Science, February 1992

Clearance

Yes, 11/2006