

- Education**
- Bachelor of Science, Computer Engineering* Completed: May 2005
Southern Illinois University Edwardsville
Specializations:
- Object-Oriented Programming
 - Embedded Systems
 - Computer Architecture
 - Network Engineering
 - Image Processing
 - Control Systems
- Masters of Science, Electrical Engineering* Incomplete: Sept 2005 through May 2006
Southern Illinois University Edwardsville
Specializations:
- ARM Embedded Systems
 - Computer Architecture
- Skills**
- Programming/Scripting** : C, C++, C#, HTML, CSS, Perl, UNIX Shell, Various Assembly
Tools : GCC, Matlab, Verilog, Visual Studio .NET, Wireshark, Microsoft Office
Operating Systems : GNU/Linux, Solaris, Windows (Desktop and Server)
Certifications : MCTS - .NET Framework 4, Windows Applications
Technologies : IPv4, IPv6, TCP/IP, UDP, SCTP, SSL/TLS, X.509, DNS, DHCP, SIP, SDP, RTP, RTCP, HTTP, SMTP, VPN, IPsec, VLAN, CISCO IOS, ICMP, IGMP, GPIO, SPI, SSI
- Experience**
- Network Harbor Inc. Embedded System Engineer
Bartonville, Illinois August 2006 - Present
- ◆ Ongoing development of a real-time conference control application for Windows Server.
 - Enables conference monitoring and control for integration products.
 - Programmed in C# .NET using Microsoft Visual Studio.
 - Support SIP/SIPS for secure industry-interoperable call control.
 - Cross-domain DNS and resource resolution for integration into a growing VoIP infrastructure.
 - Compliant with many IETF memorandum, including RFCs 3261, 3262, 3263, 3551, 4566.
 - ◆ Created an IP intercom substation for the physical security market as half of a two-man team.
 - Programmed device firmware in C language using GCC on Debian Linux.
 - Developed a control application in the C language with network, audio, and GPIO components.
 - Interfaced network components for media and call control.
 - Media compliant with RTP/RTCP using industry standard audio encoding (G.711, G.722).
 - Privacy and authentication using SRTP and SRTCP with crypto suite support for AES and 3DES.
 - Call control using SIP, including support for session timers, resource location, and SDP negotiation.
 - Secured call control using SIPS over TLS with ability to import or self-sign X.509 certificates.
 - Developed a CGI configuration application in the C language.
 - Interfaced configuration application using HTTP/Web or GPIO controls.
 - Network protocol support for both IPv4 and IPv6.
 - Various optimizations with assembly procedures.
 - Created a board support package to port the Linux kernel to the intercom system board.
 - Designed the intercom system board using Mentor Graphics EDA.
 - Developed test equipment and procedures for device manufacturing.
 - Authored software and hardware manuals for end users.

**Experience
(cont'd)**

Network Harbor Inc. Embedded System Engineer
Bartonville, Illinois August 2006 - Present

- ◆ Developed network recorder for IP intercom calls
 - Joins conferences using SIP call control from a intercom media server.
 - Features for single or multiple stream recording over RTP.
 - Support IGMP membership for multicast media.
 - Recordings accessible using API over HTTP.
 - API includes mechanisms for search, playback, and export functions.
- ◆ Miscellaneous network administration tasks.
 - Subnetting and configuration of corporate networks. (IPv4, IPv6, DHCP)
 - Consultation for internal and external DNS configuration.
 - Troubleshooting network connectivity issues. (ICMP, Wireshark, UDP, TCP/IP)
 - Maintenance of corporate e-mail. (Microsoft Exchange)
 - VPN administration for home offices. (various IPsec devices)

Cybercon.com Technical Support Staff
St. Louis, Missouri May 2006 – July 2006

- ◆ Data Center Technical Support
 - Creation, execution, and resolution of customer-initiated trouble tickets.
 - Assembly, maintenance, and repair of co-located servers. (Mostly UNIX; some Windows)
 - Network configuration for new/modified accounts. (Cisco Routers and Switches)
 - Hourly billing for customer support.
- ◆ Site Security and Maintenance
 - Monitored physical access to client hardware.
 - Mitigation against compromised client software.
 - Status checks and repairs of site electrical, air conditioning, and backup systems.

Southern Illinois University Edwardsville Graduate Teaching Assistant
Edwardsville, Illinois August 2005 – April 2006

- ◆ Computer EDA Lab Manager
 - Administration of Solaris v9 computer lab equipped with Mentor Graphics EDA software.
 - Guided senior-level CS and ECE students during Verilog implementation of a 16-bit CISC CPU.
 - Debugging and evaluation of student designs.
- ◆ Electrical Engineering Teaching Assistant.
 - Graded coursework for Circuit Analysis and Analog Control Systems.
 - Led voluntary tutoring sessions for assigned courses.

**Interests &
Hobbies**

Amateur Auto/Motorcycle Mechanic, APA Pool League, Camping, Hiking, Mountain Biking, Home Remodeling, UMCOR/UMVIM Volunteer