

- 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#, HTML4/5, CSS, Javascript, Java, Perl, UNIX Shell, Assembly  
**Tools** : GCC, Eclipse, 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, XML, XAML, AJAX, HTTP, SMTP, VPN, IPsec, VLAN, CISCO IOS, ICMP, IGMP, GPIO, SPI, SSI, XSD, SOAP, WSDL, REST, WADL
- Experience**
- The MITRE Corporation Enterprise Software Systems Engineer  
Shiloh, Illinois May 2015 – Present
- ◆ Software Engineering support to USTRANSCOM Program Executive Office
    - Advise program management on technical risks, issues, and opportunities
    - Provide oversight into the activities of contractor-led software development teams
    - Design and develop prototype software systems to identify risks and enhancements
    - Analyze and assist with software designs, development, testing, and deployments
    - Review and comment on program documentation and contractor deliverables
    - Perform independent testing and design analysis to detect security vulnerabilities
  - ◆ Support software development processes
    - Conduct Business Process Model (BPM) analysis to define software requirements
    - Apply Service-Oriented Architecture (SOA) concepts to segregate software components
    - Apply Object-Oriented Analysis and Design (OOA/D) principles to synthesize software designs
    - Decompose software designs to report incremental software release plans
    - Define epics, stories, tasks, and tests for an Agile software development team
    - Guide implementation of testing techniques to verify correctness of software implementations
    - Utilize the implementation of automated tests to detect feature regressions
  - ◆ Act as Technical Adviser to the Government and the Development Contractor
    - Provide independent code reviews for developed capabilities (Java, AJAX, SQL Stored Procedures)
    - Guide fault-discovery and remediation activities using signal-trace analysis (Wireshark, Logs, etc)
    - Prototype and demonstrate automated testing strategies (JUnit+Mockito, SoapUI)
    - Define services interfaces for software components (SOAP, WSDL, XSD, REST, WADL)

**Experience  
(cont'd)**

Network Harbor Inc.  
Bartonville, Illinois

Embedded System Engineer  
August 2006 – April 2015

- ◆ Developed 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.
- ◆ 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)

## Jarod Allen Neuner

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### Experience (cont'd)

Cybercon.com  
St. Louis, Missouri

Technical Support Staff  
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  
Edwardsville, Illinois

Graduate Teaching Assistant  
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