

**The University of Akron**

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**From the Selected Works of Daniel Shell**

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Fall September 1, 2016

## dshell resume

Daniel Shell



Available at: [https://works.bepress.com/daniel\\_shell/1/](https://works.bepress.com/daniel_shell/1/)

## **EXPERIENCE**

**DSHELL NETWORK ARCHITECTS, LLC**  
Fairview Park, Ohio

2010 – Present

**CEO**

- System Engineer and Principal Investigator for mobile Tactical Networks using leading edge secure wireless technology. Expertise in using Internet Protocols for secure mobile communications.
- Architected an LTE mobile IP tactical network solution for CERDEC. Used Open Source for technologies for:
  - VoIP
  - Firewall
  - Scripting
  - Google Earth Technologies
  - Android Operating System
- Wooster Hospital Nov. 2012 Voip over wireless consultant
  - CISCO Call Manager troubleshooting
  - CISCO VOIP wireless phone troubleshooting
  - CISCO Switch troubleshooting
  - Wireless controller troubleshooting
  - Wireless design recommendations and troubleshooting
- 2011: Prepared a seminar series on LTE technology
- Cisco Certified Network Professional Lecturer at University of Akron.
- Cisco Certified Network Academy Instructor Lorain County Community College.

**WDC Co., Inc.**  
Cleveland, Ohio

2006 – 2009

**Chief Technology Officer, Chief Information Officer, Lead Systems Engineer**

- Provide creative total systems solutions utilizing new and current product lines. Provide technical direction for customer solutions and expertise for end-to-end mobile networking designs and implementations. Establish product development procedures.
- As CIO, provide manufacturing with QC procedures. Manage the Technical Assistance Center for customer support.
- Provide expertise for the design, implementation and maintenance of the web site.
- System Engineer and Primary investigator and project manager for over \$3 million dollars of government contracts:
- Teamlinc: System Engineer for Mobile Ad Hoc Networking using Optimized Link State Routing working with Army Technical Automotive Development Center (TARDEC).
- Developed 20 near-production MANET systems for the US Army Tank and Automotive Research and Development Center (TARDEC) exercise at Michigan International Speedway August 2009.
- ID key based security using IPV6, working with SPAWAR San Diego.
- System Engineer for secure multicast along with secure unicast, using identity of the system or user, rather than the current ipv4 address.
- Aerostat Project: Research and fly communication systems for disaster recovery. Sky Sentry is the prime contractor.
- System Engineer for flying a Qualcomm QDBS cell switch at 1000 ft., using an Aerostat. This is the 1st time this had been done. At the 1000 ft. altitude we had reliable communication for 11 miles.
- Pysops MUA: System Engineer for Pysops on MUA for deployment of advanced communication in the field.
- MUA demonstrations in September and October 2008.

***System Engineer and Network Architect, Government Systems Unit (1994 – 1999)***

- System Engineer for Internet mobility issues surrounding global defense, both from a hardware and software solution. Major customers were Tactical Army's forward deployed units, U.S. Coast Guard, and brown water solutions. Developed crypto solutions for both Tactical Army deployments, as well as other possible uses.
- System Engineer for the development of Mobile IP Networking IOS software released in October 2001. Worked with IOS development team on new features such as Multicasting, Co-located Address, Dynamic Home Agent and Dynamic registration of Mobile IP subnets.
- System Engineer and project leader for minirouter and worked with RTP tech center on development of the Darkstar V1, Darkstar v1.3 and SFR. This has lead to the development of the MAR3200 and follow on projects.
- System Engineer for prototype 1553 to IP small gateway unit to use PC104 form factor for easy integration with minirouter. This would allow for commanders to have near real time status of weapon systems.
- System Engineer for CISCO 3200 Mobile Access Router. Millennium Challenge 02 at Fort Irwin National Training Center with the 82nd Airborne Division. This proved that CISCO technology could be used in a "real" battlefield operation.
- System Engineer for Neah Bay project for Coast Guard. Provided initial contact and project plan for use of Mobile Networking on a Coast Guard vessel. This lead to involvement of NASA Glenn Research Center. Successful field trails were completed.
- Principal Investigator and System Engineer for Cisco router in Low Earth Orbit (CLEO). Currently a CISCO 3251 router is in polar orbit. This is an experimental payload on the Surrey Satellite named UK-DMC. This is a five year experiment proving mobile routing technology, Internet access, and standard communications protocols can be used for near earth orbit space craft. As of today the router is working perfectly and a number of milestone experiments have been completed.
- Expert in MobileNetwork IOS software and worked closely with the development team on this major feature. Also worked closely with RTP Tech Center on development of next generation minirouter and java virtual machine for use with IOS. Expert in Mobile networking IPv6 implementation.

***Systems Engineer, Federal Division (1994 – 1999)***

System Engineer for pre-sales and post-sales support for Department of Defense customers in a five state region.

- Major accounts: Wright Patterson Air Force Base, Dayton Ohio
- Tank Command, Detroit, Michigan
- Department of Defense Finance and Accounting Services, Cleveland, Ohio.
- WPAFB's network supported a 20,000 user community. Tank Command supported the R&D for the Army which required high speed, high end workstations and networks. DFAS in Cleveland had 31 regional centers around the U.S., 7 large operation centers with 4,000 - 5,000 users each. DFAS Cleveland consisted of a FDDI Metropolitan Area Network connecting 3 buildings into one high speed network.

**EDUCATION**

- MSLS, Information Science, Case Western Reserve University, 1981.
- Master of Music, Music Composition, Cleveland State University, 1979.
- Bachelor of Arts, Music Education, Cleveland State University, 1974.

## PROFESSIONAL ACTIVITIES

- Engineering Member, representing CISCO Systems, of the Telecom Industry Association Satellite Subcommittee on TCP/IP over high latency networks.
  - Worked with the IETF and NASA on creating an IETF Standard for TCP/IP on high latency networks, 1996-2001.
- Continuing Education Instructor at Cuyahoga Community College and Cleveland State University.
  - Taught courses in CISCO Routing and Advanced Novell LAN Management and troubleshooting. 1990-1999.
- Consultant to U.S. Dept. of Labor, Contract Labor Department, 1989.

## AWARDS RECEIVED

- National Intelligence Award from Joint Chiefs of Staff
  - Virtual Mission Operations, 2005.
- NASA Turning Goals into Reality (TIGIR), 2004/2005
- NASA Stellar Award for Innovation, 2004.
- Northeast Ohio Regional Technology (Nortec) Award for Innovation, 2003

## CONSULTING

### Cleveland Public Library CLEV-NET

April 2013 – present

- Data Center Install
  - VMware ESXI 5.1
  - VMwaew Vcenter server
  - HP 6300 Fibre Channel Storage Array
  - Server consolidation project
- Network Security Audit of CLEV-NET Core network.
  - Analyze firewall log files.
  - Audit firewall rules using best practices.
  - Audit servers for vulnerabilities.
- Phase 2 is an audit of the wireless network..
- Phase 3 is the virtualization of the core network and VOIP system.

### Refrigeration Sales Coperation

October 2013 – 2014

- Install and Configure Solar Winds
- Configured Solar Winds alarms for a VMware production environment
- Monitored and managed alarms for Refrigeration Sales Coperation

### Wooster Hospital of Ohio VOIP wireless network

November 2012

- Consulted with network team at Wooster Hospital of Ohio to help remedy the major network issues they had with the CISCO wireless VOIP phones and the enterprise switching and wireless network.
- The following recommendations were made and implemented:
  - All wireless VOIP traffic on a separate SSID and VLAN.
  - Improve the uplinks on the CISCO switches using the gigabit per second ports already installed and operational.
  - Implement QoS for VOIP traffic on the controller.
  - Move the VOIP traffic to 5 GHz band from the 2.4 GHz band.
  - Updated firmware on the controller.
  - Updated firmware on the CISCO wireless VOIP phones.
- Customer very satisfied with recommendations and improved wirelsss VOIP services for nurses and doctors at the hospital.

## TEACHING

**University of Akron**  
Akron, Ohio

2011 – Present

### ***Adjunct Faculty***

- Lecturer teaching Enterprise Networking, Wireless Networking, and Senior Thesis class also known as current topics. These classes are upper level course work for juniors and seniors in the Computer Information Systems Bachelor of Science degree program.
- The Enterprise Networking class is a combination lecture and lab. Major topics covered are network design, installation, security, troubleshooting and costs. The course work, tests, labs are designed by myself to ensure an advanced level of networking skill and knowledge.
- The wireless class is combination lecture and lab. Major topics covered are 802.11n, LTE, 802.11ac, network design, troubleshooting, and security. The course work, test and labs are designed by me to ensure an advanced level of networking skill and knowledge.
- The current topics class is a senior thesis class. Student are given or allowed to research current topics in the information technology profession. Some examples of current topics are: Telematics, FEMTO Cells, Quantum Key Distribution, and Cloud Computing.

### ***Faculty advisor:***

- Judge CyberDefense Competition Midwest Region Feb 2013
- University of Akron Cyber Defense Team. The team participated in the mid west cyber defense competition in 2012.

**Lorain County Community College**  
Elyria, Ohio

2010 – Present

### ***Adjunct Faculty***

- Lecturer for *CISCO Certified Network Academy* classes. These classes are designed for the entry level student to give them a basic understanding of data networking. A series of four classes CCNA 1 – 4 that cover routing, switching, wireless and WAN technologies.
- Currently architecting a Health Information Technology class to be offered spring of 2013. This class will cover HIPPA rules in relation to information technology. It will be offered in partnership with LCCC's allied health (Nursing) program at the LCCC campus.
- Certified instructor for VMWARE classes. Topics covered in are VSphere, installation, security, Virtual Machine clusters, Virtual Machine switching, guest OS, monitoring and management of a cloud computing environment.