

MARK STEVEN LEWIS

PROFILE A creative problem solver who drives solutions with technology that best fits the need. Has extensive technical experience in the software, networking, intelligence, security and systems domains. Demonstrated skills in analyzing problems, architecting and executing solutions. Embraces new challenges and enjoys developing new products and markets. With strong communication skills, has successfully managed both projects and people.

SKILLS **INVESTIGATION:** Cloud; VMware; Xen; OpenStack; SDN; Chef/Puppet; AWS; CloudFormation
SOFTWARE: Architecture; Python; C/C++; Java; TCP/IP; SQL/Database; GIT/SVN; Linux/Windows
SYSTEMS: Requirements; CONOPs; Security; Modeling; UML/XML; MATLAB; INCOSE
BUSINESS: Development; Presentations; International; Demonstrations; Training and Support

EXPERIENCE **LEAD SYSTEMS ENGINEER, NORTHROP GRUMMAN ISR, SACRAMENTO**

2008 to present

- Lead SE for Global Hawk ASIP program with a focus on payload software
- Architected portions of the management system of a \$600M program
- Designed interoperability ICDs to interface 3rd party systems into a single unified one
- Created FAA compliance process for calibration transmission frequency management
- Wrote MATLAB tools to convert data, and upgraded calibration system features
- Wrote System Security Plans (SSP) and attained certification for ASIP 2C
- Wrote security compliance procedure for NAGIOS network management
- Managed system software delivery of 3rd party components
- Led verification of key system components
- Presented technical material at PDR, CDR, gateway reviews and customer meetings
- Trained in INCOSE, which provides a disciplined and systematic approach to SE

SOFTWARE MANAGER/ENGINEER, NORTHROP GRUMMAN ISR DIVISION

2003 to 2008

- Managed a group of 35 software developers with full responsibility for staffing
- Responsible IPT for custom handheld Linux based controller
- Ported ASIP code base from SunOS to Red Hat Enterprise Linux
- Developed, tested and integrated code for cyber intelligence, using custom TAG processor
- Built MySQL backend and brought up Enterprise Architect for high level system design
- Designed and implemented a Linux based software update facility
- Wrote DAR, which examined the suitability of all current Network Processors

NETWORK TECHNOLOGIST, MAPLE OPTICAL SYSTEMS, SAN JOSE CALIFORNIA

2000 to 2002

- Key software developer of MPLS and ATM networking protocols
- Implemented an ATM with PNNI routing code base (DCL)
- Improved MPLS interoperability with Cisco and Juniper routers
- Wrote product CLI interface guidelines, which defined the product look and feel

SENIOR SOFTWARE ENGINEER, LUCENT TECHNOLOGIES, ALAMEDA CALIFORNIA

1999 to 2000

- Defined and developed portions of early MPLS stack on Ascend APX 8000
- Wrote software for new ATM networking features
- Enhanced Frame Relay features on MAX TNT
- Used advanced protocol analyzers such as Spirent and Agilent

SOFTWARE CONSULTANT, VARIOUS CLIENTS

1995 to 1999

- Optimized WAN network and other feature performance with code refactoring
- Wrote Frame Relay stack, which attained full compliance with the Sprint FR network
- Developed extensions to DHCP protocol stack to support PPP
- Developed and enhanced an ISDN protocol stack for Japan, Italy and U.K.

SOFTWARE DEVELOPMENT MANAGER, TELEBIT, SUNNYVALE CALIFORNIA

1990 to 1994

- Team delivered the first multi-protocol dialup IP router, which helped build the Internet
- Chaired IETF working group to provide interoperability between PPP networking products
- Wrote design and help standardize PPP with configuration option negotiations
- Co-developed a header compression technique for IPX (RFC 1553)
- Managed 10 senior developers, with responsibility for features, budgets and release plans

IBM, NASA/AMES RESEARCH CENTER AND OTHERS

Until 1990

- Architected optimal data management solutions using SQL and 4GL tools
- Provided OS support on IBM's BSD Unix 4.3 and AIX
- Provided technical support for ATT Bell Lab Unix ported to Intel x86 processors
- Analyzed markets, evaluated potential products, and negotiated the distribution rights
- Designed, developed and tested complete control software for an excimer laser system which controlled devices such as a timer board, stepper motors, and gas valves
- Developed software products which controlled robotic arms
- Managed a development/support group for 25 DEC minicomputers
- Implemented and beta tested DECNet and developed a software distribution system

EDUCATION

UNIVERSITY OF CALIFORNIA, BERKELEY CALIFORNIA

Graduated with a Bachelor of Science degree. A member of Phi Beta Kappa honor society.

LEADERSHIP & PUBLICATIONS

Founded and chaired the IETF Modem Management Working Group (1993-1994).

Founded and chaired the Point-to-Point Protocol (PPP) Consortium (1992-1994).

Barnes, J., Brown, L., Royston, R., Waldbusser, S., "Modem Management Information Base (MIB) using SMIV2", RFC 1696, August 1994

Lewis, M., Mathur, S., "Compressing IPX Headers Over WAN Media (CIPX)", RFC 1553, Dec. 1993

SECURITY

Holds a Department of Defense Top Secret clearance, with an SSBI date of 02/20/2009 (RIP in progress). CI polygraph examination successfully completed 2/28/2010 with SCI access. For additional security clearance information, please contact Patricia Arevalos (916-570-4747).