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H. Morrow Long, CISSP, CISM, CEH

Objective

World class protection of Yale University and Yale's information assets via an effective IT compliance program, a metrics-based risk management strategy, information security operations built on standards and a coherent strategic view driven by business needs and Yale values.

Experience

University Information Security Officer / Director – Information Security Office

Successful Accomplishments

♦ Project X functional owner for User Access and Security (1997-2001).

◊ Created Yale IT policies (including 1601), procedures and processes.

◊ Managed XTrain, YAS and START design, development and budget.

♦ Project Management and Leadership –

◊ Yale's Migration to Windows 2000 Active Directory (2001)

◊ Yale's e-Preservation and production of digital evidence under the direction of Yale's General Counsel for the Federal Grants and Contracts Investigation (2006-2007).

♦ First Director of the Yale Information Security Office (1997-2008) –

◊ Created the Yale Information Security Office, policies and procedures.

◊ Selected, trained and directed exceptional operational and project staff.

◊ Created and implemented Incident Response policies and procedures.

◊ Established data center firewalls, intrusion detection (IDS) and digital forensics and computer investigation capabilities at Yale.

◊ Collaborated with data networking organization to bring virtual private network (VPN) service to Yale, block insecure protocols at Yale border.

◊ Integrated the central and Medical Information Security Office's personnel and processes during the ITS / ITS-Med merger in 2005.

◊ Created and implemented the Security Design Review (SDR) process in 2007.

◊ Evangelized Information Security at Yale. Created training for Yale undergraduate freshman orientation, administrative and other staff. Delivered training / awareness presentations to many campus groups.

♦ Initiated IT Auditing and Compliance in ITS as a component within Information Security

◊ Participated in, performed and directed assessments and audits of security and compliance of ITS and non-ITS information assets for FERPA, HIPAA, PCI, SSN Elimination Project,

◊ In conjunction with ITS leadership, defined IT Security Compliance function. Encouraged successful CISA certification of staff member. Posted and helped to fill position for first IT Auditor function within ITS.

- ♦ Digital Millennium Copyright Agent (2000-Present)
  - ◊ Created Yale policies and procedures. Collaborated with Yale General Counsel Office for continuous legal approval and process refinement.
  - ◊ Represented Yale University at 2007 and 2008 meetings of the Joint Committee of the Higher Education and Entertainment Communities Technology Task Force
- ♦ University Project Teams:
  - ◊ Creation of IT Appropriate Usage Policy (IT AUP / Policy 1607)
  - ◊ Year 2000 – hired and supervised consultants (KPMG/CapAmerica)
  - ◊ HIPAA Privacy and Security – created/wrote/edited policies.
- ♦ ITS Project Teams
  - ◊ Distributed Data Encryption (2007-2008)
  - ⇒ Managed PGP 6, 7, 8, 9 and current Whole Disk Encryption at Yale
  - ⇒ Provided expertise to, and participated in product evaluation and selection of new PGP WDE release for Yale desktops
  - ◊ Distributed Data Scanning (2007-2008)
  - ⇒ Selected, recommended initial data scanning solutions (open source)
  - ⇒ Created custom scanning portion of 2007 solution (VT.EDU code)
  - ⇒ Provided expertise to, assisted in evaluation and selection of Yale desktop commercial data scanning product (found IdentityFinder).
  - ◊ ITIL Infrastructure Implementation and Process Mapping (2007-2008)

Visiting Scientist – Carnegie Mellon University

- SEI / CERT Network Systems Survivability Research Lab (2006-Present).

Course Instructor - recent courses / teaching:

- Quinnipiac University, CPS, Information Security for Mgrs (2007-Present).
- Security University, Forensics(04), CEH (05)., ECSA(06), Edge (07)
- University of New Haven, Criminal Justice, Internet Security (2005).
- U.S. Treasury Department, NYC and Arlington, VA, (2003/4)
  Network Penetration Testing – Computer/Network Security Auditing. For Security University (securityuniversity.net).
- FDIC Training Center, Arlington, VA (2001)
  Internet Security, Routers and Firewalls – 5 days incl. Cisco routers and routing protocols. For ITMI (Information Technology Management Inst.).
- Gateway C.T. College, North Haven, CT (1999-Present)
  Internet Infrastructure, Architecture, Security and Firewalls.
- University of Pittsburgh and AT&T Education Center. (1998-Present)
  Internet Security and Firewalls. ITMI (Information Technology Mgt. Inst.).
- Yale University Computer Science Department (1997)
  Programming Executable and Interactive Content for Intranets and the Internet - Interactive Web technologies: Java, ActiveX, Javascript, Vbscript, Perl. Web security. Spring Semester Lecturer Appointment..

Lecturer – representative presentations :

- EDUCAUSE 2004 (Denver, CO) , *Effective Practices for Wired and Wireless Security Seminar,* October, 2004.
- EDUCAUSE Security Professionals Conference 2004 (DC), *Effective Practices for Wireless Security in Higher Ed,* April, 2004.
- NERCOMP 2004 (Worcester, MA) , *Effective Practices for Wired and Wireless Security Seminar,* March, 2004.
- EDUCAUSE 2003 (Anaheim, CA) , *Digital Forensics Pre-Conference Seminar*, November 3, 2003.
- Yale University, *Investigating Unix/Linux Intrusions* October 27, 2003.
- InfraGard New York Metro Chapter, *"WiFi Security".* October 2003.
- United Nations, ECOSOC Working Group on Informatics, *Global Information 2003 Security Summit at the United Nations Panel*, September 11, 2003.
- ICPL (EDUCAUSE Computer, Policy and Law Institute) , Cornell University *"Digital Rights Management",* July 2003, *"e-Discovery",* 7/07
- ISSA New York Metro Chapter Annual Meeting, *"Seminar on Computer Forensics*". May 2003.

Course Instructor and Lecturer - Previous University teaching:

University of New Haven
- CS640 *"Computer Organization"*, Fall 1990
- CS620 *"Data Structures"*, Summer 1990.
- CS648 *"Computer System Selection",* Winter-Spring 1990
- CS603 *"Intro to Pascal Programming",* Summer & Fall 1989
- CS606 *"FORTRAN Programming"*, Spring 1989
- CS603 *"Intro to Pascal Programming"*, Fall 1989
- Unix (1984), Basic Programming (Spring 1983). Business School.

Fairfield University
- Mid-1980s: Business Data Processing & Programming

Consulting Clients (partial list)
- Creative Change, Glastonbury, CT. Web development / hosting.
- Ipivot. Los Angeles, CA. Web load balancing vendor (acquired by Intel).
- Plexus Research, Boxborough, MA. Electric Power Industry Research.
- Standish Group, Dennis, MA.. E-Commerce Research/Advisory. Wrote server evaluation white paper.
- MirrorWorlds. New Haven, CT. Internet "middleware" company.
- Scientific Computing Associates, New Haven, CT. software company.

Manager of Development

1986–1996 Yale University Computer Science   New Haven, CT

- Network architect for several departmental intranets.

- Created custom network-based backup and recovery system software.

- First Yale Internet Hostmaster, Postmaster, Newsmaster and Webmaster.. The Internet NIC Technical and Security Contact for Yale. Founding member of YaleCERT (Computer Emergency Response Team).

- Installed Transarc AFS (Andrew File System – a wide area filesystem distributed across the Internet), MIT Kerberos V4 and other Athena services in the "Zoo" (CS/Engineering undergraduate computing lab).

- Manager of System Programmers for the initial years of the University's first public campus-wide Unix system (MINERVA SparcStation2 in Engineering.).

- Technical Manager of, and leading technical support member in the successful Campus Unix Support Program (CUSP) specializing in Solaris, AIX, OSF, HP/UX Unix and Linux computer systems. Created Satan audit service. Conducted several custom audits of Unix systems on campus.

- Responsible for a staff of five and for the security, integrity and system software for 300+ advanced workstations in Computer Science, Math, Psychology, and at the Medical School and Science Park campuses.

- Taught (by example) first University 'client-server' MIS development team (GSPS - Graduate Student Payroll System) how to write 'secure shell scripts' for use with Oracle database programming.

- Active participant on first policy creation teams for E-Mail, USENET NetNews, User Directory Services and Web Information Services as well as on the campus High Speed Network Re-architecting committee.

- Wrote semi-famous public domain security programs ***probe_tcp_ports, probe_udp_ports, randpass,*** and ***WWWBlock*** which are distributed on the Internet and other media (ie. the Sun Users Group CD-ROM). Contributed TCP port probing code to the original public domain ***ISS*** (Internet Security Scanner - Chris Klaus) network auditing software.

- Wrote saytime and GMT-saytime for the Web, among the first audio CGI (Common Gateway Interface) scripts. Both were featured in the November 1994 ***WIRED*** magazine's NetSurf section (page 147).

- Converted several departmental publications and documents to electronic versions for the Web (HTML and GIF files) for Computer Science, Engineering, Math, Psychology and other groups on campus.

- Set up and configured two **LightStream 2020** ATM switches with switched Ethernet and FDDI interfaces as well as native 155 megabit ATM interfaces. Benchmarked UDP and TCP traffic using above switch vs. traditional Ethernet and FDDI technology vs. a proprietary IBM V7 switch.

Course Director and Instructor

1991–1999   DataTech Institute   Clifton, NJ

- Created two popular multimedia training courses on Internet and IP network security:
    1. _Enabling Networks for Internet Access_ - Securely Connecting, Creating Secure Gopher, FTP, Web and other Information Servers.
    2. _Internet Security Solutions_ -   User/Host/Network Security, Risk Assessment. Policies. Packet Filtering and Firewalls. Cryptography for Authentication, Integrity, Privacy and E-Commerce. Auditing.

Member Technical Staff

1984–1986 ITT Adv. Tech Center   Shelton, CT

- Managed a team of system administrators and programmers.

Lead Programmer/Analyst

1983–1984 New England Mgt.Services, New Haven, CT

- Supervised application programmers creating **INVESTWARE™** (portfolio management package for investment counseling firms) who:
    - Wrote for DOS 1.0 / 2.0 PCs using MDBS database and C.
    - Ported to XENIX (Microsoft Unix variant).
    - Designed financial applications (record maintenance, reports, inquiries, transaction processing), GUI functions and teleprocessing routines..

Education

1981–1986   Univ. of New Haven   West Haven, CT

- M.S.C.I.S, Computer and Information Science.
- Research Assistant and Instructor (CS and Industrial Engineering).

1977–1981   Boston University   Boston, MA

- B.S., College of Communications.
- National Merit, Connecticut State and University President Scholarships.

Publications

- **_The Encyclopedia of Forensic Sciences_**, "Internet Crime", Robert L Dunne, H Morrow Long and Eoghan Casey, Academic Press, 2000.
- **_The Handbook of Computer Crime Investigation_**, "Network Analysis", Eoghan Casey, Troy Larson and H Morrow Long, Academic Press, 2001.
- **_Network security and data integrity in academia: an assessment and a proposal for large-scale archiving_**, A Smith, D Greenbaum, SM Douglas, M Long, and M Gerstein (in press) Genome Biol 2005.
- **CMU SEI/CERT NSS Technical Report 2007 and 2008** (classified).