FRANK E. EAK

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Summary

Over twenty-three years of system and software development, analysis, and testing experience for Naval surface ship weapons systems, submarine weapons systems, and related support programs.

Experience

Logicon, Inc., Dahlgren, VA   February 1983 - Present

Webmaster/Software Engineer (May 1998 - Present) -- Develop and maintain the Aegis System Test & Evaluation (ST&E) web site hosted on the Aegis Intranet at NSWCDD, and the internal Logicon ST&E web site. These sites were built using FrontPage 98/2000 and various support tools such as Adobe Acrobat and PaintShop Pro. Member of the Aegis Intranet Coordination Group. Develop database programs in MS Access and spreadsheets in MS Excel to support ST&E processes and activities, and provide general PC and LAN support to the department.

Senior Program Engineer (November 1996 - Present) -- Perform system engineering, testing, and analysis of the Aegis Combat System (ACS) and Aegis Weapons System (AWS) Mk 7, concentrating on the interfaces with the Tomahawk Weapon System (TWS), Advanced Tomahawk Weapon Control System (ATWCS), and the Joint Maritime Command Information System (JMCIS). Performing impact analysis on proposed system changes including Computer Program Change Requests (CPCRs), Interface Design Specification (IDS) Change Requests (ICRs), Engineering Change Proposals (ECPs) and Specification Changes (SCs). Develop and maintain ACS test requirements and procedures related to ATWCS and TWS. Perform test operations at the Surface Combat System Center (SCSC), analyze test results, and use Aegis Data Reduction and Analysis (ADAR) programs to investigate and resolve Test Observation Reports (TORs).

Senior Systems Engineer (June 1996 - November 1996) -- Performed system level test and evaluation activities for ATWCS, verifying that system requirements are fulfilled through specification analysis and testing. Created an internal Logicon web site containing ATWCS information (system architecture, interfaces, etc.) and general contract information for training of new employees and use as reference material by analysts and testers.

Senior Technical Staff (February 1995 - June 1996) -- Performed duties in support of new business development, existing projects, and computer network operations. Established Internet capabilities for the facility through a local Internet Service Provider. Continued to support operations of the facility LAN. Performed investigations related to the establishment of a Health Informatics Infrastructure (HII) knowledgebase (KB) and data repository using Oracle 7 and Designer/2000. Created a web site to make HII KB information available on the internet.

Facility Security Officer (August 1990 - June 1996) -- Responsible for all aspects of the security program for the facility including the control of classified material, conducting security awareness meetings, processing clearance requests, and serving as liaison with the Defense Investigative Service (DIS) and other contractors.

Program Manager, SLCM TWS MK 36 ISNSA (May 1988 - February 1995) -- Responsible for all technical aspects of the Independent Software Nuclear Safety Analysis (ISNSA) of the Sea Launched Cruise Missile (SLCM) TWS MK 36 Weapon Control System (WCS) software and system interfaces, Navy Data Transport Device (DTD) Production System (NDPS), and Shipboard Disk Copy (SBDC Planned, directed, and performed requirements analysis, design analysis, code analysis, testing, media certification, and results documentation. Issued over 90 specific CDRL items including Management

Plans, Nuclear Safety Requirements Reports, Test Plans, Test Procedures, Test Results Reports, Media Certification Reports, Critical Function Flow Diagrams, Software Tool Development Documentation, ISNSA Interim and Final Reports, and ISNSA Certification Recommendation Letters. Also issued numerous other CDRL items including monthly progress and status reports, meeting agendas and minutes, nuclear safety discrepancy reports, and software trouble reports. Participated in ISNSA program management reviews, developer design reviews and in-process reviews, and nuclear safety studies. Also responsible for ISNSA of the nuclear capable Operational Flight System (OFS) from May 1988 to January 1990 and coordination of TWS software system safety efforts from February 1992 to February 1995.

Section Manager, Systems Engineering Section (April 1985 - February 1995) -- Assigned section personnel to tasks and monitored progress. Performed yearly performance evaluations. Interviewed employment candidates at the Dahlgren facility and remote sites. Responsible for computer resources (Novell Network with PC workstations, MicroVAX II, and MicroVAX 3400) and directing efforts of support personnel. Maintained hardware and software inventories, tracked status of trouble reports, and ordered new software/hardware as needed.

Project Engineer, CCS MK 2 AN/UYK-43 Firmware ISNSA (July 1991 - March 1992) -- Responsible for group of 6 analysts performing ISNSA requirements analysis of the Submarine Combat Control System (CCS) MK 2 AN/UYK-43 firmware. Coordinated group efforts with 3 other remote sites. Participated in defining the formal methodology to be used for the CCS ISNSA.

Project Engineer, SLCM ISNSA Tool Development and Qualification (February 1983 - May 1988) -- Performed software development, analysis, and testing in support of the ISNSA tool qualification efforts. Primary tool qualified was the TWS MK 36 Launch Control Group (LCG) Wrap Around Simulation Program (WASP). Developed real-time interface driver programs needed to perform WASP qualification. Developed a real-time INS model for use with the TWS MK 37 LCG WASP. Used the qualified TWS MK 36 LCG WASP to perform ISNSA testing. Generated Tools/Facilities Usage and Qualification Plans. Performed nuclear safety tape certifications and produced nuclear certified disks for fleet deployment. Received a letter of commendation from NSWC-N44 for the certification efforts.

EG&G, WASC Inc., Dahlgren, VA   April 1977 - February 1983

Programmer/Analyst -- Designed, implemented, validated, and maintained software in support of Trident Fleet Ballistic Missile accuracy studies. Developed a 3 Degree-of-Freedom trajectory model and a high-frequency gravity model for incorporation into NSWC's Advanced Weapon System Simulation. Developed a model of chemical perturbations in the ionosphere caused by the interactions between missile exhaust gases and electrons in the ionosphere. Developed an extensive system of programs and databases used for determining the accuracy of the Navy's meteorological forecasting techniques. This system was incorporated into the Fleet Numerical Oceanography Center's operational forecast validation system. Received two letters of commendation from NSWC-K44.

Security Clearance

Active Secret and Inactive Top Secret

Education

B.S., Computer Science, Virginia Polytechnic Institute and State University, March 1977

Additional Training

Applying DOORS Training Course, January 2000

Computer Based Training
- Introduction to the Java Language, September 1999
- Object Oriented Principles and Java, August 1999
- An Overview of Java, June 1999

Aegis Personnel Qualification Program (PQP) Technical Indoctrination, January 1999

Object Oriented Technologies for Engineers, November 1998

Mastering Distributed Applications Design Using Microsoft Visual Studio, October 1998

Lotus Notes Release 4 - Beyond Basics, September 1997

Advanced Tomahawk Weapon Control System (ATWCS) Operations and Maintenance Training, July 1997

Joint Maritime Command Information System (JMCIS) Training, February 1997

Introducing Aegis Data Reduction and Analysis (ADAR), February 1997

Introduction to Oracle Designer/2000, March 1996

AT&T World Wide Web Training, February 1996

Logicon Continuous Process Improvement/Total Quality Management (CPI/TQM) Boot Camp, April 1994

Completed Industrial Security Management Course and passed Facility Security Officer Certification Exam, January 1991

Computer Software/Hardware Summary

Programming Languages - FORTRAN, Assembly, Pascal, BASIC, Ada, PL/1

Software Packages - FrontPage and other HTML Editors, Adobe Acrobat, Adobe Photo Deluxe, MS Photo Editor, PaintShop Pro, Netscape Enterprise Server, WWW Browsers, Microsoft Office (Word, Access, Excel, PowerPoint, Outlook), MS Project, WordPerfect, FoxPro, Lotus 1-2-3, CorelDRAW, ccMail, DISSPLA, PDL, Oracle Designer/2000 with Oracle 7 Database, Lotus Notes, DOORS

Operating Systems - MS Windows 3.1/95/98, MS DOS, Novell Netware, Rolm RMX/RDOS, DEC VAX/VMS, CDC SCOPE

Hardware - Intel 80x86 and Pentium PCs, TAC-3 (HP 755), AN/UYK-19 (Rolm 1666D/1602), AN/UYK-64 (Rolm 1666B), DEC VAX Series, CDC 6700, CDC Cyber 175, IBM 370/158