

Rhonda Barnes

EDUCATION

Auburn University, Auburn, AL, USA; B.S., 1978

Over twenty-five years of diverse experience in the software engineering and simulation industries with emphasis on software system safety and management (both technical and executive).

OTHER TRAINING

- APT Research, Fundamentals of System Safety (2006)
- L-3 GSI, Enea TekSci DO178 (2003)
- CSA
 - Finance for the Technical Executive (MIT Sloan School of Management - 1998)
 - The ABC's of Writing Winning Proposals (1997)
 - The Internet (1997)
 - Record Keeping in Small Business (1995)
 - Managing Finances to Increase Profits (1995)
- INTERGRAPH
 - The Quality Advantage (TQA) Workshop (1993)
 - System Administration (1993)
 - MicroStation I - 32 2D Graphics (1993)
 - MicroStation 32/Informix - SQL (1993)
 - Network File Manager (NFM) for Administrators (1993)
 - NFM for Users (1993)
 - CLIX OS for Users (1993)
- TRW
 - Leadership Workshop (1992)
 - Visual Literacy (1992)
 - MLRS Self-Propelled Launcher Loader Training (SED - 1991)
 - Total Quality Management (TQM) (1990)
 - Distributed Computing Design System (DCDS) (1990)
 - Structured Analysis & Design (1990)
 - Cost/Schedule Control System Criteria (C/SCSC) Training (1990)
 - Project Management (1989)
 - Ada for Managers (1988)
 - Post Deployment S/W Support (Carnegie Mellon University S/W Engineering Institute -1987)
 - Fundamentals of Supervision & Management (1986)
 - Presentation Skills Workshop (1985)

CURRENT POSITION

July 2006 – Present: APT Research, Inc., Huntsville, AL, Senior Software Safety Engineer/Vice President for Business Development.

Providing software safety analyses on the JLENS program. Serve as the lead for a Software Safety Group. Worked with OSD in development of safety guidance for development and use of Unmanned Systems. Effective 1 January 2010 additionally serves as corporate vice president for business development.

EXPERIENCE

November 2002 – July 2006: L-3 GSI, Huntsville, AL, Senior Software Safety Engineer.

Performed a MIL-STD-882B SRHA, TDHA, DDHA, & CSHA on the Apache Flight Management Computer (FMC) for the UK. These tasks were executed IAW the approved Software Engineering Directorate (SED) Software Safety Evaluation Plan, for which I was the primary author. This project was the first full application of the SED Airworthiness Procedures performed. Additional software safety projects are also being performed: Gladiator Concept Validation Model, Gladiator System Design and Demonstration (SDD), Assault Breaching Vehicle Remote Control System, Chinook CH-47F Digital Avionics Flight Control System (DAFCS) and Non-Line of Sight Launch System (NLOS-LS). Participated as a key member of a safety tiger team evaluating the Data Concentrator Unit for the CH-47F. Influential in conducting the March 2006 Unmanned System Safety Workshop, sponsored by OSD with the intent of developing safety guidance for the design/development/operation of unmanned systems. Supported several proposal efforts including Deputy for the re-compete of the AMCOM EXPRESS contract for L-3 GSI.

November 2001 – November 2002: Barnes & Son Enterprises, Inc., Huntsville, AL.

Provided business consulting services after the sale of Computer Science and Applications, Inc. to Dynetics, Inc.

June 1994 – November 2001: Computer Science & Applications, Inc., Shalimar, FL.

Vice President and later, President of this small business of approximately 50-100 employees, specializing in 1) the design and development of hardware-in-the-loop simulation products for U.S./International customers; and 2) commercial spin-offs of the aforementioned technologies. Responsibilities focused on managing CSA and multiple FFP contracts by reviewing financial data, financial planning, staffing and marketing. Assumed roles as: international liaison and corporate focal point for product exportation, proposal/product development, and subcontractor/vendor management. Additional responsibilities included state-of-the-art technology application, implementation of internal training programs, and company liaison in local Florida organizations such as the Okaloosa County Economic Development Council (EDC), Technology Coast Manufacturing and Engineering Network (TeCMEN), and Board member of the Florida Manufacturing Technology Center (FMTC) - an affiliate of Enterprise Florida.

June 1993 – June 1994: Intergraph Corporation, Madison, AL.

Project Manager for a requirements definition task with the Directorate of Public Works at Ft. Carson, CO. Responsibilities included: conducting requirements gathering via site interviews, functional decomposition of activities using IDEF methodology, business re-engineering, technical and administrative management. Additionally involved in proposal development and management of a department of thirty when the department manager was on extended TDY. Utilized Microsoft Project and Office Suite.

March 1984 – June 1993: TRW, Inc., Huntsville, AL.

December 1991 – June 1993: Ground-Based Surveillance & Tracking System (GSTS) Technology Validation Experiment (TVE) Assistant Project Manager.

Responsible for schedule, budget, and technical management of the Support Software including development of an automated Design Document Generator (DDG) tool, Post Run Analysis Tool (PRAT), and overseeing development of two additional tools by outside vendors. Development was implemented on

the Rational and SUN computers using Ada, OpenWindows, and DevGuide (COTS S/W). Supported the GSTS OPS PDR through tool demonstrations and organized TRW support at GSTS System CDR.

March 1991 – November 1991: MICOM System & Software Engineering Support (SSES) Multiple Launch Rocket System (MLRS) Senior Engineer.

Responsible for MLRS Logistics activities associated with fielding software. Tasks included developing a fielding process for each category of fieldings, preparing a fielding procedure, updating various logistics documents to include software aspects, and designing/implementing a solution to software compatibility issues associated with Fire Control System (FCS) software components.

November 1989 – March 1991 Ground-Based Surveillance & Tracking System (GSTS) Technology Validation Experiment (TVE) Assistant Project Manager.

Responsible for managing the Strategic Defense Command (SDC) GSTS Ground-Based Data Processing Object Processing Software (OPS) Support Software Work Package on this C/SCSC contract. Developed an object-oriented design and GUI for data analysis software. Prepared the GSTS OPS CSCI DoD-STD-2167A Software Development Plan. This plan was established as the standard for future SDC SDPs.

March 1987 – October 1989: MICOM System & Software Engineering Support (SSES) Sub-project Manager.

Responsible for management of a senior and junior staff of twelve individuals developing office automation and productivity improvement tools for the MICOM Software Engineering Directorate (SED). Initiated SEDs efforts for SEI CMM certification. Tasks included database design and development; hardware special studies; design and development of a Computer Aided Software Engineering (CASE) System to be used by MICOM maintained weapon systems such as PATRIOT, MLRS, and HAWK; and design, implementation, and maintenance of an inventory control system. Wrote the Software Sustainment Standard for the Deployed Systems Sustainment Division of SED. Total effort began as \$300K task and grew to over \$1M.

1988-1989 Strategic Systems Simulation Department Section.

Performed concurrent management responsibilities associated with the matrix organization including performance appraisals, personnel rankings, salary recommendations, and career counseling.

July 1986 – March 1987: MIA - WSDEE Classified Project Senior Engineer.

Designed, developed, and tested a VAX FORTRAN 77 program to convert MSIC database formatted data to FSTC format. The program design had to be diverse enough to handle 3 different missile systems.

April 1986 – June 1986: Classified IV&V Project Senior Engineer.

Designed and developed a database system for generating and tracking software problem reports.

March 1984 – March 1986: Pershing II Missile System Senior Engineer/ Project Manager.

Responsible for the Pershing II Tactical Software Validation System (TSVS), an integrated collection of software tools designed to evaluate tactical software through execution of a six-degree-of-freedom simulation, Scientific Simulation, and Interpretive Computer Simulation. Provided support of tactical software including pre-flight execution of a simulation of the tactical software, requirements analysis of

changes to tactical software, and post-flight analysis of actual flight telemetry data. During the period from 6/85 to 3/86 managed a team of five making significant changes to the TSVS.

August 1982 – March 1984: Boeing Military Airplane Co., Huntsville, AL, Senior Engineer

Automated Test Equipment: Responsible for design, program development, and firmware testing for the High Frequency and Low Frequency Switching Modules for the Avionics Test Set (ASTS). These programs were written in Pascal on a Hewlett-Packard 64000 and ran on a Motorola 6809 processor. This work included hardware integration and generation of associated documentation. Also, responsible for development and generation of the Software Development Plan for building a prototype test set for the Army Automated Test Support System (ATSS).

June 1981 – August 1982: Avco Electronics, Huntsville, AL, Programmer/Analyst.

Developed software in FORTRAN on PDP 11/70 for the Data Base Module of the King Khalid International Airport (KKIA) Project. Also, responsible for SYSGENs of all new system hardware.

April 1980 – June 1981: Singer-Link Corp., Clear Lake, TX, Principal Systems Engineer.

Provided analysis and correction of space shuttle simulator modifications and performed studies to identify and recommend simulation improvements. Performed check-out of Flight Software by operating simulated mission phases. Jointly responsible for the input and output subsystem, and controls and displays subsystem. Programs written in FORTRAN and Assembly (15R1) for the UNIVAC 1100 series computer.

February 1979 – March 1980: Computer Sciences Corp., Huntsville, AL, Member of Technical Staff.

Responsible for conversion of 68 CECOM war-game programs from UNIVAC to IBM 360.

PROFESSIONAL ACTIVITIES AND ACHIEVEMENTS

Awards

- System Safety Society 2006 Manager of the Year
- System Safety Society, Tennessee Valley Chapter 2006 Professional of the Year
- Huntsville Association of Technical Societies Professional of the Year 2006

Professional Memberships

- International System Safety Society
- Huntsville Aerospace and Marketing Association
- National Defense Industrial Association