

Glenn Gerard Butcher, DCS

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DEFENSE EXPERIENCE

The Boeing Company, 2002-Present. Scientist/Engineer. Current SECRET w/COMSEC.

Site Lead, GMD Fire Control/Communications: Oversight of subcontractor supporting Ground-Based Midcourse Defense flight testing; communications architecture evaluation – WAN, LAN, and UDP multicast technologies (Kwajalein Atoll, RMI)

United States Air Force, 1975-1997, Retired Grade: Major. Both broad and in-depth experience in all areas of information system development, acquisition, and management. TS w/SCI access based on an SBI last held in November 1997.

Operational Test and Evaluation, 1994-1997:

Test Director, ALERT Theater Missile Defense System: Planned, executed and reported evaluation of ALERT's effectiveness and suitability to support theater warfighters worldwide. Coordinated test activities in Korea, Europe, and the Middle East as well as reporting test results to senior operations and acquisition officials. (Buckley Air National Guard Base (ANGB), Colorado)

Test Director, Defense Support Program Satellite Readout Station Upgrade: Planned, executed and reported the Phase III Initial Operational Test and Evaluation at Woomera Air Station, South Australia. Responsible for logistics and host-country coordination of test activities, as well as reporting test results to senior acquisition officials. (Buckley ANGB)

Deputy Director for Mission Support: Provided test and evaluation policy and practice guidance to three test teams evaluating major space and satellite system acquisitions. Coordinated conferences and meetings to develop strategic plans for space system test and evaluation. Participated in Air Force-level operational test policy formulation. (Peterson Air Force Base (AFB), Colorado)

Test Director, Granite Sentry Air Defense System Initial Operational Test and Evaluation: Conducted test planning and resourcing for testing the final increment of this warning system in the Cheyenne Mountain Command Center. (Peterson AFB)

Software and Systems Engineering, 1985-1994:

Chief, Mobile Command and Control Systems Development Branch: Directed software development and testing for Air Force Space Command's mobile battle management system. (Peterson AFB)

Granite Sentry Chief Engineer: Participated in development of configuration management and testing processes for the deployment of Air Force Space Command's Granite Sentry airborne threat early warning system, Phase II. Developed the plan for transitioning Granite Sentry development from a government organization to a prime contractor. (Peterson AFB)

Command and Control Systems Engineer: Directed modeling and simulation activities supporting the 6 billion dollar Strategic Command and Control Upgrade Program, providing data to justify funding of electromagnetic pulse hardening and modernization initiatives. Served as the SAC command representative to embedded computer system modernization initiatives, to include briefing development for general-officer presentations to the Air Force Council. Developed initial office automation architecture for Strategic Air Command's Deputy Chief of Staff, Requirements. (Offutt AFB, Nebraska)

Chief, Airborne Command and Control Development Branch: Directed development of the replacement software systems for both LOOKING GLASS, SAC's airborne command post, and for the mobile ground command post. (Offutt AFB)

Computer Operations and Acquisition Management, 1982-1985:

Computer Operations and Acquisition Management Officer: Managed a 4 million dollar operations and maintenance budget, procurement, and contract execution for the Eastern Test Range's real-time range safety and post-launch data reduction operations and the COBRA JUDY ship-borne phased array radar. (Patrick AFB, Florida)

Military Command and Control Operations, 1975-1979 (Enlisted):

Technical Instructor: Taught all blocks of instruction at the Command and Control Specialist Course, Keesler Technical Training Center. (Keesler AFB, Mississippi)

Wing Command Post Controller: 58th Tactical Fighter Training Wing. (Luke AFB, Arizona)

TECHNICAL EXPERIENCE:

UNIX System Administration: Slackware, SuSE, and Red Hat Linux, Silicon Graphics IRIX, Sun Solaris. Administration and configuration of web servers, firewalls, and Beowulf clusters.

Network Administration: TCP/IP configuration in both Windows NT/W2K and UNIX; network architecture to include IP subnet organization, LAN-WAN integration, and Ethernet configuration; UNIX sendmail+IDA configuration; firewall, VPN, IPSec and proxy configuration; Beowulf cluster configuration and management.

Web Application Development: Apache server admin, web programming in Bash, Perl, PHP Python, and HTML5, HTML design including frames, cascading style sheets, server-side includes, and database access using IBM DB2 and MySQL.

Software Engineering: CMM evaluation and practice; Configuration control using CVS, requirements and design using Twiki.

Programming: Perl, and Python in applications from TCP clients and servers to text processing; Windows API, object-oriented programming in Pascal; 8086, MC68HC705 and Z-80 assembly programming for embedded applications; BASH shell scripting for UNIX system administration and monitoring; Ada-83 for military command and control applications; C for Parallel Virtual Machine (PVM) applications running on Beowulf clusters, and Unix daemons.

Process Control: RS-485 networking; low-voltage sensing and commanding including both hardware and software design.

Capacity Planning: Windows Perfmon and Unix /proc and vm/iostat data collection, reduction, and analysis.

COMMERCIAL EXPERIENCE:

Director of Development, DevelopNET Corporation, January 2001 – Present: Implemented software development infrastructure for a team co-located in Colorado and Oregon. Developed tools, processes, and network infrastructures to facilitate rapid exchange of ideas, designs, and interfaces among software developers, as well as capacity planning data collection and reduction tools. Also developed applications and middleware to implement the customer service portal, a database-driven interface to capacity planning reports generated from data collected from both outside and within customer firewalls.

Webmaster, Colorado Technical University, November 2000 – January 2001: Responsible for a major upgrade to the college website, as well as numerous improvements to the interactive experience, such as daily schedule updates and site searching.

ACADEMIC EXPERIENCE

Honorarium Instructor, University of Colorado at Colorado Springs, 2001: Teaching undergraduate courses in Concepts of Programming Languages and Computer Literacy.

Chair of Computer Science, Colorado Springs Campus, Colorado Technical University, 1999-2000: Responsible for the execution of over 100 sections of undergraduate and graduate courses supporting degrees in Computer Science, Information Technology, and Management Information Systems. Implemented new Bachelor and Master degrees in Information Technology, as well as new professional certificates in information technology. Continued to serve as a Professor, teaching graduate and undergraduate courses.

Professor of Computer Science, Colorado Technical University, 1997-1999: Undergraduate advisor for Computer Science, Management Information Systems, and graduate advisor for Information Technology. Served as interim Dean of Computer Science during a vacancy in the permanent position. Taught undergraduate and graduate courses in Software Engineering, Distributed Systems, Comparative Programming Languages, UNIX and NT Systems Administration and Programming, and programming in Java and Perl. Served on Master's thesis committees, as well as Doctorate dissertation committees.

Adjunct Professor, Colorado Technical University, Colorado Springs, Colorado, 1991-1997: Taught undergraduate courses in Programming in Pascal, Computer Graphics, Compiler Design and Construction. Taught graduate courses in Software Project Management, Systems Engineering, and Software Engineering.

Adjunct Professor, College of St. Mary, Omaha, Nebraska, 1986-1988: Taught undergraduate courses in Pascal Programming.

Adjunct Professor, Brevard Community College, Melbourne Florida, 1982-1983: Taught undergraduate Introduction to Computers.

Presented papers on software volatility at the 1996 Software Technology Conference in Salt Lake City, Utah, and the 1998 and 2000 International Conferences on Computer Science and Informatics in Durham, North Carolina and Atlantic City, New Jersey.

Published article: *A model for addressing software volatility in new system development*, Journal of Information Sciences, Elsevier Science, 118 (1-4) (1999) pp. 121-143.

Research interests include software maintenance and software volatility, abstraction paradigms in programming languages, distributed and parallel computing to include commodity supercomputing, and distance learning.

ACADEMIC MILESTONES:

Doctor of Computer Science, Colorado Technical University, 1997. Dissertation: *Addressing Software Volatility in the System Lifecycle*.

Master of Science, Computer Science, Florida Institute of Technology, 1985.

Bachelor of Science, Magna Cum Laude, Computer Information Systems, Arizona State University, 1980.