

Allen W. Baker

3945 Patterson Road • Pea Ridge, AR 72751 • 479-451-0905 • baker@engr.uark.edu

Information Systems Engineering Software Systems Design - Telecommunication Systems Design

Twenty-two years experience as a Communications Engineer with the United States Air Force (USAF) and the National Aeronautics and Space Administration (NASA). Demonstrated real-time Communication Systems management and analysis skills in support of Space Shuttle missions in NASA's Mission Control Center. Eleven years experience as Systems Engineer and Operations Manager for a well-known church television department, including redesigning and rebuilding the entire video production system, and managing a staff of up to forty volunteers. Over thirty-five years in personal and professional software development including development and testing of components of NORAD's Space Computational Center, development of the largest client/server database application ever developed in-house at NASA's Johnson Space Center and several desktop database systems for local clients. Strong systems engineering, database and software design, presentation and interpersonal skills.

Experience

University of Arkansas - Computer Science Computer Engineering Department 1/99 - Present

- ◆ Teaching undergraduate computer programming courses in the Computer Science and Computer Engineering Department
- ◆ Advising undergraduate Computer Engineering majors with respect to academic and career planning

Northwest Arkansas Community College – Business and Computer Information Dept. 8/03 - Present

- ◆ Teaching undergraduate computer literacy course covering use of Microsoft Office XP

NASA -- Lyndon B. Johnson Space Center, Houston, Texas 10/88 - 12/98

- ◆ Developed client/server database application currently used to track all executive correspondence to and from the Johnson Space Center. Successfully migrated over eleven years' data from the retiring mainframe to Microsoft SQL Server.
- ◆ Managed development of the Space Station Freedom's \$600M Voice and Data Communications System. Provided technical oversight of proposed design changes.

United States Air Force at the Lyndon B. Johnson Space Center 9/82 - 9/88

- ◆ One of only two officers selected to lead the development of a joint training program for Space Shuttle Flight Controllers at NASA's Mission Control Center in Houston, Texas and the Air Force's Shuttle Operations and Planning Complex in Colorado Springs, Colorado.

United States Air Force 7/78 - 8/82

- ◆ Space Shuttle Flight Controller during twelve of NASA's Space Shuttle missions, including three missions as the lead Instrumentation and Communications Flight Controller.
- ◆ Commander of a detachment of the Air Force's 1815th Test and Evaluation Squadron tasked to perform System Acceptance Tests and Operational Test and Evaluation of the \$215M Digital European Backbone Communication System.
- ◆ Led a 12-man team in the development of test plans and procedures for the Air Force's state-of-the-art Automated Technical Control system. Validated contractor designs relative to Army, Air Force, and Navy requirements.

- ◆ Designed, coded, and tested the Output Message Processor function of the Air Force's Space Computational Center in assembly language for a Honeywell 6000 series mainframe computer.
- ◆ Engineered upgrades to the Air Force's Distant Early Warning (DEW) Line communications system.
- ◆ Reviewed and validated contractor designs for the Communications System Segment of the \$427M Cheyenne Mountain Upgrade Project.

Education

College

- ◆ M.S. in Electrical Engineering (MSEE), University of Arkansas, Fayetteville, AR (6/73); Thesis: "Development of a Quick Batch Assembler for the IBM 360"
- ◆ B.S. in Electrical Engineering (BSEE), University of Arkansas, Fayetteville, AR (6/71)

Post-College

- ◆ Management
 - Project Management; Time Management; Dynamic Systems Engineering
 - Managing Teleconferences; How to Handle Difficult People; Influence and Leadership
 - Risk Management and Fault Tree Analysis
- ◆ Academics and Teaching (University of Arkansas)
 - Teaching Camp sponsored by Teaching and Faculty Support Center (7/02, 7/03)
 - "Learn About Arkansas Bus Trip" sponsored by Teaching and Faculty Support Center (5/04)
- ◆ Software Development
 - Client/Server Computing; Relational Database Design; SQL
 - Object-Oriented Software Design with Borland Delphi
 - Visual Basic for Applications (VBA); Visual Basic; Turbo Pascal; Unix
 - HTML; JavaScript; Java; Cold Fusion
- ◆ Software Use, Administration and Support
 - Microsoft Windows95; Office95 (Word, Excel, PowerPoint, Access); Exchange
 - Microsoft Windows NT Workstation 4.0; Windows NT Server 4.0
 - Microsoft SQL Server 6.5
- ◆ Telecommunication and Networking
 - Digital Communications Concepts and Technologies (Sampling, Coding, Multiplexing, Compression; ISDN, DSL, T-1, T-3)
 - Analog Video Systems (NTSC); Digital Video Systems (DTV, HDTV)
 - Network Concepts (Ethernet, FDDI, ATM, TCP/IP, OSI); Web Security
 - Systems Operational Test and Evaluation; Scott Air Force Base, IL (3/79)
 - Wideband Systems Evaluation; Scott Air Force Base, IL (4/78-6/78)
 - Air Force Communication-Electronic Engineer Course, Keesler Air Force Base, MS (7/73-1/74)

Professional Skills

Presentations (writing, speaking, multimedia)
 Project Management and Team Leadership
 Relational Database Design and Development (SQL, Microsoft Access, Microsoft SQL Server)
 Software Design and Development (C, Delphi, Assembler) (limited C++, Java)
 Internet Web Site Design and Development (HTML, Dreamweaver)
 Video Systems Design and Development (Conferencing, Production, Editing, Presentation)
 Communication System Design and Development (Voice, Video, Data)
 Desktop Publishing (Microsoft Publisher, Adobe PageMaker)
 Desktop Graphics (Corel Draw)