

The Resume of Robert J. Abend, P.E.

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Education:

Master of Science in Engineering Management 12/90
Florida Institute of Technology (Melbourne)
Technical Minors: Neural Networks and Geometric & Fourier Optics
GPA 3.9/4.0

BSEE Summa Cum Laude 12/89 GPA 3.8/4.0
Florida Institute of Technology (Melbourne)

Experience Profile:

Extensive background in managing engineering hardware and software design activities and directing manufacturing operations, primarily in the areas of integrated circuit development, test, burn-in, wafer probe, and data processing and computer internetwork design. Familiar with PC board and Multichip module processing, design, and development. Familiar with liquid propellant satellite launch vehicle design, development, and manufacturing. Experienced in the implementation of modern manufacturing quality control methods such as DOE, JIT, SPC, and TQC. Well developed technical, entrepreneurial, communications, and management skills.

Key Technical Skills:

- Electronic Component Engineering
- Internet Data Communications
- Computer Forensics
- Computer Network Design
- Digital and Analog Circuit Design
- "C", Assembler, FORTRAN, SQL, BASIC, PERL, UNIX Shell, and JAVA
- Familiarity with UNIX, DOS, Windows, The Internet, and Most Personal Computer Applications
- System Level Electronic Design, Including Automatic Test Equipment
- ASIC Development in FPGA's and PLA's
- Artificial Neural Network Design

Employment Experience:

US Air Force, LA Air Force Base, Space & Missile Systems Center

9/96 – Present

Chief Delta IV Product Assurance - Provide engineering technical support involving the development of the Delta IV satellite launch vehicles (liquid propellant rockets). Areas supported included avionics design and production, inter-vehicle communications systems and telemetry, system reliability modeling, software, and propulsion systems. Supervise eight engineers involved in oversight and review of system designs and production activities. Manage the activities of five additional engineers involved in hardware pedigree assessment. Personally responsible for managing and resolving avionics, structural, propulsion, and other technical issues associated with the Delta IV launch vehicle.

US Air Force, LA Air Force Base, Space & Missile Systems Center

7/94 – 9/96

Electronics Engineer - Worked with the Mentor Graphics Corporation in developing an integrated data system allowing common internet access to distributed databases throughout the Space Community. Consulted on the design and configuration of the Los Angeles Air Force Base computer network and Internet connectivity.

Webmaster for the Program Management Directorate World Wide Web Home Page. This project involved installing and administering UNIX and NT platform based servers, networking design, installing httpd server software, developing Hypertext Markup Language files, and UNIX based Common Gateway Interface scripts. Established a space related data sharing forum involving the Air Force, NASA, JPL, and the Aerospace Corporation. The purpose of this forum is to develop data sharing technology and to develop a synergy among developers of spacecraft and launch vehicles by sharing parts, design, and other forms of information.

US Air Force, Hill AFB Hardware Technology Team

10/92 - 7/94

Project Manager - Responsible for designing and implementing a Low Temperature Cofired Ceramic Substrate manufacturing and assembly facility. Duties involved cleanroom layout and design, equipment evaluation and selection, acquisition, and installation. Also responsible for an integrated circuit, multichip module, systems test facility, and a PC board manufacturing and process engineering group. Responsible for the design of telemetry data receivers and transmitters used in testing munitions, aircraft, and missiles. Performed other design activities including development of Mil-Std 1553 based avionics. Accountable for both labor and equipment budgets. Supervised and directed the activities of 7 engineers and 12 manufacturing personnel.

A. E. T., Inc., Palm Bay, Florida

12/90 - 10/92

Director of Engineering - Responsible for custom design activities including ASIC development in PAL's and FPGA's, analog design, and software development. A Small Business Innovative Research proposal that I developed was selected by the US Department of Health, from 175 submittals, to develop an emergency sound recognition system for the hearing impaired. The design that I developed used advanced DSP methods and Neural Networks. Also employed during this period at the Florida Advanced Technology Center, BCC and the Florida Institute of Technology as an adjunct professor teaching electronic design and computer science.

Florida Institute of Technology

3/89 - 12/90

Full Time Student - Completed MS Degree

Harris Semiconductor, Palm Bay, Florida

6/79 - 2/89

Progressed from Engineering Section Head to Director of Test where I was responsible for manufacturing test, burn-in, wafer probe, mark pack & ship, automatic test equipment design, test engineering, and sustaining engineering activities for the Custom Integrated Circuit Division. Engineering responsibilities included new product development and characterization, the design of custom automatic test systems, and test software and hardware development. I was responsible for 200 manufacturing and engineering personnel, and held this position for 6 years. I also managed and developed an annual 6 million dollar expense and capital budget. During this period, I developed the methodology and published a paper on "Test Environment Modeling and Simulation" that allowed a 30% reduction in the time required to introduce new products.

Earlier Experience: 1963- 1979

Directed the electronics manufacturing and engineering activities involved in test system production, field service, and integrated circuit test and assembly operations.

Other Training:

Advanced Email & Internet History Forensic Recovery, 2004
Advanced Computer Forensics, 2003
EnCase Enterprise Response, Auditing, and Discovery, 2003
Fiber Optic Networking, The Fiber Optic Association, 2002
Design of Experiments, 1987
Just In Time Manufacturing, 1986
Statistical Process Control, 1985
Statistical Quality Control, 1983
33 Week US Army Signal Corps Radar Repair Course, 1963

Credentials:

Professional Engineer, Registered in Florida, Registration Number 43203

FAA Private Pilots License w/Instrument Rating.

Certified EnCase Computer Forensics Examiner

FCC General Radio Telephone License with Ships Radar Endorsement

FCC Extra Class Amateur Radio Operators License

Certified Fiber Optic Technician

US Patent #4,549,338 "Method of Fabricating an Integrated Circuit Including Electro-Optical Transmitters & Receivers" - 10/85

US Patent #4,845,052 "Method of Packaging a Non-Contact I/O Signal Transmission Integrated Circuit" - 7/89

US Patent #4,862, 231 "Non-Contact I/O Signal Transmission in Integrated Circuit Packaging" - 8/89

US Patent #5,544,174 Involving Improved Multichip Module Testability and Performance - 8/96

Member: ETA KAPPA NU and Blue Key Honor Societies.

Member Institute of Electrical and Electronic Engineers (IEEE)

Member National Society of Professional Engineers (NSPE)