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*Cubic Transportation Systems, San Diego, CA, 2002-2006*

**Sr. Vice President, Engineering & Program Management**

Extending the dominant supplier of large customized automated fare collection systems to a totally refreshed product line supporting several large tailored systems simultaneous with configurable offerings for small and mid-markets.

*Cybersensor, Inc, Madison, TN, 2000-2002*

**Vice President, Operations**

Startup providing remote monitoring and control using multiple satellite and terrestrial wireless networks  
Patented system architecture allows users to view sensor readings, set alarms, report by exception, reconfigure parameters, etc...by just using their internet web browser.  
Product applications include metering, pipeline compressor monitoring, tank farm management

*Trex Medical Corp, Danbury, CT, 2000*

**General Management & Systems Engineering Consultant**

Restructured and managed primary new product development of full field digital mammography system  
Revised all R&D procedures & managed technical and documentation clean-up for FDA audit

*Lunar Corporation, Madison, WI, 1997-1999*

**Vice President, Operations** (R&D, Production, Customer Support; 180 staff, approx \$48M annually)

Cradle to grave responsibility for all product related activities for the premier bone densitometry manufacturer  
Refreshed product line with substantially improved R&D schedule and budget compliance  
Also re-designed cash-cow product for 20% cost reduction while improving reliability  
Established metric-based programs for continuous quality improvement in all departments  
Reduced installation defects by a factor of four in less than four months  
New processes/practices enabled ERP usage to pro-actively manage rather than reactively document  
Improved responsiveness and substantially reduced inventories by eliminating myriad "full in-boxes"  
Service inventories cut by 55%; median critical software bug age reduced from years to weeks  
Migrated Customer support from reactive folklore to systematic, documented training and diagnostics

*Sony Corporation of America, Business & Professional Products Group, San Jose, CA, 1992-1997*

**Vice President, Systems Engineering Center** (approx \$15M annually)

Development of software-intensive products mainly integrating sophisticated Sony hardware into systems  
CineNET provides format-independent digital acquisition, archive, and viewing for cardiologists  
DIRECTV's Broadcast Control Subsystem controls Hughes's \$50M 150 channel ground station  
New generation of non-linear Video Servers flexibly automates multi-channel transmission  
Extremely distributed, scalable, fault tolerant application based on PC's, C++, NT, and SQL

*Hughes Missile Systems Co. (nee General Dynamics Convair Division), San Diego, CA, 1992*

**Vice President, Program Development**

Development and production of Unmanned Strike Systems, e.g., Tomahawk & Advanced Cruise Missiles  
Functionally responsible for Marketing, Strategic Planning, & related services (Photo, TV, Art & Ed, Repro)  
Programmatically responsible for all pre-EMD efforts (\$35M Contract R&D, \$13M discretionary funds)  
Major refocus from "technology for performance" to "processes and practices for lowest cost"

*United Technologies Corporation Advanced Systems Division, San Diego, CA, 1987-1991*

**Vice President, San Diego Operations** (1990-1991)

Entrepreneurial 1983 start-up focusing this \$20B corporation's technologies on tactical smart weapons

Responsible for all line functions (Program Mgt., Business Ops, Production Readiness, Engineering)

Full P&L for San Diego's approx. \$20M annual sales and \$5M discretionary investment in IR&D et al

**Vice President, Research and Engineering** (1987-89)

Extensively redefined technical approach to salvage division's major submunition dispenser program

Reduced departmental overhead expenses by 30% while providing more effective computing resources

*Philips Medical Systems, Inc., Shelton, CT, 1984-1987*

**Director of Engineering** (approx. \$10M annually)

Transitioned from sustaining analog product to locally developed, advanced digital image processing

Video-rate digital disk and high-resolution viewing add-on to Digital Subtraction Angiography (DSA)

Multi-processor Computed Radiography system enabling migration to all-digital radiology dept's

Technically structured and oversaw new strategic alliances with innovative specialists

Advanced radiology viewing stations (Pixar, Cemax, Island Graphics) and PACS (AT&T, Raytel)

*General Dynamics Convair Division, San Diego, CA, 1978-1983*

**Director -- All-Up-Round Systems Engineering & Integration Agent** (1983)

Structured and led new entity to fill management void in Tomahawk Cruise Missile program

Solely responsible and technical direction for design baselines of 44 contractors for all Tomahawk variants

**Director -- Medium Range Air-to-Surface Missile** (1980-1982)

Joint Service, reduced cost, non-nuclear submunition version of the Tomahawk Cruise Missile

Grew from 8 people in a trailer to 600+ executing \$100M Full Scale Development (FSD) late '81 contract

**Director -- Systems Engineering** (1979) (400+ staff in 14 departments)

Systems development dept's developed functional, design, and verification requirements

Analytic dept's conducted analyses & trade studies (dynamics/flight sciences)

Functionally supported all cruise missile, DC-10, and Atlas/Centaur space programs

**Manager -- Systems Development** (1978-1979) (180+ in 4 departments)

*United States Air Force, R&D Officer, 1964-1978*

**Program Manager, Defense Advanced Research Projects Agency (DARPA), Rosslyn, VA** (1975-1978)

Conceived & executed 3 major advanced cruise missile technology thrusts (approx. \$15M annually)

"Zero-CEP" guidance incorporated active & passive sensors with sophisticated image processing

Compound rotary and reciprocating concepts for reduced fuel consumption, small propulsion

More survivable airframes used shaping and new materials, i.e., the beginnings of "stealth"

**Associate Professor, Air Force Institute of Technology, Wright-Patterson AFB, OH** (1972-1974)

Developed & taught graduate courses in instrumentation, numerical methods, fluid mechanics, and aero

**Development Engineer, AFPRO, Lockheed Missiles & Space Co., Sunnyvale, CA** (1966-1970)

In-plant technical representative on several military (Secretary of the AF Special Programs) satellites

In-depth involvement with finance, accounting, legal, contracts, and other business considerations

**EDUCATION:** Ph.D. (specialty in Automatic Control), Purdue Univ., 1972

M.S.Aero.Eng. (with Distinction), AF Inst. of Tech., 1966

B.S.Mech.Eng. (with High Honors), Univ. of Arkansas, 1964

**HONORS:** Tau Beta Pi, Pi Tau Sigma, Pi Mu Epsilon honorary societies; Registered Prof Engineer

Five USAF Meritorious Achievement/Commendation Medals

Ten refereed Journal articles; Reviewer for Applied Mechanics Review and ASME

Elected to honorary Arkansas Academy of Mechanical Engineering