



Wayne B. Norris



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WAYNE B. NORRIS CURRICULUM VITAE

SUMMARY

September 2007

Area of Expertise/Specialty: Computers, patents, copyrights, trade secrets, physics, engineering, technology, software and software company valuation, software industry appropriate compensation, engineering and software industry standards and contract performance, general aviation, software failure analysis, and fiduciary duties of corporate officers. Lead technology expert in successful in \$1.7 billion tax case.

Additional Comments: Wayne B. Norris, the Chief Scientist of the [BOSSdev](#) and [DefenderTech International Systems](#) family of companies, CEO of its BOSSgov government business unit, and the former President and Chief Financial Officer of Offshore Creations, Inc. [<http://www.OffshoreCreations.com>], has spent a 37-year career in computing, science, engineering, environmental planning, and corporate management. He has been an Expert Witness in numerous cases involving technology, intellectual property, standards for performance of corporate officers, and technology valuations. Norris Associates maintains an extensive and growing network of experts in a wide variety of fields. Please see Mr. Norris's attached *Curriculum Vita*.



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WAYNE B. NORRIS CURRICULUM VITAE

Professional Summary: Corporate and technical manager, software engineer, sales and marketing executive, financial analyst/business plan author, and physicist, with 38 years of professional service and 46 years writing computer software. Chief Scientist in environmental/oil spill community. Patent advisor. Expert witness for issues in Technology, Intellectual Property, and Conduct or Corporate Officers in Federal and State courts [20% of time or less.]

EXPERT WITNESS EXPERIENCE:

I was recently the US Government's expert witness for software development issues in the multi-year case of *Microsoft Corporation versus Commissioner of Internal Revenue [US Tax Court Docket Number 16878-96]*, the largest tax case ever litigated by any jurisdiction in history. I authored four expert witness reports that were admitted into the record, and testified for approximately 7 hours, including *voire dire*, direct, cross, redirect, and recross. I was the principal architect of the Government's technical approach toward interpretation of IRC 927(c) in the case of software. The Government won the case, and my arguments were incorporated into the Court's opinion. Upon request, any or all of the expert witness reports and transcripts will be provided for examination.

I specialized in explaining very complex issues to the Court in accessible language and in advising IRS attorneys on strategies for the examination of Microsoft expert witnesses.

One of my fellow expert witnesses, Mr. Ray Ocampo, has graciously agreed to provide his highest recommendation for my work, upon qualified request. Mr. Ocampo, who was the Government's witness for Intellectual Property, was the former Senior Vice President and Chief Counsel for Oracle Corporation for over 10 years, and is currently on the Board of Directors of several firms. Mr. Ocampo is currently Executive Director of the Berkeley Center for Law & Technology, University of California at Berkeley (<http://www.law.berkeley.edu/institutes/bclt/faculty.html>).

I have worked as an expert witness in several modes, including depositions, testimony in court, and preparation of expert witness reports and strategy documents:

- Software intellectual property
 - Microsoft Corporation vs Commissioner of Internal Revenue -- for Defendant's Counsel -- Victory by Defendant [IRS], US Tax Court, Seattle, WA and Washington, DC.

- Patent infringement cases
 - Jordan Spencer Jacobs v. Microsoft Corporation, Logitech, Inc., Pelican Accessories, and Analog Devices, Inc. -- for Plaintiff's counsel -- case settled to the satisfaction of all parties, Federal District Court, Central Florida
 - Other cases in progress
- Forensic analyses of magnetic material
 - Document authentication – Microsoft Corporation vs Commissioner of Internal Revenue -- for Defendant's Counsel -- Victory by Defendant [IRS], US Tax Court, Seattle, WA and Washington, DC.
 - Deleted data recovery and analysis; email recovery – case in progress, California
- Software and hardware quality and performance cases
 - Allen vs Worldwide *et al* -- for Plaintiff's counsel -- case in progress, Superior Court of Ventura County, CA
- Software copyright cases
 - Mitchell and Manhattan Software vs Jean Kasem, Little Miss Liberty, et al, -- for Plaintiff's counsel – Superior Court of Los Angeles County, CA – case settled prior to trial
 - Other cases in progress
- Misappropriation of trade secrets
 - Mitchell and Manhattan Software vs Jean Kasem, Little Miss Liberty, et al, -- for Plaintiff's counsel – Superior Court of Los Angeles County, CA – case settled prior to trial
 - Lynch Communications, Inc. v Irish Communications, Inc, David O'Keefe, et al. -- for Plaintiff's counsel – Superior Court of Riverside, CA -- case dropped
- Software industry appropriate compensation
 - Feltman v Otalvaro, et al -- for Plaintiff's counsel – case settled – US Bankruptcy Court, Southern Florida
- Software company valuation
 - Mitchell and Manhattan Software vs Jean Kasem, Little Miss Liberty, et al, -- for Plaintiff's counsel – Superior Court of Los Angeles County, CA – case settled prior to trial
- Fiduciary duties of corporate officers
 - Lynch Communications, Inc. v Irish Communications, Inc, David O'Keefe, et al. -- for Plaintiff's counsel – Superior Court of Riverside, CA -- case dropped.
 - Other cases in progress
- Software contract performance
 - Alliance Manufacturing Software, Inc. vs Typhoon Software, Inc. -- for Defendant's counsel –

- Airline liability
 - Case sealed
- Aerial law enforcement
 - People of the State of California vs Stevenson, reduced misdemeanor sentence

I have also acted as a patent consultant for private firms, reviewing patents for applicability to various cases and for intrinsic financial value.

Summary of Expert Witness Areas:

- Computer software development issues, practices, responsibilities, financing, responsibility, defects, failure analysis, and valuation
- Patent, Copyright, and Trade Secret issues, including infringement and misappropriation
- Outsourcing, including domestic and international
- General physics, dynamics, engineering, technology, and mechanics
- Software industry appropriate compensation
- Engineering and software industry standards and contract performance
- Management practices in engineering, science, research & development, and technology
- General aviation aircraft operations [I am an FAA rated Airline Transport Pilot, Flight Instructor, Ground Instructor, and Parachute Rigger]
- Fiduciary duties of corporate officers
- Hazardous materials, oil spills, and industrial safety
- Related issues

MANAGEMENT EXPERIENCE:

SUMMARY: I have been employed in the technology industry for 38 years, and have been doing corporate and project management over a 23 year period:

FUNCTIONS:

- Project and Program Management
- Shareholder and Media Relations
- Strategic Planning
- Financial and Operations Analysis
- Senior Computer Systems Analyst
- Research Scientist
- Environmental Scientist
- Intellectual Property Development
- Over \$15 Million in Technology Sales
- Marketing
- Business Planning
- ISO-9001, SEI/CMM

INDUSTRY EXPERIENCE:

- Aerospace
- Software
- Retail / POS / Restaurant
- Defense
- Dot-Com
- Biomedical
- Telephony
- Stocks
- Environmental
- E-Cash
- International
- Outsourcing
- Consulting Services
- Oil & Gas
- Airline Security

HIGHLIGHTS:

Thirty-four years of experience in management, business, engineering, and research. I have managed from 4 to 80 people, delivering dozens of projects on-time and on-budget.

| POSITIONS HELD | NUMBER OF INCUMBENCIES | YEARS OF SERVICE |
|--------------------------------|------------------------|------------------|
| President / CEO | Two | 4 years |
| Vice President..... | Two..... | 6 years |
| Chief Scientist | Two | 5 years |
| Chief Technology Officer | One..... | 5½ years |
| R&D Manager | One..... | 1½ years |
| Division Manager | One..... | 1½ years |
| Senior Product Manager | One..... | 1 year |
| Senior Scientist..... | One..... | 2 years |

Sales Total / Successful Proposals: More Than \$15 Million
 Proposals Authored:..... 250..... Conversion rate: 20%
 Largest Successful Proposal:..... \$7.5 Million
 Number Of Successful Proposals \$1 Million or more 4
 Public Speeches and Lectures Given..... More Than 100
 Business Plans Authored: 4 Patents Authored:..... 4
 Marketing Plans Authored: 8 Trade Show Presentations: 12
 ISO-9001 Plans Authored 2 SEI/CMM Assessments Authored 1
 Environmental Plans Authored..... 13 Expert Witness Cases 30

EMPLOYMENT HISTORY

CEO, BOSSgov, Inc. / Chief Scientist, BOSSdev, Inc., family of companies 2005 - current

BOSSdev is a technology provider specializing in multiple systems for major US and international firms and the US military community. BOSSgov is the business unit

within BOSSdev that specifically deals with US Government contracts and work leading to them.

Duties:

- With a support team, won a contract for supply chain management / data mining for all US Army armored vehicle parts and maintenance operations. I am Program Manager of the resulting I-LIMBS [Intelligent Logistics Information Management and Bridge System] supply chain middleware project for the US Army Tank Command's Tank Automotive Research and Development Center [TACOM/TARDEC].
- Chief Designer and Program Manager of a patent pending Improvised Explosive Device [IED] detect/defeat system using Thermal Neutron Activation Analysis. Successful tests were recently performed at the Radiochemical Engineering Development Center at Oak Ridge National Laboratories [REDC/ORNL], and the system is being prepared for presentations to Government stakeholders and potential private investors.
- Chief Scientist for our line of millimeter and terahertz microwave security cameras, which can detect hidden liquid explosives under clothing without invading personal privacy, in final negotiations for placement at US airports:
<http://www.defendertech.com/threatdetection.php>. [I was interviewed on CNN's Anderson Cooper 360 on August 10, 2006 about this camera system and its capabilities as a result of the disclosure of the London bomb plot]
- Strategic positioning, Technology Management of US Government contracts, Customer relationship management, security solution engineering, representation of the company to government and industry. I am a regular presenter on Capitol Hill and at the Pentagon.
- Spearhead of ongoing negotiations with investment bankers for \$60 million company recapitalization
- Created a Series A Preferred / Series B common structure for a solar energy utility to be added to a California public power district
- With a support team, won a contract for security audits of all Maryland Motor Vehicle Administration facilities.
- In negotiations to place intelligent video surveillance cameras throughout crime ridden areas of Los Angeles.

I host a radio show to advertise our product lines, *Business and Technology*, on KZSB-AM 1290 and streaming live on the Web at www.newspress.com. Previous guests include the Outreach Coordinator for the Central Intelligence Agency's In-Q-Tel Venture Capital firm, as well as numerous other technology leaders.

President, Chief Financial Officer, and Board Member, Offshore Creations, Inc., 2003 – 2005 [acquired by BOSSdev, Inc.]

Offshore Creations, Inc. was a publicly traded 130-person US-based multinational software engineering firm with business and sales offices in the United States and engineering offices in Ukraine. It was acquired by my present firm. OSC and its successor business unit supply IT products and services, web services, and static art and animation to more than 100 customers from the US and Europe. Users of OSC software include Disney, Warner Brothers, the Department of Homeland Secu-

rity, the US Navy, the US Army, the German Air Force, Brunswick Corporation, and more than 100 others.

Duties:

- I designed the financial and capital structure and reporting system, authored the internal financial processes, trained the senior financial and bookkeeping staff, and managed all financial and audit operations.
- I was responsible for all US regulatory agency reporting and liaison, including SEC and NASD reporting responsive to GAAP, FAS, SAB, and SOP standards.
- I authored the company's Form 10, including the MD&A.
- I was responsible for developing and implementing company performance metrics, job costing standards, and related management accounting standards.
- I was responsible for all tax planning and reporting to US taxation authorities and generating output for reporting to foreign tax authorities.
- I was responsible for our outside finance instruments, primarily debentures.
- I was responsible for all financial aspects of the company's merger.

Interim Controller, Phoenix|X-Ray, Camarillo, CA, 2003

I was Acting Controller during a management reorganization of this German-American manufacturer of industrial X-ray equipment. My responsibilities at the US office include GL, AR, AP, Payroll, Inventory, closing, reporting, and general financial and management accounting and consulting.

Management Consultant, Several Established and Startup Firms, 2002-2003

I worked with several established and startup firms, providing accounting and management consulting, technical consulting, business plan development, and promotional assistance. The established firms are in the laundry services and medical device sectors, and the startup firms are in the local telephone service, medical imaging, electronic cash, and nuclear waste management sectors.

Expert Witness, 1995 - 2004

I provide expert witness services in cases in state and federal courts involving management, technology, intellectual property, and computer issues.

Acting Controller, Chief Financial Officer, The Total Link, 2002

The Total Link is a telecommunications reseller in the Competitive Local Exchange Carrier [CLEC] industry in the Bell South area. My work includes preparation of telephone tariffs for regulatory agencies the States and for the FCC.

Contract Software Development Manager, 2001 - 2002

The client made software for retail and wholesale trade in the lumberyard, hardware, grocery, and apparel industries.

Senior Product Manager, 3DStockCharts.com, Inc., Santa Barbara, CA

The company (<http://www.3dstockcharts.com/>) produces real-time 3-D renderings of zero-delay full-book bid/asked prices for stocks on the world's major Electronic Communication Networks [ECNs] including Archipelago, Island, Instinet, Redibook, and Brute, using ultra-thin client-side browsers. The company has 75,000 subscribers, over 50,000 daily hits, and in use by major stock brokerages around the world. I was responsible for

determining product and engineering content, creating software development life cycle procedures, qualifying and managing outsourcing and distributed development resources, and coordinating engineering standards.

Research & Development Manager, Biopac Systems, Inc, Goleta, CA

Biopac Systems (<http://www.biopac.com>) manufactures a line of medical instruments for research and education. Biopac's product line includes equipment to monitor and record over 40 electrophysiologic channels including heartbeat, EEG, EKG, EMG, plethysmograph, and numerous others. In this position, I managed a group of 11 engineers and others developing and testing software and hardware, including three working remotely from Russia. I was also responsible for launching the company Intranet, establishing the Quality Assurance department, handling the company's first recall effort, developing software development life cycle procedures, including ISO 9001 procedures, establishing a company Internship program, introducing Version Control to our ISO 9001 system, and determining compensation strategies, bonus award practices, and related HR policies.

Vice President, Emulation Systems, Inc. of Santa Maria, CA

The company built simulators for aircraft and trucks, for use in the training and entertainment markets. Our products included FAA certificated simulators for Cessna 172 and 182 aircraft, plus realistic simulators for the F-18, Cessna 210, and Beech 19 series of aircraft, the Hughes 500 series helicopters, as well as truck-mounted spray-boom applicators. All simulators had full-featured, high-resolution terrain graphics and full control loading, as well as full Jeppesen navaid and terminal databases. I was in charge of Engineering, R&D, Manufacturing, and Customer Support.

Vice President of Science & Technology and Chief Technical Officer, Typhoon Software, Inc., Santa Barbara, CA, St. Petersburg, Russia, and Agana, Guam

I managed 55 Russian computer scientists and managers and 15 other staff in St. Petersburg, Russia, Santa Barbara, CA, and Agana, Guam, performing 57 software development projects for 41 U.S. customers, including 7 Fortune 500 companies. I personally marketed and sold every original project Typhoon ever produced, and assumed primary management responsibility for all of them.

Typhoon at the time was the world's largest outsourcer of Russian software and engineering talent. Environments included Windows 3.x, 95, and NT, OS/2, UNIX, AS400, DOS, Macintosh OS, and embedded systems. Languages included SQL Server, Oracle, VB/Crystal Reports, VBA, Access, Delphi, C/C++, RPG400, and assembler for embedded micro-processors. Projects included MRP systems, database systems for the banking, medical, legal, printing, automotive, law enforcement, and retail communities, Internet applications, speech recognition, multimedia, device drivers, telephony, screen savers, porting between systems and languages, algorithm development, and educational software. Retail products included: IBM ViaVoice add-ins for Word, Word Perfect, and GroupWise; *Always With You*, a custom screen saver; and a PLM to C porting tool.

A major project at Typhoon was the design and delivery to Xerox Business Systems of an MRP system for the printing industry, including Internet submission of print jobs, error-checking, and workflow tracking thru the factory. Tie-in was provided to the HR system [for machine-qualified employees, vacation and overtime, etc.], to the Inventory system, to the timekeeping system, the fixed assets system [for machine downtime], and to the General Ledger. Automatic backward scheduling was provided, with remote login for

sales staff. Automated project bidding was provided, with document archival. Supervisor alarm conditions were provided for critical conditions. The system was installed and previewed for the LA Unified School System, Microsoft, and numerous other clients. As a part of the effort, I was required to conduct a self-assessment and program launch for an SEI CMM Level 3 management structure.

My largest single project was managing 35 engineers in a multi-year effort in support of Harris Digital Telephone Systems projects. Our work included a white-box development to build a turnkey prepaid telephone credit card system for MCI that was installed in Istanbul, Turkey, Dohar, Qatar, Beijing, China, and Toronto, Canada. I also managed the development of the world's most successful PLM-to-C translator, a European ISDN teletext, and more than 10 additional projects.

Another major project at Typhoon was a successful proposal for a \$7.5 million rewrite of the entire Guam government software environment, including a substantial data mining and document management component, with both to-date and date-forward efforts. This involved a team of 8 people hand-picked and managed by myself over a 4-month period.

Division Director, Federal Systems, ExperTelligence, Inc., Santa Barbara, CA

I managed the most ambitious object-oriented hypertext software development project ever written, Dynamic Documents™, for the U.S. Government. I had 6 employees and a budget of \$500,000 per year. We delivered a prototype, and then negotiated a follow-on contract for \$1 million over two years. My responsibilities included management, business, and programming -- I wrote the word processor.

Member of the Technical Staff, General Research Corporation, Santa Barbara, CA, Hollister, CA, McLean, VA, and Alexandria, VA [Management duties]

I performed the duties of a staff physicist [*discussed later under TECHNICAL EXPERIENCE*], as well as performing management and marketing functions. I was asked to improve software operations at a GRC subsidiary, Semifab, Inc., of Hollister, CA. I reorganized procedures, created a Software Department, purchased additional hardware and software, and produced their first operations manual. I hired the staff and stayed until the department was operational.

I did marketing, especially to the Defense and National Security communities. I conducted seminars in new research findings for potential customers throughout the U.S., and coordinated numerous proposal efforts.

I also conducted classes in counter-espionage and security awareness.

President and Chief Pilot, Norris Airways, Santa Barbara, CA

I created and operated an aircraft fixed base operation ("FBO") with 14 employees, including 9 pilots, 3 departments, and 11 single- and twin-engine aircraft. We offered aircraft instruction and rental, air taxi service under Federal Aviation Regulation Part 135, and were an authorized Cessna Aircraft dealership.

President, Gasohol, Incorporated, Santa Barbara, CA

I organized the first modern gasohol company west of the Mississippi, with 8 investors and 10 employees at 2 sites, including a retail station, a wholesale terminal, and a delivery tanker. Wholesale customers included the U.S. Naval Weapons Center, Pt. Mugu, CA.

President, Norris Associates, Consultants, Santa Barbara, CA

I created and ran an environmental and engineering consulting firm with 6 employees. Projects included residential developments, a power plant in Omaha, NE, a sewage system in Los Angeles, CA, and oil drilling offshore Orange County, CA. We developed oceanographic, thermal plume, and atmospheric chemistry software and used fuzzy set theory to model governmental decision making.

SOFTWARE ENGINEERING and SCIENTIFIC RESEARCH EXPERIENCE:

SUMMARY: I have been involved in software development since 1959, and in the industry since 1969. In addition, my career as a research physicist began in 1969 and lasted for many years.

Project Manager, US Army Supply Chain Improvement, for TARDEC/TACOM

I wrote the successful proposal for an advanced Federated Database integration tool to simplify condition-based maintenance, predictive maintenance, and vehicle condition monitoring for the Army's line of HMMWV vehicles. I managed the project for its startup, prior to being given leadership of a larger business unit.

Systems Consultant, Kinko's, Inc. Corporate Headquarters, Ventura, CA

I developed Visual Basic and ACCESS database tools for analysis of payroll and compensation issues related to corporate mergers and restructuring.

Systems Consultant, Lawyer's Support Systems, Santa Barbara, CA

I developed TAPI-2 voice response systems in C and Visual Basic.

Systems Consultant, Allied Signal Corporation, El Segundo, CA

I designed and wrote an automated requirements traceability matrix tool for NASA's International Space Station Alpha engineering support. The tool featured a parser and database engine, and was developed in ACCESS and VBA.

Senior Programmer, Infogenesis Corporation, Goleta, CA

I developed a range of software to support electronic cash registers for the restaurant and hospitality industry, including IBM 4680 Store Systems, PCs, and AS-400s. Applications include database, systems, installation configuration management, exception handling.

Senior Scientist, Morton Associates, Inc., Santa Barbara, CA

I wrote Oil Spill Emergency and Contingency Plans (OSCEPs) and related documents. I was the Senior Scientist and Principal Author of the OSCEPs for 8 offshore oil platforms operated by Chevron. I did process-plant risk analyses and wrote oil spill emergency response software and training multimedia presentations on Macintoshes and PCs using Macromind Director. I authored the *Commercial Fisheries Handbook for Proposed Exploratory Drilling Operations, Cavern Point Unit*, and was a contributing scientist in related documents. I also performed asset evaluation for oil leases offered for sale.

Independent Consultant, Santa Barbara, CA

- I wrote INSP, an air quality regulatory compliance Management Information System [Unocal, Inc.]
- I wrote the computer program, ECNA, Enhanced Criminal Network Analysis. ECNA is used by over 10,000 law enforcement personnel worldwide. [Anacapa Sciences, Inc.]

Member of the Technical Staff, General Research Corporation, Santa Barbara, CA, Hollister, CA, McLean, VA, and Alexandria, VA [Technical projects]

I performed the duties of a staff physicist, as well as performing management and marketing functions [*discussed earlier under MANAGEMENT EXPERIENCE*].

- Analysis of Soviet nuclear and conventional land/air threats and NATO and SDIO responses.
- Signal detection analysis. Research on the system dynamics of the formation of dissident, terrorist, and criminal groups, based on management science and critical systems approaches.
- Computer simulation of heat flow, magnetic fields, electromagnetic scattering, and neutron transport.
- Numeric-based AI analysis of electrophysiologic data and other observable human signals, including facial microgestures and voice spectral and discourse content.

Independent Consultant, Santa Barbara, CA

- Systems analysis of missile range safety software for Vandenberg AFB [Control Data Corp.]
- Software development for an optical measurement system [Nanometrics, Inc.]
- Hardware/software engineering for infrared detector testing [Santa Barbara Research Corp.]
- Software development for a color touch screen computer [Santa Barbara Laboratories]
- Deterministic simulation of fire control system for the M-1 tank [Delco Systems, Goleta]
- Simulation of power characteristics for the Lycoming O-235 aircraft engine [Santa Barbara Designs]
- Development of shipboard fire control software [AN-SLQ-32] [Raytheon]
- Development of real estate multiple listing database and print management software [DA-Com, Santa Barbara, CA]

Senior Programmer, ITT Federal Electric Corp., Vandenberg AFB, CA

Development of missile range safety and auto-destruct software

Senior Programmer, Informatics, Inc., Jet Propulsion Laboratories, Pasadena, CA

Development of telemetry and command software for support of NASA deep space probes from the world-wide Deep Space Network [DSN] antenna array.

Physicist, Rockwell International Science Center, Thousand Oaks, CA

Microwave remote sensing. Mössbauer studies of lunar rock from Apollos 11 and 12. Microwave studies of the earth's atmosphere. Studies of crystal growth in gels.

SPECIALIZED EXPERIENCE:

ENVIRONMENTAL

SALES AND MARKETING / PROPOSAL EFFORTS / CORPORATE PRESENTATIONS

FINANCIAL AND CORPORATE ANALYSIS; BUSINESS PLANS

SAFETY ENGINEERING EXPERIENCE

ENVIRONMENTAL: I was Chief Scientist and primary author of the Oil Spill Contingency and Emergency Plans [OSCEPs] for the Chevron oil platforms in the Santa Barbara Channel. I was a senior author for the San Joaquin Valley's Kettleman-Los Medanos-Richmond [KLMR] pipeline OSCEP, the Cavern Point Exploratory Drilling Project Site Report, the Phillips Gas Plant Abandonment Plan, the Estero Bay Oil Terminal OSCEP, the Site Documentation for the Gosford production field in Bakersfield, pipeline spill response plans for Pacific Offshore Operators, Inc. [POOI], and I authored and presented spill response classes for Shell Western Exploration and Production, Inc. [SWEPI]. I performed asset evaluation for the Unocal California Property Divestment, as well as numerous other oil and gas related projects. The OSCEPs and other plans were responsive to regulations of the EPA, DOT, FAA, NTSB, DOE, MMS, USCG, the California Department of Fish & Game, OSHA, numerous APCDs, and the California State Lands Commission. I also wrote the *Commercial Fisheries Handbook for Proposed Exploratory Drilling Operations, Cavern Point Unit*, the MMS-required handbook describing the relationship between oil activities and the 46 distinct fisheries in the Santa Barbara area, and developed INSP, the relational database management computer software system for air pollution maintenance and monitoring used by Unocal's northern Santa Barbara oil facilities. I also did preliminary studies for possible LNG transport accidents from Valdez, Alaska to Yokohama, Japan.

I worked on gaseous toxic plume analysis with nitrogen tetroxide, UDMH [unsymmetrical dimethyl hydrazine], and ammonia, as part of risk analysis at Vandenberg AFB. I also worked on heated water discharge plumes related to power plant effluents on the Missouri River and atmospheric chemistry models related to vehicular and stationary sources in the Los Angeles Basin.

Earlier in my career, I was part of the team that produced California's first Environmental Impact Report in 1971 [for Ventura County's Ormond Beach power plant]. I later did hazardous materials research at Vandenberg Air Force Base relating to Minuteman missile launches and rocket fuel spill and storage problems [unsymmetrical dimethyl hydrazine and nitrogen tetroxide]. Soon after, I formed my own company to do environmental work, doing projects for the City of Carpinteria, the City of Los Angeles, and the City of Omaha, Nebraska, on projects ranging from Los Angeles's Hyperion Sewage Treatment plant ocean outfall to residential developments, to a nuclear power plant for the Omaha Public Power District [OPPD] [never built].

I also did sedimentation and drilling plume work for the Exxon Tanner Bank exploratory drilling project, and did North Sea oil exploration impact studies for the Government of Scotland, including wave height and wind speed statistical models.

SALES AND MARKETING, PROPOSAL EFFORTS, and CORPORATE PRESENTATION Activities as Vice President of Science & Technology and Chief Technical Officer, Typhoon Software, Inc., Santa Barbara, CA, St. Petersburg, Russia, and Agana, Guam

I personally sold over 50 engineering projects to approximately 40 customers worldwide, including 7 Fortune 500 companies, over a 5½ year period. I was the senior member of my company's trade show staff, and personally worked full time in our booths at COMDEX, SPEECHTEK, ASAT, and others. I authored or approved all marketing and sales brochures, and all marketing strategies. I was head of a proposal team that won a \$7.5 million contract with the Department of the Interior to provide government software services for the Government of Guam. I have made corporate presentations on 23 occasions, including 8 to trade show audiences totaling over 1,000 people.

FINANCIAL AND CORPORATE ANALYSIS; BUSINESS PLANS: Thru my various executive positions, I have been performing financial analysis and corporate strategic analysis for over 15 years. In 1998, I was a consultant with Kinko's, Inc. corporate headquarters, doing compensation analysis. Earlier, I performed feasibility studies, authored job costing metrics, and developed Job Cost Accounting Systems. I have authored 4 business plans.

SAFETY ENGINEERING: I have performed numerous safety engineering activities, including writing hundreds of documents explaining the safe and proper use of equipment and procedures to diverse audiences. These audiences included the general public, the aviation community, the petroleum industry, and the aerospace community.

Other: Among my earlier career highlights, I was a defense systems analyst in the Strategic Defense Initiative Office at the Pentagon, and a laboratory physicist working on moon rocks from Apollos 11 and 12. I also owned an aircraft fixed base operation [FBO], where I ran an FAR 135 approved aircraft charter service, a flying school, and a Cessna dealership. I have worked in the oil industry as a gasoline retailer and wholesaler and as an oilfield diver on the SEDCO 702 and 706 semisubmersible rigs for Petroleo do Brasil [Petrobras] in Brazil. I have also worked in the fishing industry as a commercial sea urchin diver.

I have had extensive experience as a scientific programmer and defense systems analyst, notably in applied electromagnetics while a physicist at General Research Corporation, antimissile defense at the SDIO at the Pentagon, armored vehicle simulation at Delco Systems, missile flight testing at Edwards AFB, and range safety/missile destruct analysis at Vandenberg AFB. I have held numerous security clearances in the past. These included DOD/TS, SCI, and other agency clearances I am not permitted to discuss openly. I was being reviewed for a DOE Q clearance at the time the relevant project was cancelled by the Government. I was my own security administrator, and am a graduate of the DOD Security Manager School. I also taught a class in counterintelligence awareness.

CAREER SUMMARY: Management / senior technical positions with forward-looking, aggressive firms

SUMMARY OF CAPABILITIES

- Inventor and development manager of a nuclear particle beam-based system for standoff detection of hidden military and terrorist explosive devices ["IEDs"]; manager of prototype design, advanced neutron beam research, and advanced gamma ray imaging telescope research
- Product and engineering management of a real-time dot-com company in the field of stocks and securities trading and 3-D representations of data.
- Engineering management in the biomedical device field.
- Software development.
- Technical management of a company building simulators for training and education, including management of the engineering, manufacturing, R&D, and customer support functions.
- Sales and marketing in a variety of industries. Products included computer software products and services and engineering services to large and small companies. I was the primary person responsible for identifying, selling, closing, and delivering 57 software products and projects to 40 customers over 5 years, including 7 Fortune 500 customers.
- Technical and personnel management of teams of engineers in distributed environments, including development of methodologies for requirements specification, software design and development, quality assurance, configuration management, testing, verification, validation, engineering change requests, cost tracking, job cost accounting, budgeting, line management, staff motivation, and personnel procedures. Software development according to Software Engineering Institute [SEI] guidelines.
- Continuing hands-on experience in engineering, including customer needs analysis, workflow analysis, GUI design, data modeling, module design, coding, configuration management, and testing.
- Coordinating and inspiring large groups of technical and non-technical people to do superior jobs and get superior results within a budget and a schedule, from strategic planning thru engineering, publicity, marketing and sales, fulfillment, customer service, and product updates.
- Determining capital requirements, preparing business and financing plans, making presentations to financial interests, raising capital, and developing strategies with accounting and legal staffs.
- Determining long-term corporate strategy and vision, producing tactical and strategic plans, and building staffs to achieve those plans.
- Conducting investor and shareholder relations.

EDUCATION and CERTIFICATIONS

University of California, Santa Barbara: Accounting courses leading toward designation as a CPA.

University of California, Santa Barbara: B.A. Physics

University of California, Santa Barbara: Human Factors

University of California, Santa Barbara and Santa Barbara City College: Courses leading to qualification as a Certified Public Accountant

Defense Department Industrial Security Institute, Honolulu, HI: Security Management Certificate

University of Texas, Austin: Professional Certificate, HAZOPS and Risk and Management Microsoft Certified Professional + Internet ©

FAA Airline Transport Pilot Certificate, Flight Instructor, Ground Instructor, Senior Parachute Rigger

PUBLICATIONS

"*Time-Resolved Emission Spectroscopy in Acetylene/Oxygen Explosions*", Combustion and Flame Journal, February 1970 (with R.J. Oldman and H.P. Broida)

"*The Brightness Temperature of the Terrestrial Sky at 2.69 GHz*", Journal of Atmospheric Physics, October 1972 (with W.W. Ho, G.M. Hidy, M.J. Van Melle, W. Hall, and H. Wang)

Numerous articles in popular aviation journals

PROFESSIONAL MEMBERSHIPS

Institute of Electrical and Electronics Engineers (IEEE)

Association of Old Crows (AOC) [Electronic warfare professionals society]

Santa Barbara Science and Engineering Council

SUMMARY OF ENVIRONMENTS AND CUSTOMERS (California except as noted)

3DStockCharts.com, Santa Barbara
AlliedSignal Aerospace, Torrance
Anacapa Sciences, Santa Barbara
Biopac Systems, Inc., Goleta
BOSSdev/BOSSgov family of companies
Control Data Corp., Sunnyvale
DefenderTech International Systems, Inc.
Ecomar, Inc., Santa Barbara
Edwards AFB
Emulation Systems, Inc., Santa Maria
General Research Corp., Santa Barbara
GM Delco, Goleta
HDR Ecosciences, Santa Barbara
Infogenesis, Inc.
Internal Revenue Service
Jet Propulsion Laboratory, Pasadena
Kinko's, Inc. Corporate Headquarters

Kirtland AFB, NM
McCloskey Group, Inc., Santa Barbara
McDonnell Douglas Corp., Huntington Beach
Morton Associates, Santa Barbara
Nanometrics Corp., Sunnyvale
Oceanographic Services, Inc., Santa Barbara
Offshore Creations, Inc.
Raytheon, Goleta
Rockwell Science Center, Thousand Oaks
Santa Barbara Laboratories
Santa Barbara Research Corp. (Hughes Aircraft)
Typhoon Software, Santa Barbara
Unocal, Inc., Orcutt
United States Government (numerous offices)
Vandenberg AFB

SUMMARY OF COMPUTER EXPERIENCE [non-legacy]

Operating Systems:

- Windows
- Linux
- Solaris
- MacOS
- IBM 4680

Languages

- C/C++
- Java
- HTML
- Visual Basic / VBA
- Access
- Assembly Language [numerous]
- LISP
- FORTRAN
- COBOL
- SQL
- Adobe Photoshop

Applications

- Microsoft Office
- Adobe Illustrator
- Microsoft Project
- Microsoft Visio
- QuickBooks
- Microsoft Front Page
- MacroMedia Dreamweaver