

RESUME

Revised 12 July 2017

EDUCATION

MIT	Cambridge, MA	1955-1958
Cal Poly	San Luis Obispo, CA	1958-1960, BSEE 1960

PROFESSIONAL EXPERIENCE (summary)

- Federal Civil Service, Point Mugu, CA. 20 years communications systems engineering, specification writing, proposal reviews, negotiating with contractors and government agencies.
- Federal Civil Service, Point Mugu, CA. 10 years branch and division full supervision. Responsible for operation and maintenance of all missile range telecommunications with up to 60 personnel and \$3 Million annual budget.
- Water Conditioning Systems. Ten years own business: nationwide retail and mail-order sales of water conditioning products:
- ACT Networks, Camarillo, CA. 13 months Senior Technician.
- Evolving Resources, Inc., Camarillo, CA 12 months Chief Microwave Engineer.
- Evolving Resources, Inc., Camarillo, CA 36 months Target Control Systems Engineer.
- Evolving Resources, Inc. Consultant.
- Jim Kaness Systems Engineering.

COMPUTER

Self-taught and proficient in Microsoft XP, Office 2000, and TurboCAD. Currently using Linux Ubuntu 14.04 and LibreOffice and an ICOO D50 Android tablet.

INTERESTS

Christian, faith, family, writing, electronics repair and construction, digital photography, western history, small business operation, law, home construction (electrical, plumbing, carpentry, woodworking), maintenance of two homes and three vehicles.

PROFESSIONAL EXPERIENCE (detailed)

1963 – 1983

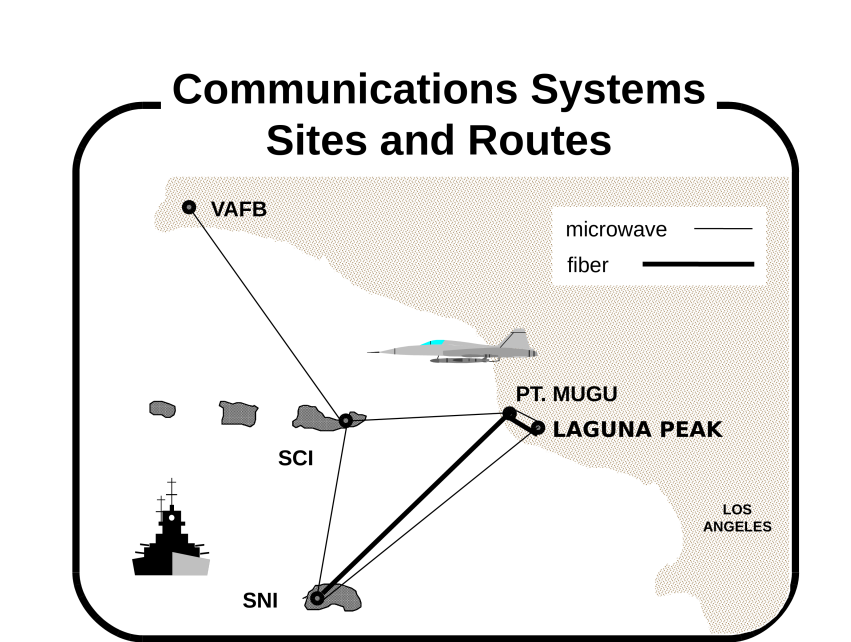
HF, VHF, UHF, and microwave systems engineering for all Point Mugu Navy test range telecommunications. From customer requirements, developed technical requirements and solutions, budget, and schedule. Wrote specifications, reviewed proposals, selected contractor, tested and accepted final product. Project engineer from concept through utilization, on several multi-million dollar projects. Familiar with analog and digital radio and microwave transmission, reception, antennas, FDM and PCM multiplex, special test

range systems such as timing and telemetry systems, tracking and surveillance radar data, and range video. Performed pathloss calculations from HF radio to light.

- Engineered and implemented analog and encrypted digital microwave telecommunications between Point Mugu and the offshore islands, and Vandenberg Air Force Base. Conceived and implemented custom interfaces for secure voice, range telemetry, and other unique range data signals.
- Nationally recognized expert on microwave multipath propagation. Invited presenter to International Telecommunications Conference in New Orleans, 1981. Profiled in Communications News, January 1984 (page 56) which can be read at <http://www.thefreelibrary.com/PMTC+Multipath+Film+Creates+Worldwide+Attention+in+the+Communications...-a0513952>

1983 - 1990

Invited to be Head, Instrumentation Data Transmission Systems Branch. Responsible for operation and maintenance (O&M) of range microwave, video, and fiber optics systems. Supervised personnel and set technical standards.



1990 - 1993

Promoted to Head, Range Communications Division. Responsible for operation and maintenance of all (cable, radio, microwave, fiber, video) range telecommunications at four sites with staff of 60 personnel and \$3 Million annual budget. Established budget, represented US Navy to government agencies and private companies, set technical standards, and supervised personnel.

- Member development team to develop specifications, review proposals, and implement the Fiber Optic Communications Underwater System (FOCUS), the repeaterless, gigabit underwater fiber system now linking San Nicolas Island and Point Mugu.

1993 - 1994

Chief Engineer of the newly re-organized Communications Systems Division. Performed various studies and tasks for higher management prior to retirement from 31-years Federal Civil Service in January 1994.

POST-RETIREMENT ACCOMPLISHMENTS**1994 - 2003**

Proprietor of the small business "Water Conditioning Systems". Mail order and local retail sales and installation of **SoPhTec**® magnetic water conditioners. Create and print sales literature, newspaper and magazine advertising, IRS-Schedule-C and California sales tax reporting.

1998 - 1999

Senior Technician for ACT Networks: Production line testing, troubleshooting, and repair of satellite data modems. Design and construct specialized factory acceptance test equipment, and train others in its use. Coordinate factory production and test of new product involving analog and digital circuitry and RF at 70 MHz and 1000 MHz. Left for higher paying ERI position.

1999 - 2000

Chief Microwave Engineer for Evolving Resources, Inc. and customer Edwards Air Force Base. Performed system design, pathloss calculations, installation design, documentation, prototype construction, procurement of materials, and sub-contract assistance. The only engineer, technician, and electrician on the contract.

- System design and installation of a mini-telemetry station and 8-foot telemetry tracker at Site-7, Air Force Plant 42 (Skunk Works), Palmdale, CA.
- System design and installation of 8 GHz digital microwave equipment, towers, antennas, and battery plants on mountaintops at Edwards AFB, China Lake Naval Station, and Nellis AFB.

2000 - 2003

Target Control Systems Engineer for Evolving Resources, Inc. and customer Naval Air Systems Command Weapons Division, Point Mugu, CA. Member of the Navy team for the CETIP-funded Multi-Service Target Control System (MSTCS) effort: Resigned full time employment to spend more time with family.

- Tim Deinhard and I co-designed and co-wrote the specifications for the Navy Early Success C-Band Data Link, a modern major upgrade to the 30-year old Integrated Target Control System (ITCS) including new GPS-based TDMA ground RF equipment and target transponders being designed and manufactured to our specifications by Micro Systems, Inc. On 6 April 2004 the prototype system successfully controlled a BQM-74 in flight testing and was declared a success by the Navy.
- Performed installation design, installation and documentation of the commercially produced UHF System for Naval Target Control (SNTC), integrating it into the test

range infrastructure at Point Mugu, Laguna Peak and San Nicolas Island. Installation design included extension of the 10Base2 Ethernet system network over government T1 circuits between sites.

- Navy member of the tri-service team for design and specification of the MSTCS L-Band Data Link Transponder (MDLT). In May 2005 a MSTCS modified QF-4 jet successfully flew Mission2 in the second of five planned Tyndall AFB missions.

2003 - 2005

On-Call Consultant with Evolving Resources, Inc. specializing in RF system design, DD1494 frequency authorization, link budgets, and system installation design.

2003 - Current

Jim Kaness Systems Engineering researches subjects of personal interest.

- Reverse engineered (2005) and wrote a technical manual for an Otis S-71 golf cart (ca. early 1970's). Posted for free download at www.econogics.com/ev/evhisto.htm and on my engineering page www.jimkaness.com/engineering
- Created (2006) the personal website www.jimkaness.com
- Engineered (2006) a wireless Internet system for Imperial Spa and demonstrated it.
- Reverse engineered (2006) the disk brakes on an Interplane Skyboy aircraft. The report is posted on www.jimkaness.com/engineering
- Elected (2008-2010) Chairman, Imperial Spa Homeowners Committee.
- Consultant (2009) to Calisto Engineering regarding Standard Missile Testing for customer US Navy.
- Deputy Program Manager (2010) for Calisto Engineering regarding Standard Missile Testing for customer Raytheon Missile Systems, Inc.
- Reverse engineered (2011) and restored an R Martin model E-1100 (ca. 2005) electric bicycle. R Martin, Ltd. has no parts and no diagrams for this model.
- Designed, manufactured, sold and installed (2010 – 2014) a high-performance 802.11b/g wireless Internet antenna system for connecting with a wireless access point up to 3 miles distant and rebroadcasting that signal as a new 802.11 wifi access point (AP). This makes the high-performance antenna system available for use by smartphones, tablets and other wifi enabled devices.
- Created (2015) spreadsheet files in LibreOffice Calc and in Microsoft Excel for printing personal bank checks using a personal computer and printer. Posted for free download at <http://www.jimkaness.com/engineering/checktemplate.html>
- Authored (2015) "CREATION – How Proven Science Supports Creation Theory" posted for free download at <http://www.jimkaness.com/engineering/creation.pdf>
- Architect (2016) and Owner-Builder of a 120 square-foot storage shed to match the architecture of our home here, with off-grid solar lighting. Design and construction details posted for free download at <http://www.jimkaness.com/engineering/shed.pdf>