



DOUG SWANK

I began my photography career at the age of 10. Mother, an avid photographer from the early 1900s, presented me with a Kodak 116 Box Camera. Because of our somewhat remote location, Joseph, Oregon, I needed to learn to process the film and prints. My favorite activity was to take aerial photographs using a kite I had built. Because the wind only blew from one of two directions the scenes were of either one neighbor's barnyard or the other neighbor's outhouse. After several flights and about 1/2 dozen pictures of the outhouse Mom told me I really needed to broaden my selection of subject material. 6 years later I sold my first series of pictures to the Foster & Kliester Advertising Company. These were pictures of their roadside signs taken during a motorcycle trip through Oregon and Northern California.

We moved to Portland where I attended Benson Polytechnic High studying aviation, mechanics, and electricity. At the beginning of my junior year the Japanese bombed Pearl Harbor marking the beginning of WWII. At the end of that semester I joined the U.S. Marine Corps. On completion of primary training (boot camp) I received additional training in radio communications, radar operations, and basic flight. The next three years were spent taking an escorted tour through the Asiatic-Pacific Theater of Operations ('South Pacific Theater') beginning in the Solomon Islands (Guadalcanal) and ending in the Ryukus Islands (Okinawa). I continued taking pictures during this period and have subsequently provided the Marine Corps League with three albums of pictures taken during this period.

I received my discharge from the U.S. Marine Corps 2 days before I was old enough to vote or buy a beer, my 21st birthday. Two months later I passed Benson Tech's 'finals' so graduated from high school about the same time.

In mid 1950 earned a B.Sc. with Electrical Engineering as the major and Physics as the minor. Shortly after graduation, secured a position in the Physics Department at Stanford University as a research associate under Dr. Wolfgang Panofsky, a leader in the development of high energy electronic linear accelerators.

My working career spanned the period of 1950 through 1988. My employment included working with such distinguished scientists as Dr. William Shockley, co-inventor and Nobel Laureate in physics for his work with semi-conductors, Dr. Felix Bloch, Noble Laureate for his work in para-magnetic resonance in human cell structure which led to the development of Magnetic Resonance Imaging (MRI)., and Dr. Hans Motts, Cambridge University Physicist whose work led to the development of hard x-ray machines used in radiotherapy resulting in minimum damage to healthy tissue and the Gamma Knife, used in treating inoperable brain tumors. During this period I also taught in the electrical engineering department at San Jose State College and was a consultant to local companies such as Hewlett Packard - computer development, Advanced Research Division of Admiral Corporation - aircraft control identification systems, and Varian Brothers - high powered pulsars for radar microwave systems and several others.

In 1963 I was assigned to a team to assist NASA in identifying and providing resolutions of problems being experienced with the Saturn V liquid oxygen fuel tank. We designed a camera system comprised of two cameras coupled by fiber optic bundles to a two lenses mounted atop the liquid oxygen tank. This system was to monitor the slosh, wave, and vortex modes of the liquid oxygen as a result of the hi-G forces experienced during launch and flight. The need for using fiber optic bundles was required as the cameras had to be mounted on the outer periphery of the vehicle as the cameras, contained in capsules, are ejected at the end of the flight, at an altitude of about 50 miles, to recover the film. Finding these little hummers in the wide expanse of the ocean was another exciting challenge. We ultimately designed and installed six systems for monitoring flight and 'staging' (stage separation) characteristics. This was the first use of a fiber optic bundle for the transmission of a coherent image between a lens and an image gathering device and has many applications today including medicine.

As the overseer of all Saturn V flight data acquisition systems the work with NASA became a long term assignment. As a result, I received a leave of absence from Stanford University. My work with NASA continued through 1972.

In late 1972 I moved on to the Massachusetts Institute of Technology (MIT) to participate in studies related to the resolution of Urban Management Problems. Our studies clearly demonstrated manpower requirements in The City of Boston's Utility department could be reduced by 68% with the implementation of computer assisted operations. We identified numerous areas where performance could be improved and costs significantly reduced. In mid 1974 we completed our studies, documented recommendations and adjourned.

From outer space to downtown Boston to Undersea Warfare! My next opportunity led to providing support to the U.S. Navy Keyport Naval Undersea Center at Keyport, Washington. I spent the next 14 years overseeing the design and implementation of wide of variety data acquisitions systems to support Mark 48 Torpedo Systems activity and undersea test/training ranges at Nanoose, B.C. Canada, Dabob Bay in Washington, and BASTUR/BSURE ranges located off Kauai, Hawaii.

After retiring in 1988 I turned my attention to traveling and photography. My travels took me to England, Denmark, France, Germany, Switzerland, Spain, Portugal, Island of Madeira, The Azores, Ajjic and Cabo San Lucas, Mexico.