



Fred Schramm graduated from Tennessee Tech with a BSIE in June 1975. Fred initially worked for Consolidated Aluminum in New Johnsonville, Tennessee doing traditional IE functions as well as management training. In 1979 he joined Sverdrup Technologies in Tullahoma, Tennessee as a consultant in the field of quality and engineering systems.

In 1981 Fred took a position with the National Aeronautics and Space Administration (NASA) in its Space Shuttle External Tank Project Office at Marshall Space Flight Center near Huntsville, Alabama as a manufacturing systems engineer. He was involved in Production Readiness Reviews for the Shuttle's External Tank and Main Engine Projects during the agency's ramp up to possibly 60 flights per year. He was involved in the Return to Flight activities following the Challenger accident. In 1992 he joined the Technology Transfer Office, applying space technology to make products used on earth, and has administered the Center Director's Discretionary Fund for advanced research, now called Independent Research and Development, since 1998.

In 1986 Fred began his course work toward a Master of Science in Engineering Management at the University of Tennessee. He received that degree in 1991.

During Fred's career with NASA he was involved with numerous studies of the effects of new technology on the space program. While doing one of those studies in 1982, he discovered a penchant for automatic identification. NASA was collecting vast amounts of manufacturing data daily by hand, many times inhibiting the flow of the product. He led the Shuttle Program in adopting bar coding. In addition to Return to Flight duties in 1986 Fred took the lead to develop ways to put bar codes directly on all Shuttle parts. The results of these technology advancements became the NASA Standard and Handbook for direct part marking, portions of which have been adopted world wide. The studies to read part identification under difficult conditions led to class of devices that read through paint while others detect invisible chemical bar codes mixed with the product. He was installed into the Space Technology Hall of Fame in 2001 and recognized by the Federal Laboratory Consortium in 2003 with its highest honor, the Award for Excellence in Technology Transfer. Fred has been awarded nine patents for his work.

Fred and his wife June, also a Tennessee Tech graduate teaching at Rock Creek Elementary, live in Winchester, Tennessee. They have a daughter Amanda who is a chemical engineer for Westinghouse Electric Company in Columbia, South Carolina. Fred is an elder in the Winchester Cumberland Presbyterian Church and is actively involved in community activities.

