

## Frederick J. Doyle (1920 – 2013)



ISPRS Past President and Honorary Member Frederick J. Doyle passed peacefully on 17 April 2013 from congestive heart failure at his home in McLean, Virginia. He was an active leader in all facets of our photogrammetric, remote sensing and mapping community. He had a very illustrious professional career in our sciences and technologies as a professor, research scientist, and scientific advisor. In addition to his scientific prowess, he also exhibited great masterful leadership and diplomacy in the national and international scientific arena. He served as ASPRS President in 1969. As 1976-80 ISPRS Secretary General and 1980-84 ISPRS President he was most instrumental in leading the International Society for Photogrammetry to embrace Remote Sensing in its name. Similarly, he artfully and tactfully led the ISPRS to become the first international Society to resolve and welcome Ordinary Membership to both Beijing and Taipei, which became the model for the International Council for Scientific Unions (ICSU). His command of the English language was excellent and served well in the complete rewrite of the Society's Statutes & Bylaws as well as his representation of ISPR(S) to the United Nations and international scientific community.

He was born on 3 April 1920 in Oak Park, Illinois and graduated from High School there in 1937. He joined the US Army in 1943 and served until 1948. His career began during World War II with an Army Air Forces unit on Guam, where he prepared target approach and damage assessment charts for B-29 bombing raids. He then attended Engineer Officer Candidate School and was assigned as the first junior officer in the founding cadre for the Inter-American Geodetic Survey in Panama tasked with extending the North American Datum through Central and South America. That assignment ended with a disastrous plane crash in 1946 in the Andes Mountains between Chile and Argentina. As one of two survivors of the crash, he waited for 12 hours on a mountaintop before a rescue party could reach him, and he was carried down the mountain, having suffered a broken femur and other injuries.

After being hospitalized for 18 months, he entered Syracuse University, where he graduated summa cum laude with a Civil Engineering BS degree in 1951. He then studied for a year on a Fulbright fellowship at the International Training Centre for Aerial Survey (ITC) in Delft, Netherlands where he was the first student under Rector Willem Schermerhorn. During that year, he had the opportunity to visit the national mapping organizations in Belgium, France, Germany, Switzerland, Italy and Austria, as well as the principal makers of photogrammetric instruments at SOM in France, Zeiss in Germany, OMI Nistri and Galileo in Italy, Kern and Wild in Switzerland. At the Wild factory he developed the calibration procedure for the new Wild A-8 stereoplottting instrument. He then went on to the Mapping & 'Charting Research Laboratory at Ohio State conducting research projects and classes for the Reconnaissance Laboratory at Wright Patterson Air Force Base. He was leader of US Air Force expeditions to observe solar eclipses in Labrador in 1954 and Vietnam in 1955. In 1954, he was appointed Associate Professor of Photogrammetry of the faculty at Ohio State University and later became the first chairman of a new department of Geodetic Sciences.

In 1960, he moved his family to the Washington, D.C. area and became Chief Scientist for Raytheon Autometric Company performing research on classified satellite reconnaissance systems for government agencies. In 1967, Fred joined the US Geological Survey (USGS) where he served as senior advisor for cartography at the National Mapping Division, planning, directing and performing research on aircraft and space sensors and ground processing systems for the US National Mapping Program. In 1969 he was asked to serve as chairperson of the Apollo Orbital Science Photographic Team, which developed, planned, and directed all the orbital mapping cameras used to photograph and map the lunar surface for the Apollo missions 13 through 17. Fred was principal investigator on the Landsat Satellites and Skylab. In 1971 he was recipient of a NASA Exceptional Scientific Achievement Medal for development of the Apollo Orbital Photographic System. He also directed photographic projects on Mariner and Viking missions to Mars, Venus and Mercury. He was the primary advocate and lead scientist in promoting the development and fielding by NASA of the Large Format Camera which was flown October 1984 space shuttle Challenger.

Throughout his career he trained many of the individuals who have become leaders in academic, military, government and civil Mapping organizations. While at the USGS, he served as adjunct professor of photogrammetry at George Washington University and Virginia Polytechnic Institute. Under contract to the National Photo Interpretation Center he prepared lecture notes for a course in Numerical Photogrammetry which he presented to NPIC, Army Map Service, Engineer Topographic Laboratory, Department of Agriculture Graduate School, VPI, George Washington and George Mason Universities. He was a prominent author of photogrammetric professional papers and texts and served on the Mapping Science Committee of the Board on Earth Sciences and Resources of the National Academy of Engineering.

Fred Doyle's scientific accomplishments and leadership qualities have been recognized nationally and internationally. He holds an Honorary Doctorate in Engineering from the Technical University of Hannover, Germany; an Honorary Doctorate of Science from Ohio State University; Honorary Doctorates of Technology from the Royal Institute of Technology (KTH), Sweden and from the University of Bordeaux, France; is an Honorary Fellow at ITC, The Netherlands; and elected an Honorary Member of ASPRS and ISPRS. He received the Fairchild Photogrammetric Award (ASPRS-1968); Brock Gold Medal Award (ISPRS-1984); Meritorious and Distinguished Service Awards (US Department of Interior); and elected to the National Academy of Engineering (1989). In 2010, George Mason University established the "ASPRS Student Chapter and Forum Dr. Frederick Doyle at GMU". The first quadrennial "Frederick J. Doyle Award" was presented, through the auspices of The ISPRS Foundation at the 2012 ISPRS Congress, to "Honor the exemplary career of Frederick J. Doyle as a role model to inspire followers and newcomers in the photogrammetry, remote sensing and spatial information sciences and technologies."

Fred is survived by his wife Mary, whom he married in 1955; four children, Fred Jr., Margaret Grant, Mary Ellen Slattery, and George; two brothers; a sister; and 10 grand-children.