

Biographical Note

| <i>Date</i> | <i>Event</i> |
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| 1938 Nov. 13 | Born, Neodesha, Kansas. |
| 1956 | Entered Massachusetts Institute of Technology, Cambridge, MA. |
| 1958-1960 | Bell Telephone Laboratories, Murray Hill, NJ, intermittently for about ten months between 1958 and 1960 under the MIT cooperative program. Experimental design development of pulse and analog electronic equipment. |
| 1960 | S. B. in electrical engineering, Massachusetts Institute of Technology, Cambridge, MA. |
| 1961 | S.M. in electrical engineering, communications, systems engineering, operations research, Massachusetts Institute of Technology, Cambridge, MA. |
| 1961 (Summer) | RAND Corporation, Santa Monica, CA. Examined the operational potential of advanced undersea detection techniques; mathematical economic study of the impact of alternative inspection rules on the stability of arms control agreements. |
| 1962 | E.E. in electrical engineering, Massachusetts Institute of Technology, Cambridge, MA; Honorary Societies: Eta Kappa Nu, Tau Beta Pi, Sigma Xi; (Summer) RAND Corporation, Santa Monica, CA. |
| 1962 (Summer) | Participated in a systems analysis study of the NATO air defense system. |
| 1963 Feb.-1963 Nov. | RAND Corporation, Santa Monica, CA. Spacecraft system studies; participation in the recommendation to NASA of a preferred in-space checkout concept for the Apollo spacecraft. |
| 1963 Nov.-1967 Feb. | RAND Corporation, Santa Monica, CA. Part-time research on new techniques for decisions on spacecraft reliability augmentation. Worked on various studies and arms control, space, and air defense. |
| 1964 Apr.-1965 Sep. | Volunteered for U.S. Army in Vietnam, but assigned to Edgewood Arsenal, MD, Army Chemical and Biological Headquarters Operations Research Group. Performed systems analyses of field Army chemical alarm systems. Technical monitor of a systems analysis study of strategic biological detection systems and a study of civil defense applications. |
| 1966 (Summer) | U. S. Bureau of the Budget, Washington, D.C. Co-authored suggested analytic framework for allocating IRS enforcement resources. Developed an improved analytic framework for decisions about Federal support of graduate students. |

- 1967 Ph.D. in management decision-making and systems analysis; operations research; economics; R&D management, Massachusetts Institute of Technology, Cambridge, MA. Thesis: *The Uses and Limitations of Systems Analysis in the Department of Defense*. Major professional interest: the theory and application of improved decision processes for top management decisions that combined technological change, quantitative analyses, and management judgments.
- 1967-1968 RAND Corporation, Santa Monica, CA. Worked as an economist and defense analyst.
- 1968 Richard M. Nixon's Presidential campaign. Worked as an expert on budget policies.
- 1968 Nov.-1969 Jan. Nixon Transition. Served on the President-elect's task force on budget policies and assisted on other transition matters.
- 1969 Jan.-1970 Sept. Special Assistant to President Richard M. Nixon, White House, Washington, D.C. Had direct White House responsibility for the Atomic Energy Commission, the National Aeronautics and Space Administration, maritime policy matters, and served as liaison with all science-related regulatory agencies, among them the Federal Communications Commission and the Federal Power Commission. Crafted Administration "Open Skies" domestic satellite policy, that allowed any qualified private company to launch communications satellites, thereby breaking the monopoly model for the industry.
- 1970 Sept.-1974 Sept. Director, Office of Telecommunications Policy, White House, Washington, D.C. following confirmation by the U. S. Senate. The highest-ranking Executive Branch official in communications and responsible directly to the President. Responsible for the Administration's policy on broadcasting, cable, and telecommunications regulation, as well as the Federal government's own telecommunications activities. Led the development of current policies of competition and deregulation in telecommunications at OTP to replace the then-dominant, highly regulated, and monopolistic structures of the television and telecommunications industries.
- Implemented the Open Skies Policy adopted by the Nixon administration that made it easier for qualified companies to launch domestic communications satellites. The initiative, which was originally developed by Whitehead while serving as Special Assistant to the President, created a more competitive environment which helped transform the domestic telecommunications industry and paved the way for cable television networks like [C-SPAN](#), [CNN](#), and [HBO](#) to emerge and prosper.
- Spearheaded efforts to develop a new regulatory model for the cable market, which up to this point had largely been regulated as an adjunct to broadcast television, to encourage innovation and allow the fledgling

industry to grow more robustly. Helped facilitate the 1971 Cable Copyright Compromise Agreement which cleared many of the copyright obstacles hindering the development of cable programming. Chaired the 1974 Cabinet Committee on Cable which advocated loosening the regulatory controls on the cable industry to allow it more freedom of expression, analogous to that enjoyed by print media.

Supported the Nixon administration's efforts to launch anti-trust litigation against AT&T to end its monopoly on the nation's telephone service. Provided key testimony before the Senate Antitrust and Monopoly subcommittee by arguing that the existing regulation of the telephone industry had become a barrier to competition and innovation and that there was no pressing need to allow AT&T's monopoly to continue. The Department of Justice's anti-trust suit against AT&T, originally filed in 1974, eventually led to the breakup of the company in 1982, by creating separate local telephone companies for different parts of the country.

Examined the operational potential of advanced undersea detection techniques; mathematical economic study of the impact of alternative inspection rules on the stability of arms control agreements.

1972-1993

Yosemite National Institutes Board Member and Chairman for thirteen years. Expanded campuses from one to three to service all socio-economic groups for non-political environmental education in the wilderness.

1973 May

Married Margaret Mahon

1974 Apr.-1974 Aug.

Organizer and chair of a team of four other people to meet in secret and to produce a plan for Vice President Gerald R. Ford's first days in office, once it seemed that there was a possibility that President Richard M. Nixon would resign from office. Met with the team at his private residence, Washington, D.C.

After the resignation, participated in a group of President Ford's senior advisors regarding the first days in the White House.

1974 Aug.-Sept.

Worked in the Office of the President in the new Administration with the President's senior advisors. Prepared issues, identified staff, and briefed the Chief of Staff prior to his daily meeting with the President.

1974-1975

Joint Harvard/MIT Visiting Fellowship, Cambridge, MA.

1977-1983

Founder and President, Hughes Communications, a subsidiary of Hughes Aircraft Company, El Segundo, Calif. Designed and developed the initial phase of the Galaxy series of satellites, or that for Galaxy I, II, and III. Developed a business to provide satellite services using satellites manufactured by the parent company. Pioneered the Galaxy satellites in

which transponders were sold or leased for the life of the satellite, thereby creating a new business model for the satellite industry, which subsequently became the model for all satellite services in the U.S. and around the world, and made it easier and cheaper for cable systems to get their program networks.

Beginning in 1986, PanAmSat, founded by Rene Anselmo, would break the Intelsat monopoly using the transponder sales strategy developed for Galaxy.

1983-1985

Founder of SES ASTRA (Société Européenne des Satellites). Formerly known as Coronet, of which he was Founder and Chairman, this project was based in the Grand Duchy of Luxembourg and successfully argued for the use of Luxembourg's satellite orbit slots, for the purpose of television and other data transmission. The project then became Europe's first commercial direct-to-home satellite TV broadcast business, ending the state-run monopolies over broadcasting in Europe and bringing viewers hundreds of new non-governmental, that is commercial or free enterprise, TV channels. Central to the Coronet business plan was the concept of the 90-centimeter home satellite dish fed by a KuBand satellite. The combination of these factors – Luxembourg's orbit slot, new-to-Europe small satellite dishes, and the KuBand satellite – led to the consequent success of SES Astra.

Coronet became Société Européenne des Satellites (SES) in 1985. By 2012, SES, S. A., of which ASTRA now is a part, is the core of its satellite television business. SES, as a whole, is today the world's second largest private commercial satellite company, measured both by revenue and number of operational satellites – now 52. SES S. A. distributes more than 6,200 TV, radio, and data services covering 99% of the earth's surface.

1984-2008

Board of Directors, Prudential Mutual Funds Family. Founder and Chairman, Governance Committee. Director or Trustee variously of 116 mutual funds.

1985-2004

Founder and President, Clay Whitehead Associates, which attempted to be an international business development company, principally concerned with the telecommunications and television industries. Tried unsuccessfully to found National Exchange (NEX) to provide telecommunications services in the United States using advanced satellite technology with a novel method to route communications traffic among Very Small Aperture Terminals (VSATs), or among very small transmit-receive satellite earth stations.

1988-1993

Led the successful expansion of the first privately-owned international commercial satellite system to the Asia Pacific region for PanAmSat. Introduced the Galaxy template of transponder sales to this initiative,

allowing it to expand beyond its single satellite for the Atlantic region and to break Intelsat's global monopoly.

- 1989 Patent: USP 4,813,036 – Fully Interconnected Spot Beam Satellite Communication System, granted March 14, 1989.
- 1993-2003 Sued SES ASTRA (Société Européenne des Satellites) of the Grand Duchy of Luxembourg regarding a contractual dispute. Prevailed in 2003. Agreement sealed.
- 2002-2008 Outlined eleven chapters and did research and text for three of *The History of 20th Century Telecommunications: The Development and Regulation of Telecommunications and Broadcasting*, planned as an essay on decisive moments in the rise of telecommunications technologies and their intersections with monopoly formation and deregulation in the U. S.
- 2005 Inducted into the Society of Satellite Professionals International Hall of Fame for being a “seminal figure in the development of the satellite industry.”
- 2005-2007 Distinguished Visiting Professor of Communications Policy, George Mason University School of Law, Arlington, VA. Held classes by invitation with colleagues Donald Baker, Henry Geller, Dale Hatfield, Thomas Hazlett, Brian Lamb, Glen Robinson, Antonin Scalia, and Richard Wiley.
- 2007 Mar.-2008 July Senior Advisor, Global Internet Freedom Coalition, developing and supporting closed society Internet freedom policies; supporting and advising field tested Internet firewall circumvention systems operating in China and other closed societies, including Iran.
- New Tang Dynasty Television, restoring uncensored television programming and transmission to China.
- 2008 July 23 Died of prostate cancer, Washington, D.C.
- 2009 Patent for software: USP 7,505,924 Service Subscription Service Business, March 17.
- 2009 Inducted into the CQ Amateur Radio Hall of Fame W6WW (SK).