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The Origins Of Satellite Communications, 1945-1965 (Smithsonian History Of Aviation And Spaceflight Series)



Synopsis

Conventional assumptions hold that U.S. government research and development efforts produced the satellite communications industry. David J. Whalen has looked deeply into the history of the industry and presents remarkable new information to tell a much different story. He finds that most of the satellite technology was privately developed by AT&T and Hughes Aircraft Company, and that the market for satellite communications existed before the government stepped in. In this detailed history of satellite communication's earliest years, Whalen explains that NASA, the White House, and Congress intervened in satellite communications development to show the world that the U.S. was in the space race and that the billions of dollars the U.S. government planned to spend would result in practical applications. He traces many different outcomes of government intervention, such as the marginalization of AT&T, who designed and paid for the first real communication satellite, Telstar 1; the positioning of Hughes as the dominant commercial satellite manufacturer; and the establishment of geosynchronous Earth orbit as the preferred orbit. Had the market been allowed to operate freely, AT&T would have launched their commercial low-earth-orbit telephone satellite in the 1960s. Many previous histories of satellite communications have emphasized government contributions; this version is the first to focus on the industry's contributions.

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Customer Reviews

In 1964, NASA Administrator James E. Webb asked his staff, "How did we get so much

communication satellite technology for so little money?" His question was not satisfactorily answered by his NASA lieutenants, but David Whalen, a long-time aerospace engineer with a Ph.D. in space policy, seeks to answer it in this important book. "The Origins of Satellite Communications" is a significant exploration of the early years of technology development and use of space-based communications systems, with emphasis on the role of industry. Satellite communications is the only truly commercial space technology to be developed in the more than 45 years since the beginning of the Space Age in 1957. It generates billions of dollars annually in sales. The story that Whalen tells here is how the United States achieved this technology. He asserts that the private sector led the charge, and there is much in his argument that is compelling. He notes that the first inkling of what the satellite telecommunications business might look like appeared in the fall of 1945 when a then-obscure RAF electronics officer and member of the British Interplanetary Society, Arthur C. Clarke, wrote a short article in "Wireless World" that described the use of satellites in 24-hour "geosynchronous" orbits some 24,000 miles above the Earth to distribute television programs. This proved prophetic and has informed the industry ever since. Whalen comments that the first person to emphasize both the technical and financial possibilities of satellite communications was John R. Pierce of AT&T's Bell Labs. In the mid-1950s, he argued that a communications "mirror" in space might be worth as much as a billion dollars. His estimate was conservative.

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