

# 2002: AN ELECTRONIC-TELEVISION ANNIVERSARY REPORT ON THE SAN FRANCISCO SECTION MEETING NOVEMBER 14, 2002

In 1920, when he was just 14 years old, Philo T. Farnsworth conceptualized an all-electronic scanning scheme for television, drawing a TV pickup tube for his high-school teacher. The teacher saved the drawing and later testified when Farnsworth's patents were in litigation. Farnsworth established his first laboratory when he was 19 and went on to found four corporations and patent 130 inventions. This autumn marks the 75th anniversary of the inventor's first working television prototype, which he developed in his lab on Green Street in San Francisco.

On November 14, 2002, the San Francisco Section celebrated Farnsworth's life and work with a meeting titled "2002: An Electronic-Television Anniversary." The event took place on the campus of the University of San Francisco and was hosted by faculty member Steve Runyon. Donald G. Godfrey spoke about Farnsworth's successes and failures in television and in life. Godfrey is the author of "Philo T. Farnsworth: The Father of Television," University of Utah Press, 2001; ([www.upress.utah.edu/books/godfrey\\_d.html](http://www.upress.utah.edu/books/godfrey_d.html)), and a professor at the Walter Cronkite School of Journalism and Mass Communication at Arizona State University, Tempe, AZ.

The Farnsworth story remains highly charged with emotion about who invented what in television. Godfrey dispelled some of the myths about the inventor that have recently been circulating in the popular press. The speaker gave proper credit to the many engineers at various companies in the U.S. and abroad who also contributed to the development of electronic television. Farnsworth himself publicly acknowledged the many contributions of other inventors.

Farnsworth was a complicated man who found himself at odds with some powerful corporate forces in American electronics in the 1920s and 1930s. In his typical role of "engineering maverick," he was chronically underfunded. One of his early backers had to buy him his first suit so he could make a presentation to raise money in San Francisco for the Green Street facility.

The floor plan of Green Street showed that Farnsworth's TV research and development lab was almost totally self-contained, with engineers even able to blow their own glass for making cathode-ray tubes. When RCA engineer and inventor Vladimir Zworykin (also credited by some historians as "the father of

electronic television") visited the lab in the early 1930s, he admired one of Farnsworth's video innovations and commented, "I wish I'd thought of that."

One of the greatest compliments to the inventor was when RCA's Zworykin said he preferred to have Farnsworth as an active competitor. Zworykin recognized that Farnsworth was not bound by prior art, quickly recognized technical truths, and was free to innovate rather than derive. He felt that working outside of RCA made the San Francisco inventor more effective in the advancement of the state of the art of television.

Friction between Farnsworth and David Sarnoff's giant RCA Corporation continued, however. A lawsuit between the two over Farnsworth's television patents dragged on from 1932 to 1939. In the end, Farnsworth prevailed because he was able to establish the early date of his initial idea and that his patents had been reduced to practice before RCA had any hardware. The patents had significantly broad enough claims that RCA couldn't design around them. RCA paid \$1 million for a Farnsworth license in 1939, today's equivalent of at least \$20 million.

Farnsworth ramped up his operation to manufacture television sets in the late 1930s and acquired several large factories, but meeting World War II defense needs required their conversion to war production. During the war, Farnsworth developed a 2000-line imaging device that was used in sniperscopes and developed a way to intensify the image on a radar screen. By 1944, the inventor's television patents had expired. After the war, Farnsworth had a productive career as a staff scientist for ITT Corporation, which hired other engineers to complete the many projects he conceived. When Farnsworth retired, he was well off, although in poor health.

Since the Federal government seemed to have no interest in fusion, in which Farnsworth strongly believed, he used his own funds to research that energy generation method. By the time he died in 1971, Farnsworth had mortgaged almost all of his assets to pay for his various research projects. Godfrey's talk included the personal side of Farnsworth's life and his commitment to family. The program was more about the milestones in an industry and a life than it was about the details of one man's inventions.

—Roy Trumbull, Section Chair