

# Looking at aerospace's place in history



Ken and JoAnn Cowan at their home in Fullerton. Ken worked for Hughes Aircraft Company (1957-1968). At right is a painting JoAnn created in 1962 of Ken standing at the Venice oil fields looking towards the hills of Playa del Rey. (Kevin Chang / Weekend)

## **Caitlin Yoshiko Kandil**

JoAnn Cowans has been married for 58 years, but it wasn't until this year that she understood the import of her husband's career.

Ken Cowans had worked for the defense contractor Hughes Aircraft Co., which many credit for helping to end the Cold War, and most of his work was secret.

"The bulk of the work was classified at Hughes," said JoAnn Cowans. "So Hughes people in general don't talk much about it."

But over time, as classified material became acceptable to discuss, she started to learn more about her husband's development of high-tech cooling systems and the implications these inventions had on geopolitics.

"I never realized what Hughes had done," said Cowans. "The people were dedicated to winning the Cold War, and their work was really important."

Cowans spent months researching the history of Hughes and digging up artifacts from her husband's time at the company, which was founded by Howard Hughes in 1932. She also solicited personal accounts from other former Hughes employees, hoping to better piece together the military electronics company's past.



Some memorabilia from Ken's time at Hughes Aircraft Company includes one of more than a hundred working product patents, center; a slide rule, top right; company news articles and a book by former Hughes Aircraft Co. President D. Kenneth Richardson.

(Kevin Chang / Weekend)

With these materials, including old company newsletters and engineering tools, she approached the Fullerton Public Library about making a public exhibit so the city — which was home to a Hughes plant for nearly 40 years — could learn about a company whose historical importance has long gone unnoticed.

The Hughes Aircraft exhibit will be on display at the library in January and February, culminating on Feb. 20 in an appearance by D. Kenneth Richardson, former Hughes president and author of "Hughes After Howard: The Story of Hughes Aircraft Company."

The company named for the business tycoon and aerospace engineer started by building aircraft during World War II. After the war, it shifted its focus to electronics, including radar, satellite and missile systems.

Originally headquartered in Culver City, Hughes became a top defense contractor and one of the largest employers in Southern California.

Hughes' development of new military technology is often credited for helping to end the Cold War — a view that many former employees embrace.

"We had a sense that we were conquering Russia during the Cold War," said Ken Cowans, who worked at Hughes between 1957 and 1969. "And I feel very good about defeating the Soviet Union, because freedom in the Soviet bloc was almost non-existent."

Larry Iboshi, an electrical engineer at Hughes between 1961 and 1995, worked on sonar systems for the company.

"Our job was to keep track of where the Russian submarines were," he said. "We were able to upgrade the torpedoes that submarines used so you don't just point it and hope it hits the target — it knows how to listen and track its target."

But Peter Westwick, director of the aerospace history project for the Huntington-USC Institute on California and the West, said the relationship between Hughes and the end of the Cold War is not that simple.

"There's an old saying that the Cold War was won in El Segundo," he said, referring to the concentration of defense contractors, including Rockwell, Lockheed and TRW. "I think that argument is

overly simplistic. There are a lot of factors that went into ending the Cold War, and no single factor was dominant — ethnic nationalisms, the Afghanistan war, the price of oil in the 1980s and the cost of maintaining both internal and external empire."

And there are also those who are skeptical that this weapons build-up was worth it.

"Some critics would say that this arms race was unnecessary, bloated, and vast resources — billions if not trillions of dollars and valuable brainpower — that might have been better spent solving social problems here in the United States," said Westwick.

Some of Hughes' technology was developed for commercial use, most notably the communications satellites that power XM Radio and DirecTV, which Hughes once owned; miniaturizing computers, which led to the smart phones of today; and in-flight entertainment systems, which Iboshi worked on later in his career.

Hughes was part of an aerospace industry that helped to shape the entire region.

"You could look at almost any aspect of Southern California culture in the Cold War and it was touched by aerospace," said Westwick. This included the "space-age aesthetic" of the area's architecture, Hollywood's computer animation technology and even surfing, which saw a "revolution in surf board design" driven in part by aerospace, he said.

In addition, the industry helped to drive population and economic growth.

"For much of the 20th century, aerospace was the economic engine, and it lifted up hundreds of thousands of Los Angeles-area families into the middle class," said Westwick. "That whole image of the age of affluence, leisure culture, going to the beaches, recreation — that was built on aerospace dollars."

Hughes also had an outside influence on the city of Fullerton, where it opened a \$6-million, 300,000-square-foot facility in 1957.

"It was one of the first big industries that was brought to Fullerton," said Cheri Pape, adult services librarian of local history at the Fullerton Public Library. At its peak in 1986, Hughes in Fullerton had 14,000 people on its payroll, making it the largest employer in the city. (At its height, the entire company employed 85,000.)

Hughes brought a "huge influx" of people to Fullerton. In 1950, before the company's arrival, Fullerton had a population of nearly 14,000, said Pape, and by 1960, with the addition of Hughes, the city had grown to 56,000.

"And once we had Hughes," she said, "Fullerton became a more attractive location for other industries, and lots of businesses came in around that time."

In 1994, after 37 years of operation, Hughes' Fullerton branch announced it would be shutting down. The company had already been in decline for decades, following massive cuts to Pentagon spending after the Cold War. Then in 1997, the defense contractor Raytheon announced it was acquiring Hughes for \$9.5 billion.

Even though the Hughes Aircraft Co. no longer exists, Ken Cowans sees its legacy enduring.

"The place where I worked, Google is now moving into," he said. "The work we did at Hughes formed the scientific basis for that which is done at Google, so it's interesting that they're moving into the same installation in Culver City."

*The Fullerton Public Library is located at 353 W. Commonwealth Ave. It is open daily. Call (714) 738-6334 for hours and further information.*

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