



*C. Lester Hogan*

# C. LESTER HOGAN

1920–2008

Elected in 1977

*“For contributions in microwave ferrite devices and leadership in the semiconductor industry.”*

BY DAVID HODGES AND ERNEST KUH

CLARENCE LESTER (LES) HOGAN, scientist, engineering scholar, inventor, university professor, industrialist, pioneer, and leader in the semiconductor industry, passed away on August 12, 2008.

Les was born on February 8, 1920, in Great Falls, Montana. After graduating from Montana State University in 1942 with a degree in chemical engineering, he joined the U.S. Navy and worked with scientists at Bell Labs on the development of acoustic torpedoes. He was then sent to the Pacific Theater to train submarine crews in the use of that technology. After the war, he enrolled at Lehigh University, where he earned a Ph.D. in physics.

In 1950, he joined the staff of Bell Labs, and shortly thereafter he invented the microwave gyrator. For his inventions, he was granted U.S. Patents 2,748,353 and 2,887,664, among others. The microwave gyrator, which is essential for controlling the direction of signal flows in radar and microwave radio-communication systems, is widely used today in many microwave devices.

Les joined the faculty of Harvard University in 1953 and in 1957 was named the Gordon McKay Professor of Physics. After five years at Harvard, he was recruited by Motorola, which was located in Phoenix, Arizona, as general manager of its semiconductor operation. In the 1960s, under his leadership, Motorola became the most profitable chip maker in the world, and Les was recognized as having an unusual combination of technological expertise and market insight. In 1968, he became president of Fairchild in Mountain View, California, and seven semiconductor experts from Motorola came after him. The outraged company sued but to no avail as Les had not done anything unethical. Les was president of Fairchild until 1974, when he became vice chairman of the company's board of directors. He retired in 1985.

Les Hogan was elected to the National Academy of Engineering in 1977. He received the Institute Electrical and Electronics Engineers (IEEE) Frederik Philips Award in 1975, and the IEEE Microwave Pioneer Award in 1993. He received the Eta Kappa Nu award in 1997. He was vice President of IEEE for several years.

For many years after his retirement, Les was an adviser to leading universities, including the Massachusetts Institute of Technology, Montana State, Lehigh University, Stanford, University of California, Berkeley, Princeton, and Yale. At Berkeley, he was not only a commencement speaker but also helped in developing university/industry relations. He was a major force in creating Berkeley's research program in computer-aided design, for which a conference room was named in his honor. In addition, in recognition of his many contributions, a friend and former associate endowed the C. Lester Hogan Professorship in the College of Engineering at Berkeley. His wife remembers that his life focus was teaching.

Les was a warm person who had many friends from academia and industry, whom he and his wife Audrey entertained at their home in Atherton, California. These memorable parties, which were the settings for fruitful exchanges of knowledge and friendship between these two important segments of the Silicon

Valley population, undoubtedly influenced the development of high-technology industry in California.

Les is survived by his wife, the former Audrey Biery Peters. They were married for 62 years. A daughter also survives, Cheryl Lea Hogan, and two grandsons, Marc and David Aymerich.