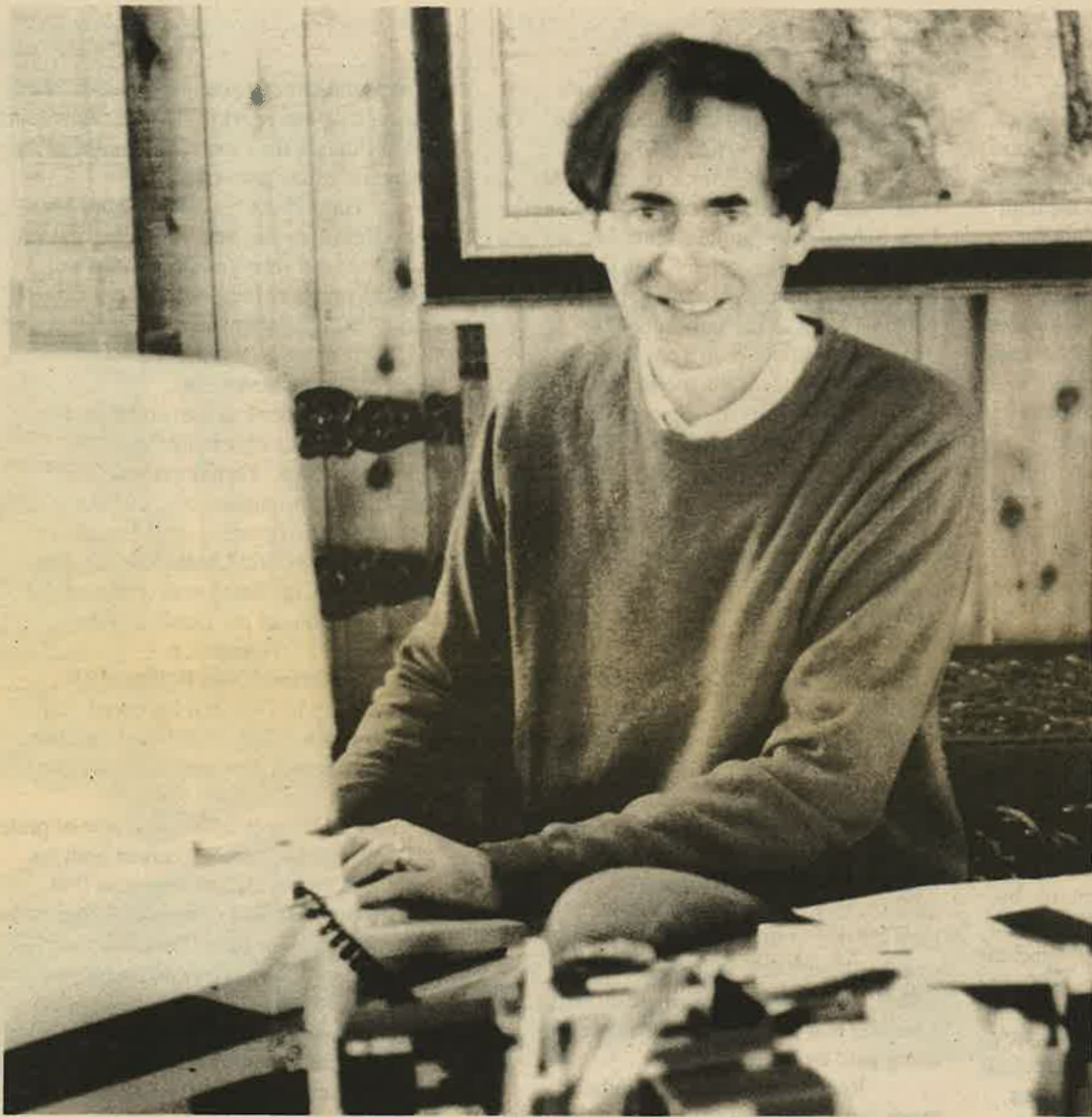


## 1987 Distinguished Alumnus Thomas E. Osborne



*The "Green Machine" was made of green balsa wood and was the model for the world's first scientific desktop calculator. Its inventor, Tom Osborne, would later pioneer the development for generations of calculators to come.*

By Marty C. Padilla  
Alumnews Editor

To most people the "Green Machine" could have been any number of things, but to the business world, it was truly a stroke of genius. The "Green Machine," made out of green balsa wood, was the model for the world's first scientific desktop calculator. Its inventor, Thomas E. Osborne, is one of this year's Distinguished Alumni Award Recipients. Osborne would later pioneer the development for generations of calculators to come. The most famous of which is the first commercial calculator, small enough to fit in a shirt pocket.

Working out of a small corner of his home in San Francisco, Osborne designed and constructed the Green Machine while his wife, Carol DeKay Osborne, BA '52, worked full-time to support the couple.

"My goal has always been to attack an environment which I thought there was a very large market and should have been addressed by large companies, but was not."

Osborne said he can exploit any field by getting a very detailed knowledge of how it works. He then designs a system that solves the problems of that environment and going out and selling that system and the solution to a particular company.

He sold his Green Machine idea to Hewlett Packard and called the new desktop calculator the HP 9100. Osborne worked

with HP to develop several computer/calculator products, the most famous of which is the HP35, the first calculator small enough to fit in a shirt pocket. In less than five years after its introduction in 1972, the HP35 effectively displaced the traditional tool and symbol of the engineer -- the slide rule. Osborne's projects at HP have resulted in more than 60 patents in the United States and foreign countries in which he is named as inventor.

Osborne's perseverance as an inventor has truly paid off, both the Green Machine and the HP 35 are on display at the Smithsonian Institute in Washington D.C. His inventions will remain a permanent part of the nation's history of technological advancements.

One of his recent endeavors is the development of a computer management system for a retail store. Holding true to his belief that "You don't know what it's like until you're in the cooker," He and Carol are partners with his sister in Wildwood Inc, a Lander, WY gift and flower store.

Osborne recalled that growing up on a ranch near Meeteetse, WY laid the foundation for his future achievements. "There is a certain degree of innovation and independence you learn growing up in an isolated environment. There were not many other kids around. You become a very good judge of your own product," he said.

# Thomas E. Osborne's inventions have Revolutionized our everyday personal Computing power

"In retrospect, it would seem that attending a one room school house at Meeteetse should have been chaotic. There were eight grades and about 12 kids. The teacher was always talking to someone. But she had a rule that worked very well. She started with the little kids. Then she would move on up through the grades. There is a great tendency to listen to the teacher as she's working with other students and not do what you were supposed to do. Her method of solving that was, she's going to come back and measure how you're doing and if you could do what she asked you to do, then it was okay for you to listen to her instructing the other students."

"A one room school house offers an ability to be exposed to things that I think are denied people who go through one grade at a time. They may be totally unaware of what the future may be bringing. I always had some idea of what was going to happen through the eighth grade. A one room school has some things to offer that people who had never experienced one would not believe."

In 1944 the Osborne family moved to Cody, WY. "It was a bit of a shock," he recalled.

"One of the first days I was in school I heard a firetruck. I had never heard a firetruck before. I shot to the window and yelled 'there she goes.'"

Osborne recalled being reprimanded by his teacher. "After it was all over, however, she asked what I thought of it." I responded, "It was worth it."

In 1957, Osborne entered UW. He recalled that he and a friend hitchhiked to Laramie to register and decided he would never hitchhike again. "I didn't know there were wierd people in the world before that," he said.

He graduated in 1957 with a bachelor's in electrical engineering. He was named outstanding electrical engineer of his class and designated distinguished graduate of UW's Air Force ROTC program.

Osborne recalled that some of the rules he learned in the UW's ROTC program work well in industry. One of the rules he mentioned, "Do not ask anyone to do something you cannot do yourself. And, he added, "If you could not speak well you were going to put a cap on how well you do."

He was also a member of Sigma Tau, Phi Kappa Phi and Sigma Nu while at UW.

In 1959, he attended the United States Air Force Institute of Technology, University of Washington. He studied meteorology and computer programming. In 1960 he served as an active duty officer at Headquarters, Strategic Air Command, at Offutt Air Force Base in Omaha.

In 1961 he entered the University of California at Berkeley where he earned his master's in electrical engineering with an emphasis in computer design.

Before entering UCLA Berkeley, Osborne said he had grown accustomed to UW classes which were taught mainly by professors with Phd's. At Berkley he found some of his classes were taught by teaching assistants which took some getting use to.

Following Berkeley, Osborne went to work with a local engineering firm, while he continued to work on his own inventions.

He said the company was making a product, "That was just terrible." Osborne made suggestions for improvement and offered to design a new system. "They were making electronic calculators that had four second multiplier times," he said.

"I told them that what they were working on was not going to be a success. If they were willing to let me try and improve the system I would be willing to do it at no cost to them. All I asked for was lab space," he said. Following a meeting, the company decided not to take Osborne up on the offer.

At that point he decided to leave the company and design a working model of an electronic calculator of his own. Osborne founded the San Francisco-based firm of Logic Design with his wife.

After two years of development and research time behind him, Osborne began to approach large companies with his ideas. Several companies rejected him, and finally, Hewlett-Packard would listen.

Osborne was twice chosen as keynote speaker for the Institute of Electrical Engineer's, and was a guest lecturer at Berkeley for a semester. He also guest lectured at the Soviet Academy of Sciences in the USSR, and has been credited with contributions to a text book dealing with computer design.

He and Carol are instrument-rated pilots and members of the Aircraft Owners

and Pilots Association. He owns and flies an aerobatic plane.

The Osborne's are active supporters of the San Francisco Symphony and ballet and related arts programs.

His inventions have helped revolutionize our everyday personal computing power. His contribution ranks high among the most exciting developments in electronics that have occurred over the last five decades.

Tom and Carol will return to Laramie for Homecoming 1987 in October to receive his Distinguished Alumni Award. Yet another accolade in his glittering career. □

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