

Retro Ramblings

By: Douglas Love, Grand Trustee, Napa Parlor #62

Since the end of the Second World War, California has led the nation in many fields. In the agricultural, industrial, entertainment, and service sectors, California ranks above all of the other states. In fact, California's economy still ranks fifth in the world. One area in which California led the world was, and to a great degree still is, the electronics and computer industry. This, along with the entertainment and tourism industries, is arguably what our beloved state is best known.

While California is now linked to technology and innovation, that was not always the case. Early in the state's history, gold was the item that brought many to California. Then agriculture, mild weather, and available land drew many. Pan Pacific trade played a part also. While the Transcontinental Railroad, the Panama Canal, and the development of a national highway system made California more accessible than ever, and entertainment and tourism were part of California's economy early on, it was World War II that brought many people to California and launched the growth of the technology sector.

The aerospace industry began on the East Coast, but in 1910 Los Angeles hosted an international aviation meet. The participants found the weather ideal for flying. In 1921, William Douglas started the Douglas Aircraft Company and over the next fifteen years, the aeronautical industry blossomed in Southern California with the establishment of Lockheed, Northrup, Hughes and others. Soon, the greater Los Angeles area became the center for aviation and aerospace, eclipsing the older East Coast base, centered around Long Island. Even today, California is a leading center for aviation and aerospace technology.

The same is true of the electronics industry. Early on California was a locus for electronic innovation. In 1912, the Marconi Wireless Corporation moved its high-power long wave station KPH from the Palace Hotel in San Francisco to Bolinas. The Corporation purchased land to build a permanent radio station in Marshall. Completed in 1914, Marconi operated the station until World War I, when it was seized by the US Navy. At the end of World War I, the station was transferred to General Electric Corporation and the station was operated by RCA until 1939. The property was sold in 1947 and again in 1964 to the infamous Synanon Corporation; which was headquartered there until 1980. In 1980, the San Francisco Foundation purchased the property and donated it to the state as a historic park in 1984. In 1927, Philo T. Farnsworth invented television in his laboratory at 202 Green Street in San Francisco. While Farnsworth's and the Marconi Corporation's advances were certainly impressive, they pale in comparison to what was soon to follow.

In 1939, Bill Hewlett and Dave Packard founded Hewlett-Packard and in 1944, AMPEX developed the first commercially viable magnetic tape recorders. But in 1947, at Bell Laboratories in New Jersey, a world changing device was created; the first working transistor. Invented by a team of three physicists, including William Shockley, the transistor soon replaced vacuum tubes and became the basis for modern electronics. Shockley, who was raised in Palo Alto, eventually left Bell Labs and in 1956 returned to Palo Alto to form Shockley Semiconductor... Employees of Shockley, known as the "traitorous eight" left to form Fairchild Electronics, and eventually Intel. Then along came Apple, Google and a host of other companies, making the Bay Area the world hub for the technology industry.

In 1965, Gordon Moore, co-founder of Intel famously observed that the number of transistors on an integrated circuit would double every two years with the cost remaining nearly the same. This observation, known as “Moore’s Law” has accurately described the growth of the technology industry over the last nearly sixty years. The landscape of the technology industry changes very rapidly with the latest, most powerful devices of a few years ago now being nothing more than e-waste. Due to this rapid advancement in technology, Gordon Bell, developed the idea of a museum to preserve older technologies and tell the story of computer development while he was an engineer for Digital Equipment Corporation. What is today The Computer History Museum had its first exhibit in 1975 in a converted coat closet in DEC’s headquarters. In 1984, *The Computer Museum* moved to Museum Wharf in Boston and closed in 2000, shipping all of its holdings to Mountain View. In 2002, the Computer History Museum opened in a building that once housed Silicon Graphics Corporation and remains there to this day.

The museum is dedicated to preserving the history of computers and computational devices from the abacus to the modern computers and software of today. Among its holdings are a Norden bomb sight, an Enigma machine, a Cray 1 supercomputer, a recording of the first mp3 and the only functional PDP-1 computer in the world. For those who wish to learn a bit about the history and development of the technology which has become interwoven into our daily lives, the Computer History Museum is a great place to visit.

GETTING THERE: From 414 Mason Street: Get on US 101 South and stay on it for 36.5 miles to exit 399/Shoreline Drive. Turn left onto Shoreline Drive and the museum will be on your right. The museum is located at 1401 North Shoreline Drive, Mountain View. Its hours are Wednesday through Sunday from 10:00 am to 5:00 pm. Tickets are \$19.50 for adults 18 and over. Seniors 65 and over, youth 11-17 and military are \$16.50. Children 8-10 are \$6.00 and 7 and under are free. The museum’s phone number is: (650) 810-1010 and its web address is <https://computerhistory.org/>