

The First Day of the Silicon Valley

If you could point to moment in history as the day that the Silicon Valley began, it would be August 24, 1899.

In late August of 1899 the *Sherman*, an Army troop transport, was expected to arrive in San Francisco carrying the First California Volunteers and two batteries of the California Heavy Artillery home from the Philippines where they had participated in the Spanish-American War and the beginning of the Philippine-American War. At that time there was much euphoria about the quick and decisive victory by the United States over Spain. It was America's first overseas war and, because of the war, the U.S. annexed Puerto Rico, Guam, the Philippines and the Guantanamo Bay Naval Base. I will leave it to another forum to discuss the pros and cons of imperialism and our 21st century view of it. In 1899, to most American citizens, it was a great victory.

A cable was sent when the ship left Yokohama (they had a sightseeing stop in Nagasaki and Tokyo after leaving Manilla) so the ship was expected in San Francisco around August 22. A huge welcome home celebration was planned by the City. The *San Francisco Call* newspaper enlisted the assistance of some young amateur radio operators to help them announce the arrival of the ship before the other local papers. These young men had been experimenting with sending wireless signals and were allowed to place their equipment and an operator on board the Lightship *San Francisco* which was anchored about nine miles outside of the Golden Gate. When the *Sherman* appeared in the fog on August 23, a wireless signal was sent from the ship to a receiving station in the basement of the Cliff House who then telephoned the *Call*. The newspaper fired a cannon on the roof of their downtown office building letting everybody in the city know that the ship arrived. The *Sherman* did not enter the bay until the next day due to heavy fog.

This was the first time that "wireless telegraphy" was used to deliver news in the United States. It was also the first ship-to-shore wireless transmission in the U.S. These men had little knowledge of the work being done by Guglielmo Marconi in Europe. Most importantly, it spurred many boys and young men to build their own wireless sets (later known as ham radio) and to learn code. As the center of Pacific shipping, numerous companies spring up in San Francisco to provide ship-to-shore services to vessels. Teenage boys, who have been building their own wireless sets, were hired as operators. With signals stronger at night, young amateur radio operators (later called hams) transmitted signals at night. Ham radio clubs and stores selling equipment began to flourish.

One young enthusiast was Francis McCarty, a 14-year-old native of San Francisco. A few years after the arrival of the *Sherman*, he perfected a method of modulating or superimposing clear speech using spark-generated radio waves. Although there was much skepticism about the process, the McCarty Wireless Telephone Company was founded in 1902. McCarty died a few years later but his ideas were used by others to form the Federal Telegraph Company in Palo Alto in 1909. Federal produced vacuum tubes and radio equipment and became a major supplier to the Navy.

Federal Telegraph was the first successful technology company in the area. Litton Engineering Labs, Fischer Research Lab and Magnavox are all direct spinoffs from Federal. Most importantly Federal was founded by a Stanford grad and the president of Stanford and professors invested in the startup. Its success led to further investments by Stanford setting the groundwork for the Silicon Valley.

Vacuum tubes continued to be a major product in the area, followed by microwave tubes (highly complex vacuum tubes) starting in the early 1940s. This was followed by semiconductors in the 1950s. A semiconductor was essentially the next step after the vacuum tube but was much smaller and more reliable.

Young men working in their garage or attic, refining and innovating, starting their own companies, seeking small investors, working with local professors, venture capital, spinning off other companies and successfully competing with the large established Eastern companies, all the tenets of the Silicon Valley, had their roots in the long-forgotten story of the arrival of a ship in San Francisco.

Historical Note: The California Volunteers were led by Lt. Col. Victor Duboce, a resident of San Francisco and career soldier. He was elected to the San Francisco Board of Supervisors in 1899 but on August 16, 1900, he succumbed to an unidentified disease that he either had before going to the Philippines or contracted while he was there. Duboce Street and Duboce Park in San Francisco are named in his honor.

Author's Note: The term "Silicon Valley" as used in this article is a metonym for all types of technology in the San Francisco Bay Area. The true definition of the term is the silicon wafer and chip industry located in the Santa Clara Valley.