With Silicon Slopes coming, you might think that Utah is getting its first day as a leader under the technological sun.

But you'd be wrong.

University of Utah (the U) has been a leader in digital technology since fifty years ago! This is a story largely based on a talk given by Adobe's founder John Warnock at Silicon Slopes in 2019. It all began in 1957, when the USSR launched the first satellite and America realized they were behind in the Space Race and at risk of no longer being the world's leading technical superpower.

In response, the federal government created the National Aeronautics and Space Administration (NASA) and the Department of Defense’s Advanced Research Projects Agency (ARPA, later DARPA) tasked with developing space-age technologies, e.g., rockets, weapons and computers. Scientists and military experts were especially worried about an attack on the nation’s telephone system, which would prevent long-distance communication.

In 1962, J.C.R. Licklider, an MIT scientist from ARPA, proposed a solution to this problem: an extensive network of computers that could talk to one another and permit communication even if the Soviets destroyed the telephone system. In 1965, another MIT scientist proposed a large-scale, distributed, survivable communications network, the ARPANET, based on 'packet switching' designed to withstand almost any degree of destruction to individual components without loss of end-to-end communications.

So where does Utah figure in? In 1969, in an effort spearheaded by University of Utah Computer Science Professor Ivan Sutherland, an MIT PhD, the U Computer Science Department became the fourth node (Node4) on the ARPANET, the first outside of California to join the network (after UCLA, Stanford Research Institute and the University of California Santa Barbara). The ARPANET evolved into the Internet and World Wide Web, and the U became an early-adopter of the technology that changed the world.

And if that is not enough...

In 1924, David Evans was born in Salt Lake City. He attended the University of Utah and earned a Doctorate in Physics in 1953. After his PhD he worked for Bendix Corp. as Senior Physicist in the Computer Division, where he managed developing two of their computers, the G-20 and the G-15.

In 1965, James Fletcher, then president of the University of Utah, invited Evans to come back to the U and create a computer science department with a large DARPA grant specifically to study computer graphics. At the same time, Evans was also a Professor of Electrical Engineering and the Associate Director of the Computer Center at the University of California at Berkeley. There he ran projects sponsored by the Advanced Research Projects Agency (ARPA) in computer technology, and brought those ARPA grants with him back to Utah. In 1968, Evans convinced Ivan Sutherland to leave Harvard and come to the University of Utah. Sutherland's PhD thesis at MIT was SketchPad, a foundational computer graphics program. It was Evans' ARPA funding and Sutherland who resulted in the U becoming Node4, above, and led to the U becoming one of the first computer graphics programs. Evans also had pioneered computer graphics, and University of Utah quickly became the graphics mecca of the world and revolutionized the computer graphic industry.

Sutherland had agreed to come to Utah on the condition that Evans start a company with him. So with Sutherland, Evans founded the Evans & Sutherland Computer Corporation in 1968, which was one of the first developers of interactive graphics. The first offices for the company were in a building on the University of Utah campus. Eventually, the company found a permanent home in the University of Utah Research Park, where it grew to a company occupying four buildings and employing 830 people, with sales of 60 million, by 1982.

There are a number of uniquely identified University of Utah graphic images, including the Kline bottle and the Teapot, which you will see in the background of Pixar and other animated graphics movies.

A number of other influential students came out of the U Computer Science program then, including John Warnock, Ed Catmull, James Clark, Alan Ashton who founded Adobe Systems, Pixar Animation Studios, Silicon Graphics and WordPerfect, and Alan Kay who pioneered the modern Graphical User Interface (GUI).

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