May 16th

Barry W. Boehm

Born: 16 May 1935;

Santa Monica, California

Boehm is known for his integration of systems engineering principles with software development, specifically the Constructive Cost Model (COCOMO) in 1981, and the spiral model in 1986.

COCOMO helps to estimate effort, cost, and scheduling by utilizing details drawn from a study of 63 projects at TRW Aerospace, ranging in size from 2,000 to 100,000 lines of code, and various languages from assembly to PL/I.

The spiral model defines iterative development cycles that incrementally improve a system through risk management. Boehm's "win-win" and "anchor-point" spiral enhancements were adopted by the US Army Future Combat Systems Program.

Ivan Edward Sutherland

Born: May 16, 1938;

Hastings, Nebraska

When Sutherland developed Sketchpad [Jan 7] in the early 1960's, it launched the interactive computer graphics field, and so he's naturally regarded as the "father of computer graphics".

Joint work with Danny Cohen at Harvard in 1967 led to the Cohen–Sutherland line clipping algorithm. In 1968, Sutherland and Bob Sproull buillt the first virtual reality and augmented reality head-mounted display system, "The Sword of Damocles" [Dec 9].

He co-founded Evans and Sutherland (E&S) with David C. Evans [Feb 24], a company that quickly became known for its pioneering work in real-time hardware, 3D graphics, and printer languages.

Evans, who also founded the computer science department at the University of Utah, persuaded Sutherland to become a professor there, helping to build the school's reputation as a center for computer graphics. Among his many students were Alan Kay [May 17], Henri Gouraud who devised the Gouraud shading technique, Bui Tuong Phong [Dec 14], Danny Cohen [April 18], Frank Crow who went on to develop antialiasing methods, Jim Clark [March 23], and Edwin Catmull [March 31].

Sutherland's first programming experience at age 12 was with Simon [May 18], a relay-based computer with six words of two-bit memory, that was lent to him by its designer, Edmund Berkeley [Feb 22]. Sutherland's first significant program allowed Simon to perform division, which required him to utilize table lookups and add a conditional stop to Simon's instruction set. It was the longest program ever written for the device, requiring some eight feet of paper tape. His brother Bert helped with the modifications to Simon's hardware.

Paul Lutus

Born: May 16, 1945;

Cambridge, Massachusetts

Lutus wrote Apple Writer, the first text editor for the Apple II [June 5], while living in a twelve-by-sixteen-foot cabin he'd built in the woods of Oregon atop a 400 foot hill. Of course, this means he's sometimes called the "Oregon Hermit".

Before finding seclusion in Oregon, Lutus had designed components for the Space Shuttle [April 10] and created a mathematical model of the solar system used during the Viking mission to Mars [July 20].

He once explained how he became interested in computers:

"One night when I was reading *Scientific American* [Aug 28] in the yellow glow of kerosene, I saw an advertisement for the Apple II. Wow, I thought, a personal computer! With a computer you could draw a world in three dimensions out of colored lines. Write stories. Play music. Locate Neptune to point your telescope. Store fantastic amounts of trivial information ... The very next day I rode my bicycle to the nearest telephone and placed my order."

The new gadget also meant that he had to install elecricity in his cabin, via twelve hundred feet of electrical cord strung through the trees.

Apple Writer 1.0. Archive.org.

With his first large royalty payment for Apple Writer, he bought a Mooney 201 light airplane, which he used to visit Apple headquarters in California, and search for whales along the Oregon coast.

Quality Tape Recording

May 16, 1946

John T. Mullin served in the US Army Signal Corps during WWII, assigned to find out everything he could about German radio.

During a chance visit to a recording studio at Bad Nauheim near Frankfurt, Mullin was given two suitcase-sized AEG Magnetophon high-fidelity tape recorders and fifty reels of recording tape. Over the next two years he improved the performance of the devices, and

demonstrated their features at a meeting of the Institute of Radio Engineers in San Francisco on this day.

US singer Bing Crosby realised that this technology would enable him to pre-record his radio shows with a sound quality that equalled live broadcasts, and that the tapes could be replayed many times with no appreciable loss of clarity. Crosby quickly hired Mullin as his show's chief engineer.

When Crosby's radio concerts began airing on Oct. 1, 1947, they were the first magnetic tape broadcasts in America. Mullin painstakingly edited them through tape-splicing, and later claimed to have been the first to use "canned laughter", at the insistence of Crosby's head writer, Bill Morrow.

When Mullin died in 1999, he was buried with a rosary and a reel of magnetic tape.

The Gavilan SC

May 16-19 1983

At the Anaheim National Computer Conference, Gavilan Computer Corp. introduced the smallest (11.4 x 11.4 x 2.7 inches) and lightest (9 lbs) battery-powered MS-DOS laptop to date – the Gavilan SC. It weighed about half of a Compaq Portable [Nov 4].

The Gavilan SC.
Photo by Rdc5. CC BY-SA 4.0.

It featured a 3.5-inch floppy drive, a 400 x 64 pixel LCD screen, an innovative touch pad instead of a mouse, and an internal 300 baud modem. It was powered by an Intel 8088 [July 1] with 48K of ROM.

Some pundits call the Gavilan SC the world's first laptop, but that title is usually assigned to the GRiD Compass 1101, introduced a year earlier on [April 00] 1982. However, the GRiD had no built-in floppy disk drive, and didn't run on batteries – two important features for a useful laptop.

The Gavilan SC was the brainchild of Gavilan Computer's founder, Manuel Fernandez, although Jack Hall, an award-winning industrial designer, worked out the ergonomics, mechanics, and the device's overall appearance. For instance, it employed a clamshell screen which folded shut over the keyboard.

It was a great system, but financial mistakes and bad luck forced Gavilan to close in 1985.