Feb. 6th

Charles W. Adams

Born: Feb. 6, 1925;

USA
Died: June 23, 1991

Adams, and his trusted right-hand man Jack Gilmore [Feb 16], were in charge of the Science and Engineering Computation Group at MIT that was responsible for many of the programming firsts [Jan 00], [March 8] associated with the Whirlwind [April 20]. At the time, the machine's designers, Jay Forrester [July 14] and Robert Everett, were busy with classified air-defense work.

Adams and Gilmore developed the first interactive graphics game in 1949, based around bouncing a ball across the Whirlwind's CRT screen. Sound effects were included, via beeps of various durations.

Adams also encouraged the interchange of ideas with other groups, including the Cambridge EDSAC [May 6] team led by Maurice Wilkes [June 26], David Wheeler [Feb 9], and Stanley Gill [March 26].

He also came up with the "Summer Session Computer", an imaginary machine for teach programming principles. Adams taught the intensive two-week course for its first three years (1953-56), assisted by EDSAC members

Adams and Gilmore established the first software consultancy firm in Oct. 1959, which led to their development of an early CAD system in 1961, under contract to Itek Corporation.

Watson Lab

Feb. 6, 1945

IBM [Feb 14] founded the Watson Scientific Computing Labs at Columbia University, initially under the leadership of Wallace Eckert [June 19]. Within a year, it housed the third most powerful computing facility in the world, after the Aberdeen Proving Ground [July 29] and Harvard [Aug 7].

The first lab was based at 612 West 116th Street, and in 1953 was expanded to include 612 West 115th Street; the two sites were soon nicknamed the "612" buildings.

Courses run by the lab were first listed in Columbia's University Bulletin in 1946, including ones on computing machinery and numerical analysis taught by Eckert and Herbert Grosch [Sept 13]. They were perhaps the first computer science subjects offered by any university.

The "Watson Lab Three-Week Course on Computing", taught by Eric Hankam, was held in Nov. 1947, making it the first ever hands-on computer lab. It was offered eleven times a year through until 1957 – by which time it had been attended by around 1600 people from 20 countries.

Several historic computers were designed and/or built at Watson Lab, including the SSEC ([Jan 27] 1948), the first IBM 604 ([June ??] 1948), the NORC ([Dec 2] 1954), and the IBM 610 ([Sept 3] 1957).

Satellite view of the main Yorktown Heights building. Photo by the US Geological Survey.

In 1970, IBM moved the lab to Yorktown Heights, into a building designed by Eero Saarinen [April 22]. Each level of the large crescent-shaped structure was made up of 40 aisles radiating out from its center, and none of the offices had windows.

Saarinen's other architectural icons include the TWA Flight Center in NYC, and the Gateway Arch in St. Louis, Missouri.

Cryotron

Feb. 6 1957

The cryotron switch was the first practical use of superconductivity for building logic circuits. It utilized the Meissner effect which allows a large magnetic field to suppress superconductivity until it's removed, thereby moving the cryotron between two states.

Although the cryotron was announced on this day, Dudley Allen Buck had been been investigating the principles at MIT since 1953, and had coined the name in Feb. 1954. It came from combining cryo (Greek for "icy cold") and electronics.

Buck also successfully fabricated a logic gate, a flip-flop, and a fan-out amplifier using cryotrons, and had a grand plan to use 75,000 cryotrons to build a content-addressable memory, which was cut short by his untimely death. It was reported as viral pneumonia, but some historians believe his research with boron trichloride gas may have contributed to his respiratory problems.

IBM, RCA, and GE took up the baton, and started their own cryotron and superconducting programs, but the approach was eclipsed in the mid-1960's by silicon integrated circuits [Jan 26] that had the advantage of working at room temperature. However, the cryotron has made a comeback recently, now being applied to quantum computing.

Kilby's IC Patent

Feb. 6, 1959

Jack Kilby [Nov 8] filed a patent for "Miniaturized Electronic Circuits", the integrated circuit (IC), less than six months after the idea had first come to him [Sept 12]. After typically speedy deliberations, the patent was

granted on June 23, 1964 (five years later) as US 3138743.

Part of the delay was due to Robert Noyce [Dec 12] being granted a patent for a similar device on [April 25] 1961. This caused a great deal of controversy, not least because Noyce had filed his application on July 30, 1959, six months after Kilby. Noyce's patent application occurred after Texas Instrument's big announcement of Kilby's work at a press conference at the New York Athletic Club on March 6, and the Institute of Radio Engineers' (IRE) convention on March 23-26 where working flip-flops using Kilby's technology were demoed. Noyce's first public demonstration of his IC design was on March 24.

However, there were differences between their work. Kilby had invented a germanium IC, while Noyce had utilized silicon. Also, Kilby's device connected the transistors with wires while Noyce employed a metal conducting layer. Eventually, Kilby and Noyce were credited as co-inventors of the IC.

The JK flip-flop has two inputs labeled J and K. According to some sources this refers to Jack Kilby's initials.

Scott Guthrie

Born: Feb. 6, 1975;

USA

Guthrie and Mark Anders created ASP.NET, an open-source server-side web application framework. Guthrie also helped lead Microsoft's Azure project [Feb 1].

Guthrie is renowned for always wearing a debonair red polo shirt for conference presentations as a good luck charm. In 2017 Guthrie ran the "Azure Red Shirt Tour," where he spoke to developers about Azure cloud; Azure is, of course, a shade of blue.

Official Microsoft videos have drawn styling comparisons between Guthrie's red polo and Steve Jobs' [Feb 24] iconic black turtleneck. Fashion designer Issey Miyake retired that latter item from his clothing line after Jobs' death.

Scott Guthrie (2007). Photo by Jeff Sandquist. CC BY 2.0.

Microsoft Fashonistas were shocked in 2017 when Guthrie appeared in a photo with famed designer (and ex-spice girl) Victoria Beckham (aka Posh Spice), wearing a button-down white shirt and casual black jacket.

Wozniak Leaves

Feb. 6, 1985

Steve Wozniak [Aug 11] left Apple [April 1] to pursue other interests (some under the assumed name of Rocky Raccoon Clark). However, he technically remains an employee to this day, which makes him the only person still on the payroll since Apple's birth. He's also joked that he can no longer be fired since his official boss at Apple is still Steve Jobs [Feb 24].

Prior to his departure, Wozniak made several scathing remarks about the company's policy of favoring the Mac over the Apple II [June 5] despite the Apple II accounting for some 70% of the company's revenue. The Apple II was looked upon as yesterday's technology at the time, although versions of it continued to be produced until Nov. 1990.

Another difficult topic between Jobs and Wozniak was how Apple went public on [Dec 12] 1980. Jobs didn't grant stock options to some of the earliest Apple employees, including Daniel Kottke [April 4], Chris Espinosa, and Bill Fernandez (who had introduced Jobs to Wozniak back in 1971 [June 00]). Wozniak responded by selling some of his own shares to his friends at very low prices.

Jobs quit Apple himself in the fall of the same year, on [Sept 16].

Polybius

Feb. 6, 2000

Polybius is a fictitious 1981 arcade game mentioned in an urban legend that was probably posted to the coinop.org arcade game site on this day. It has since served as an inspiration for several real games using that name.

The legend goes that Polybius was part of a government-run psychology experiment, whose gameplay produced intense psychoactive and addictive effects. The Polybius arcade machines, located somewhere in Portland, Oregon, were visited periodically by "Men In Black" to collect data for their secret research. The author of the coinop.org post claimed to have a ROM image of the game, and to have extracted fragments of text from it.

Author, and amateur sleuth, Brian Dunning believed that the Polybius story was partly based on a real-life news article in the Nov. 29, 1981 issue of the *Eugene Register*. It reported that a 12-year-old had played Asteroids [Nov 13] for more than 28 hours, in a desperate attempt to break its long-playing duration record. Unfortunately, he had to bow out early with stomach cramps, attributed to anxiety and all the Coke he had drunk. The current duration record for Asteroids is 53 hours.

Polybius was a Greek writer from ancient times known for his "Histories", who also perfected the Polybius square cipher which partitions the alphabet into a 5x5 grid (or bigger) indexed by numbers.