Dec. 11th

Marconi Public Demo

Dec. 11 (or 12), 1896

Guglielmo Marconi (1874 - 1937) had been experimenting with wireless telegraphy since the summer of 1895 (and perhaps earlier) at the Villa Griffone, his family's home in Bologna. He had successfully transmitted signals from the attic over the nearby Celestini hill, a distance of some two kilometers. Their reception was communicated back to Marconi by his assistant firing a gun into the air.

In 1896 he came to England with his mother, looking for financial support to commercialize his ideas. In the meantime, he applied for the very first radio patent, which was issued on June 2, 1896.

Having shown off his system to the navy, army, and Post Office, Marconi arranged a demonstration to accompany a public lecture on telegraphy given by William Preece, chief engineer at the Post Office. It was held in Toynbee Hall, an educational and charitable institution in London's East End, on this day. Preece operated the transmitter and the signal was received by a small box that Marconi carried around the lecture room. Each signal triggered a bell, much to the amazement of the audience.

Nevertheless, Oliver Lodge had been working on wireless systems before this [Aug 14], and had demoed his work earlier as well, which led to priority disputes.

Charles William Bachman III

Born: Dec. 11, 1924;

Manhattan, Kansas
Died: July 13, 2017

Bachman has been called the "father of databases". He developed the Integrated Data Store (IDS) at General Electric in the early 1960's, which was later adopted by the CODASYL [April 8] Data Base Task Group as its recommended data model. Bachman also created the first multiprogramming network (built around the IDS), and an early online transaction processing system called WEYCOS.

Charles Bachman (2012). Photo by Dennis Hamilton. CC BY 2.0.

His seminal 1973 paper, "The Programmer as Navigator," described database technology as a tool for navigating through data as if following a path in a forest, and proposed the "Bachman diagram" as a visual map of that data. This approach was hugely influential until the rise of the relational database and SQL [May 1].

From 1978-82, Bachman chaired the American National Standards Institute (ANSI) and ISO [Feb 23] committees that standardized the OSI networking model [Feb 28].

Bachman was the first Turing Award [June 23] winner to have a Ph.D., and may also be the tallest recepient, towering over his co-winners at 6 feet 4 inches.

Carl Eddie Hewitt

Born: Dec. 11, 1944;

Massachusetts
Died: Dec. 7, 2022

Hewitt is best known for designing the Planner language and proposing the actor model of concurrent computation.

Planner was a hybrid of the procedural and logical paradigms, combining pattern-directed programmability with logical reasoning based around forward and backward chaining.

A subset called Micro-Planner was implemented by Gerry Sussman [Feb 8], Eugene Charniak and Terry Winograd [Feb 24] in the early 1970's, and used in Winograd's natural-language understanding program SHRDLU.

Around this time, Hewitt developed the actor model, which views concurrent computation as a collection of simple "actors". In response to a received message, an actor can make local decisions, create more actors, and transmit messages to other actors.

The actor model greatly influenced the development of a range of message passing languages and mathematical notations (e.g. Scheme [Dec 22], Tony Hoare's [Jan 11] CSP, and Robin Milner's [Jan 13] CCS and π-calculus).

Williams-Kilburn Tube Patent

Dec. 11, 1946

Freddie Williams [June 26] and Tom Kilburn [Aug 11] filed a patent application for the first high-speed, entirely electronic, random memory device, the Williams-Kilburn tube.

They had started work on the device in late 1946 at the Telecommunications Research Establishment (TRE) in Malvern

after Williams had succeeded in storing one bit on a cathode ray tube.

Their tube design was refined through 1947 at the University of Manchester. In March, Kilburn suggested an improved method for storing bits, and by the end of 1947 the tube was able to store 2048 bits as dots on the screen's surface. Each dot was lit up for a fraction of a second before fading, so the data had to be constantly refreshed. The data was read from the screen by a metal plate that detected changes in electrical charge.

Kilburn published a progress report on Dec. 1, 1947, entitled "A Storage System for use with Binary Digital Computing Machines", which was widely circulated, and persuaded many people to switch away from mercury delay lines [Oct 31] as a memory device. That was hardly surprising since delay lines were slower, heavier, more costly, and suffered from thermal and toxicity problems.

The Manchester Baby (or more formally, the Small-Scale Experimental Machine, or SSEM) [June 21] was principally intended as a test-rig for the Williams-Kilburn tube technology. It also made the Baby the first stored-program computer (probably).

The tube design was later licensed to IBM for use in the 701 [April 7] and 702, and was also employed by the the IAS [June 10] and the Whirlwind [April 20]. However, the advantages of core memory [Oct 21], as demonstrated in an upgrade to the Whirlwind, spelt the end for this approach.

Brian J. Fox

Born: Dec. 11, 1959;

Boston, Massachusetts

In 1985, Fox became the first paid programmer to work with Richard Stallman [March 16] at his newly created Free Software Foundation (FSF [Oct 4]). Fox authored the Bash shell, the TexInfo documentation system, the indispensable readline library, and many other GNU tools [Sept 27]. Before joining FSF, he had written the Amacs text editor, a faithful re-implementation of Emacs for the Apple II, and at FSF he became the GNU Emacs maintainer for a time.

Fox's Bash has since become the most popular programming shell for Linux and macOS, and has been ported to MS Windows, MS-DOS, and Android. The shell's name is an acronym for "Bourne-Again SHell", as it was intended as a replacement for the Bourne shell, and as a pun on "born again".

Unfortunately, its popularity meant that when a security hole was discovered in it in early Sept. 2014, it quickly led to a multitude of hacker attacks. The bug, dubbed Shellshock, dated from 1989.

Aside from his GNU work, Fox found time to write the first interactive online US banking software for Wells Fargo in 1995, and collaborated with Alan Dechert and Brent Turner on building the first open source election system in 2008.

He is the grandson of artist Daniel Fox, creator of the Monopoly mascot "Rich Uncle Pennybags".

Cromemco Formed

Dec. 11, 1974

Some historians point to Cromemco, along with Apple, as the two Silicon Valley companies that spawned the PC industry. At its peak in 1983, Cromemco employed more than 500 people and had annual revenues of $55 million.

In 1974, Roger Melen was visiting the New York offices of *Popular Electronics* when he saw a prototype of the MITS Altair 8800 [Dec 19]. He was so impressed that he changed his return flight to California to include a stopover in Albuquerque, where he met with Ed Roberts [Sept 13], the president of MITS. Roberts encouraged Melen to start developing add-on products for the Altair, and back in California, Harry Garland and Melen formed Cromemco to do just that. Cromemco was an acronym based on their former college dorm at Stanford: CROthers MEMorial Hall + CO (for company).

Cromemco's microcomputer firsts (all for the Altair) included the first digital camera (the Cyclops Camera [Feb 11]), the first color graphics card (the Cromemco Dazzler [Nov 12]), the first programmable storage (the Bytesaver), and the first analog joystick.

Harry Garland and Roger Melen, shipping to China (1980). Photo by Cromemco. CC BY-SA 3.0

Much of the work emanated from the grandiose-sounding Cromemco Research Lab (the second bedroom of Roger Melen's apartment) and the Cromemco Production Facility (Harry Garland's garage).

Cromemco's first computer was the Z-1, released in Aug. 1976. It sported the same chassis as the IMSAI 8080 [Dec 16], but used a Z80 chip, and could run either CDOS (Cromemco Disk Operating System) or CP/M [June 22]. Multiuser capabilities were added in later machines via the first ever microprocessor port of UNIX, naturally called CROMIX [Oct 00].

In the 1980's, the US Air Force chose Cromemco as its main computer supplier, for which the company developed a special

version of its CS-200 with a removable hard disk.

In 1984, the Cromemco System One (CS1) was chosen by the "Ghostbusters" for their lab. and in 1985 *Newsweek* magazine reported that over 10,000 Cromemco systems had been sold to Chinese universities.

LaserDisc Released

Dec. 11, 1978

The LaserDisc was the first commercial optical disc storage device for home video, initially sold as the MCA DiscoVision.

The first US LaserDisc title was "Jaws", released on Dec. 15. Two famous hypermedia projects that came on LaserDiscs were the Aspen Movie Map [June 14], and the BBC Domesday Project, a school-based initiative to commemorate 900 years since the Domesday Book.

A standard disc was 12 inches in diameter, and although looking similar to CDs (which came along four years later [Aug 17]), LaserDiscs stored analog data, with the information encoded as the lengths and spacing of pits on the disc.

Although the format was capable of offering higher-quality video and audio than VHS and Betamax videotape, it never managed to gain much traction in the US, largely due to the high cost of the player and discs, and its inability to record TV programs.

LaserDiscs should not be confused with VideoDiscs [March 22], an even less popular video format.

Y2K Stamps

Dec. 11, 2000

Gabon issued a Y2K [Dec 31] postage stamp featuring a sledgehammer about to hit a monitor. Bearing in mind the date, it came somewhat late to party.

Indonesia had released two Y2K stamps the previous year, on May 2: one depicting an exploding humanoid robot, the other a robotic insect with steel claws.

St. Kitts also issued two stamps, on Dec. 29, 1999, showing a humanoid bug-like creature destroying a PC on one, and a crying world on the other.

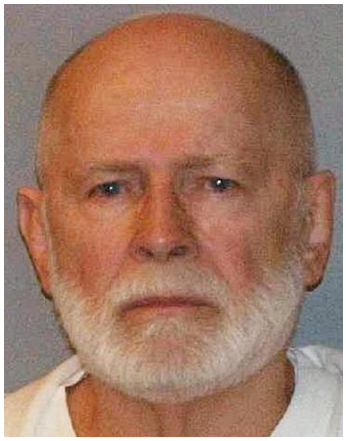
For more stamps, see [April 7], [June 20], [Oct 8], [Nov 11].

Bulger Wanted

Dec. 11, 2002

In a first for the Web, Terra-Lycos, in co-operation with the FBI, uploaded wanted posters of James "Whitey" Bulger to its websites. They appeared on the main page of the Lycos search engine, the Quote.com website, and Wired News, where they appeared as Flash banners.

Users who clicked on the posters were redirected to the FBI's website, where they could leave tips for the "Bulger Fugitive Task Force". There was a award of a $1 million for information leading to Bulger's capture.



US Marshals Service mugshot of James J. Bulger (2011). Photo by US Dept. of Justice.

Bulger was a suspect in 21 murders in Massachusetts, who had fled Boston and gone into hiding on Dec. 23, 1994. On June 22, 2011, Bulger was finally arrested outside his apartment in Santa Monica, but this was not due to the wanted posters.

The FBI's "Ten Most Wanted Fugitives" list (https://www.fbi.gov/wanted/topten) went online in 1995, and Leslie Rogge was the first fugitive on the list to be captured in 1996 with help from the Internet.

For 12 of the 16 years Bulger remained at large, he was second on the list, behind Osama bin Laden.

Angry Birds Released

Dec. 11, 2009

"Angry Birds" is a touchscreen-based puzzle game developed by Rovio Entertainment, initially for iOS [Jan 9], and later for other smartphones, consoles, and PCs. Players slingshot wingless birds of various sorts at wooden structures inhabited by green pigs.

Selling for just 99 cents, it soon totted up sales of over 10 million copies; its sequels have been downloaded more than 3 billion times.

In Jan. 2014, it was revealed that the game had been used by the NSA [Oct 24] and GCHQ [March 21] to collect data through in-game ads.

Despite what would seem to be a lack of narrative cohesiveness, a 3D computer-animated film adaptation, "The Angry Birds Movie", was released on May 20, 2016, followed by a sequel in Aug. 2019. In addition, Giridhari Dasa of the International Society for Krishna Consciousness of Brazil was inspired to write a five-part essay entitled "Angry Birds Yoga – How to Eliminate the Green Pigs in Your Life".

Horizon in Court

Dec. 11, 2019

In 1999, the UK Post Office began rolling out a new IT system called Horizon to all of its branches. By 2013, the system was being used at 11,500 branches, and was processing some six million transactions per day. It was also employed for general accounting and stocktaking.

However, during that time, the Post Office had prosecuted over 700 sub-postmasters – an average of one a week – based on information supplied by the system. Some went to prison following convictions for false accounting and theft, while others attempted to plug the gap with their own money, even remortgaging their homes.

On this day, the "Bates & Ors v. Post Office Ltd" group litigation at the High Court came to a close with the Post Office agreeing to settle with the 555 claimants. A few days later, the published judgement stated that the Horizon system was not "remotely robust" for the first ten years of its use, and still had problems after that.

While it's correct to say that Horizon was developed by Fujitsu [Oct 00], it's more precise to say it was developed by the UK branch of the company, the former International Computers Limited (ICL [July 9]) which was largely separate from the Japanese business.

One senior developer who worked on the project from 1998 to 2000 remarked, “Everybody in the building by the time I got there knew it was a bag of s**t. It had gone through the test labs God knows how many times, and the testers were raising bugs by the thousand.”

He also remembered, “To my knowledge, no one on the team had a computer science degree or any degree-level qualifications in the right field. They might have had lower-level qualifications or certifications, but none of them had any experience in big development projects, or knew how to do any of this stuff properly.”