June 20th

John Ronald Womersley

Born: 20 June 1907;

Morley, West Yorkshire, UK
Died: March 7, 1958

Womersley was appointed the first superintendent of the Mathematics Division of the National Physical Lab (NPL) at Teddington in 1944. One of his first tasks was to organize the building of a computer, which Womersley named the Automatic Computing Engine (ACE), a callback to Babbage's Analytical Engine [Dec 23].

He travelled to US in 1945 on a fact-finding mission, where he learned about the ENIAC [Feb 15], Howard Aitken's Harvard machine [Aug 7], George Stibitz's work [April 30], and von Neumann's plans for the EDVAC [June 30]. On his return, he recruited Alan Turing [June 23] and Donald Davies [June 7] to work on the ACE's design.

Turing's report "Proposed Electronic Calculator," written in 1945, specified the ACE's features in considerable detail. Turing emphasized the importance of storing data and programs, and how this could be realized with acoustic delay lines (although J. Presper Eckert [Oct 31] was the first person to propose that approach).

Unfortunately, the NPL group suffered from rivalry with the Post Office Research Station at Dollis Hill (the home of the WWII Colossus [Jan 18]) which had been assigned the difficult task of actually implementing the ACE. Also, the reduction in resources after the end of the war meant that progress was slow. Indeed, nothing of significance had been built by mid-1947, when the NPL director, Sir Charles Darwin, canceled the contract with the Post Office and decided to build a smaller "pilot" version of the ACE in-house.

Turing left the project in 1948, and Davies took over; the pilot ACE, was completed in [May 10] 1950, and a full scale version belatedly appeared in 1958.

Womersely departed NPL in 1950 to join the British Tabulating Machine Company (BTM), a forerunner of International Computers Limited (ICL) [Feb 18]. He recruited Andrew Booth [Feb 1] who had developed the All Purpose Electronic Computer (APEXC) , and BTM's Hollerith Electronic Computer (HEC 1; [June 16]) built by Raymond 'Dickie' Bird based on Booth's design became Britain's first mass-produced business computer.

Russell A. Kirsch

Born: June 20, 1929;

New York
Died: Aug. 11, 2020

Kirsch's group developed the first digital image scanner in 1957, which employed a rotating drum and passed its data to the SEAC [June 20] for processing.

Digitally scanned image of Russell Kirsch's son Walden.

One of the first photographs was a 5 cm × 5 cm picture of Kirsch's three-month-old son, Walden. It was captured in black and white, but by combining several scans at different thresholds, grayscale information was added. In 2004, the image was included in *Life* magazine's list of "100 Photographs That Changed the World".

Kirsch also proposed the Kirsch operator for edge detection which applies a mask rotated in 45 degree increments to detect edge magnitudes.

Peter Thomas Kirstein

Born: June 20, 1933;

Berlin, Germany

Kirstein is often called the father of the European Internet. He set up the first ARPANET [Dec 5] network node at University College London (UCL) in 1973 – a link that travelled from the US to Norway and then to Britain via trans-Atlantic telephone lines. He also helped hook the ARPANET into SATNET, a satellite network that connected a number of European countries.

Kirstein was on the European end of the line in [Nov 27] 1977, when TCP/IP was first used to send data across three networks: a packet radio wireless network, the ARPANET, and SATNET. The message bounced from San Francisco to Norway and Britain and back again in an demonstration of what Vint Cerf [June 23] called "true inter-networking."

Kirstein was also responsible for creating Queen Elizabeth II's first email account [March 26].

SEAC

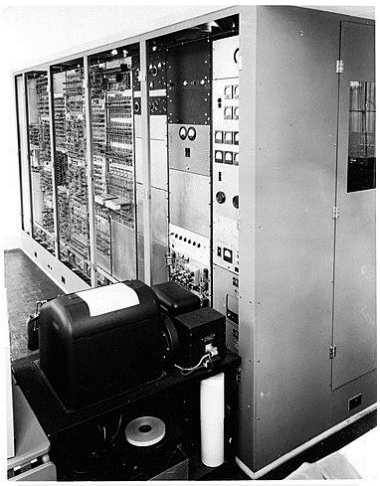
June 20, 1950

The SEAC (Standards Eastern Automatic Computer) was designed by the NBS (National Bureau of Standards) division in Washington as a stopgap after the UNIVAC it had ordered from the Eckert-Mauchly Computer Corporation [Dec 8] was delayed.

The aim was to build a simple machine as quickly as possible, based on the EDVAC [April 12], and using 64 mercury delay lines [Oct 31] for storage. All of

its logic was implemented in diodes, with unreliable vacuum tubes relegated to amplification tasks only. In that respect, the SEAC can claim to be the first solid-state computer.

The SEAC came into service in April 1950, and was formally dedicated on this day, making it the first American computer since the ENIAC [Feb 15] to become fully operational.



The SEAC (1950).

One of SEAC's tricks, which was widely adopted by other machines, was to attach its registers to a speaker so that strange memory accesses by software could be identified by unfamiliar sounds.

The UNIVAC finally arrived at the NBS a year or so later, but the SEAC was kept running.

At around the same time, the NBS division in Los Angeles developed the SWAC [Aug 17], under the direction of Harry Huskey [Jan 19].

The SEAC and SWAC were both built on shoestring budgets – the SEAC costing a mere $188,000, while the SWAC came in at $170,000. Other computer projects of the time could cost ten times these amounts.

Karl-Heinz Brandenburg

Born: June 20, 1954;

Erlangen, Germany

Brandenburg was the driving force behind the development of the MPEG-2 Audio Layer III format , more commonly known as MP3 because of its file extension [July 14]. The format was granted a US patent (5,579,430) on Nov. 26 1996.

It can generally reduce the storage size needed for a recording by a factor of 10, while still maintaining CD-like quality. However, an early version had to be drastically revised after Brandenburg applied it to Suzanne Vega's 'Tom's Diner'; the music sounded fine, but Vega's voice was destroyed. Brandenburg recalled: "I think over time I have listened to the song 500 or 1,000 times. In fact, I still like it.... later on I met Suzanne Vega and I heard her singing this song in a live performance. It was really astonishing – [it] was exactly like on the CD."

The Red Telephone

June 20, 1963

On this day, the US and Soviet Union signed a "Memorandum of Understanding Between the United States of America and the Union of Soviet Socialist Republics Regarding the Establishment of a Direct Communications Link," better known as the "Hotline Agreement".

The link was established as a result of the Cuban Missile Crisis (Oct. 16-28, 1962) where messages sent between Kennedy and Khrushchev could require five or six hours for transcription, transmission, translation, and delivery.

The hotline employed a full-time duplex wire telegraph circuit routed between Washington and Moscow via London, Copenhagen, Stockholm, and Helsinki, and a full-time duplex radio-telegraph link routed through Stockholm, Helsinki, and Moscow. The Washington to London leg utilized TAT-1, the first submarine transatlantic telephone cable.

On Aug. 30, 1963 the US sent its first message via the hotline: "The quick brown fox jumped over the lazy dog's back 1234567890."

Despite popular opinion, the US end of the link wasn't a red telephone located in the Oval Office. The original endpoint was situated in the National Military Command Center in the Pentagon, and had no voice element. The "red telephone" myth is due to its appearance in the films "Fail-Safe" and "Dr. Strangelove" [April 2], both released in 1964, and both loosely based on Peter George's Cold War thriller "Red Alert" (1958).

Lycos

June 20, 1994

The Lycos search engine was originally a research project by Michael Loren Mauldin at Carnegie Mellon. It was made public on this day with an index of approximately 54,000 pages, but after less than a month it had grown to cover 390,000 sites.

Lycos, Inc. was spun off on April 13, 1995, and Bob Davis became the CEO and first employee. In 1996, the company completed the fastest IPO in NASDAQ history [Feb 8], and in 1997 became one of the first profitable Internet businesses.

Lycos was the most visited online destination in 1999, and grew to encompass nearly two dozen Internet brands including Gamesville, WhoWhere, Wired News [June 2], Quote.com, and Matchmaker.com.

Near the peak of the Internet bubble [March 10], Lycos was acquired for $12.5 billion by Terra Networks, the Internet arm of the Spanish

telecommunications giant Telefónica. Four years later (after the bubble had burst), it was sold for $100 million to a South Korean Internet portal company.

eWorld
June 20, 1994

Apple launched the eWorld online service based around a “city buildings” metaphor proposed by Cleo Huggins. For example, the "Community Center" offered chat rooms and an online BBS where thousands of ePeople (i.e. eWorld users) could congregated, and the "eMail Center" was represented as a post office.

Despite a number of advantages over the more popular AOL [Oct 2] service, eWorld was slow to catch on due to its steep cost and poor marketing. The city was vacated on March 31, 1996, and later acquired by AOL.

eWorld is perhaps most notable for starting the trend of naming products using a lowercase letter followed by a noun. The iMac [May 6] would bring the practice into the eMainstream several years later.

Pirates of Silicon Valley
June 20, 1999

The TNT network aired the made-for-television movie "Pirates of Silicon Valley", directed by Martyn Burke and starring Noah Wyle as Steve Jobs [Feb 24] and Anthony Michael Hall as Bill Gates [Oct 28].

The story covered the years 1971–1997 and was based on Paul Freiberger and Michael Swaine’s book "Fire in the Valley: The Making of the Personal Computer".

Burke later stated “I’m a great believer in Shakespeare [Feb 20], and what we had was a modern equivalent of Hamlet [May 1], featuring two young princes, Bill Gates and Steve Jobs.” (Naturally, this raises the question of who were Claudius and Gertrude?)

Burke also remarked that when he began the film he was a PC user but ended the production as a Mac true-believer.

"Alas, poor Yorick!", from the painting by Horace Fisher (1887).

Jobs later invited Wyle to the 1999 Macworld convention [Jan 7; Jan 9; Aug 11] to play a prank on the audience. Wyle came on stage acting as Jobs for a few seconds, until the real McCoy (or is that MacCoy) walked on behind him.

Jobs told Wyle that while he hated both the film and the screenplay, he liked the actor's performance, noting "you do look like me". In a Reddit interview in 2013, Gates stated that his portrayal was "reasonably accurate".

BT's Hyperlink
June 20, 2000

British Telecom (BT) claimed rights to the hyperlink concept based on the strength of a patent filed in 1977 and granted in 1989 (US 4,873,662). It formed part of Prestel, the Post Office's viewdata sytem [June 8]. It decided to sue Prodigy [Feb 13] for royalties.

The claim was widely criticized as absurd. Historians noted that Ted Nelson [June 17] published the earliest mention of hyperlinks in 1963, and hypertext played an import role in Doug Engelbart's Mother of All Demos on [Dec 9] 1968.

BT chairman Sir Christopher Bland dismissed suggestions that BT should withdraw. "The idea that we should abandon this suit in order to provide ISPs with a feel-good factor is, frankly, bizarre." Bland also added, "Everyone sues all the time in the States, anyway."

BT's legal claim was rejected by a judge on Aug. 23, 2002.

WikiMedia
June 20, 2003

The WikiMedia Foundation, the non-profit charitable organization that operates Wikipedia [Jan 15] and its related sites, was founded in St. Petersburg, Florida by Jimmy Wales [Aug 7].

The name “Wikimedia” is a compound of wiki and media, coined by Sheldon Rampton in March 2003, three months after Wiktionary became the second wiki-based project hosted on Wales’ site.

In addition to Wikipedia, the foundation operates many other wikis, including Wiktionary (2002); Wikibooks (2003); Wikiquote (2003); Wikivoyage (2003); Wikisource (2003); Wikimedia Common (2004); Wikispecies (2004); Wikinews (2004); Wikiversity (2006); and Wikidata (2012). Rumors that the next "wiki"s will be "Wikittens", "Wikilts", and "Wikinky" are unfounded.

Other digital libraries of note include the Library of Congress’s American Memory [Oct 13], the Internet Archive [May 12], Project Gutenberg [July 4], the World Digital Library [April 21], and Google Books [Oct 6].

More gTLDs
June 20, 2011

ICANN [Sept 18] voted to end most restrictions on the names

of generic top-level domains (gTLD [Jan 1; March 15]), and began accepting applications for new gTLDS on Jan. 12, 2012, charging a mere $185,000 to register one, and an annual renewal fee of $25,000.

In response, seventy-nine companies, including Coca-Cola [Nov 14], Hewlett-Packard [Jan 1], and Samsung [Aug 19] signed a petition opposing ICANN's new program. One element of their outrage was that ICANN had accepted the registration of the ".sucks" domain. This triggered a rush of filings by well-known brand owners in order to defend their good names. The petition described the ".sucks" domain as "predatory, exploitive and coercive".