Warren Weaver
Born: July 17, 1894;

Reedsburg, Wisconsin
Died: November 24, 1978

Weaver was one of the pioneers of machine translation (MT), who first mentioned the possibility of using computers to translate documents in March 1947 in a letter to Norbert Wiener [Nov 26].

He's perhaps best known for his "Translation" memo, dated July 15, 1949, which he circulated among his colleagues at the Rockefeller Foundation. It argued that it might be feasible to use computers to translate languages in more complex ways than just the obvious word-for-word approach.

Weaver suggests four possibilities: using word context, employing formal logic, the application of cryptographic techniques (for this he referred to Claude Shannon's [April 30] work), and by the identification of linguistic universals shared by all languages.

The memo triggered over a decade of work on MT, including the Georgetown-IBM experiment on [Jan 7] 1954, and the Mark I and II translators of Gilbert King [Jan 13]. Unfortunately, it all ended in tears with the release of the ALPAC report [April 00] in 1966.

In 1964, Weaver wrote a book about the translation history of Lewis Carroll's "Alice's Adventures in Wonderland," based on his private collection of 160 versions, written in over 40 languages. He devised a method for evaluating the quality of the various translations by focusing on the nonsense, puns, and logical jokes in the Mad Tea-Party scene.

John Joseph Hopfield
Born: July 15, 1933;

Chicago, Illinois

Hopfield invented the associative neural network in 1982, more commonly now known as the Hopfield net.

At the time, neural network research was in the doldrums following the devastating criticism of Frank Rosenblatt's perceptrons [July 7] by Marvin Minsky [Aug 9] and Seymour Papert [Feb 29] in their book, Perceptrons [Jan 00].

Hopfield's key new idea was that a net could be trained to "remember" patterns. Later input would then cause it to output the closest matching pattern. From an engineering point of view, this meant that a Hopfield net allowed the use of feedback loops. By comparison, perceptrons could only store the equivalent of weighted functions, which are much less expressive.

ENIAC Memory Lecture
July 15, 1946

Prev: [Feb 15] Next: [June 26]

J. Presper Eckert [April 9] gave a talk at the Moore School [July 8] entitled "A Preview of a Digital Computing Machine." He proposed replacing the three different kinds of memory then employed in the ENIAC [Feb 15] (flip-flops, function tables, and cables with switches) with a single erasable high-speed memory – his mercury delay-line [Oct 31].

This was an important step in the development of a stored-program computer, although it was predated by the publication of von Neumann's "First Draft of a Report on the EDVAC" [June 30]. There's some lively debate which came first – von Neumann theory , or Eckert's engineering.

Mercury delay-line memory was subsequently used in Eckert and Mauchly's BINAC [April 4], and Maurice Wilkes' EDSAC [May 6]; Wilkes [June 26] had attended these Moore school lectures.

First Computer Store
July 15, 1975

Dick Heiser opened the first retail computer store, at 11656 W. Pico Blvd., Los Angeles, to sell assembled Altairs [Dec 19]. The company was licensed as "Arrow Head Computer", but the shop soon became better known as "The Computer Store." Of course, it helped that Heiser had included those words on the shop's sign because he thought the phrase sounded good.

The first store to sell computers off the shelf. (c) Dick Heiser.

Heiser was a member of the Southern California Computer Society [June 15], and opened the store after he realized that most of the attendees owned Altair kits, and would be happy to pay for assistance and additional hardware. This moment of revelation occurred at a meeting at Don Tarbell's house on this day, Fathers' Day 1975. Tarbell was the inventor of the eponymous Tarbell Cassette Interface for the Altair.

Heiser joyfully discovered that owners of the $395 Altair were willing to spend upwards of 10 times that amount on extra gear,

such as terminals, disk drives, printers, and extra memory.

By the end of 1977, Heiser had stopped focusing solely on the Altair, introducing the Apple II [June 5], Exidy Sorcerer [April 28], and Commodore PET [April 15] to his shop. He recalled later, "At first there was price resistance to the Apple, but ultimately it was the most successful. The dealer support and the after-sales support to the customer made Apple Computer the success it is."

For the second retail computer store, see [Dec 8].

Backgammon Falls
July 15, 1979

In Monte Carlo, Luigi Villa, the newly crowned backgammon World Champion, played an exhibition match against BKG 9.8, a backgammon program developed by Hans Berliner at Carnegie Mellon. A winner-take-all purse of $5,000 was at stake.

To the surprise of almost everybody, BKG 9.8 won 4-1 in a 7-point match, and so became the first program to defeat a world champion in any game.

BKG was running on a PDP-10 [Nov 00] at Carnegie Mellon, and its moves were communicated over a phone line to a terminal dressed up as a 3 1/2-foot robot, and given the name, *gammonoid*.
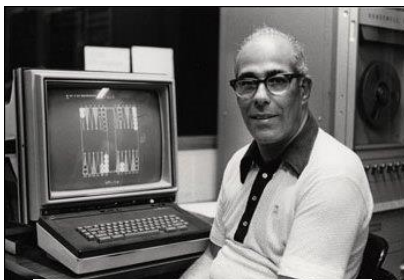
Hans Berliner with BKG 9.8 (1979). CMU Archives.

Villa remarked that, "The machine was lucky. The dice were not rolling for me tonight," Villa's disappointment was shared by several fellow Italians who treated gammonoid to a barrage of insults.

PageMaker
July 15, 1985

Aldus PageMaker began the desktop publishing (DTP) revolution when it, was released for the Macintosh [Jan 24] on this day. For the first time, an ordinary user could layout and print a book or newspaper, including any illustrations. PageMaker did this by utilizing Adobe's PostScript page description language [Dec 00] and employing the Apple LaserWriter [March 1] for output. It quickly became the "killer app" [Sept 8] that helped popularize the Macintosh.

The application was developed by Paul Brainerd, who also coined the phrase "desktop publishing".

After the merger of Aldus and Adobe on [Aug 31] 1994, PageMaker development slowed, and by 1998, it had lost almost all of the professional market to its main competitor, QuarkXPress. Eventually, Adobe began work on a new page layout application code-named "Shuksan", and also dubbed the "Quark killer". This was released as Adobe InDesign 1.0 in 1999, and successfully wrestled back market domination.

MSNBC Launched
July 15, 1996

MSNBC is an US news cable and satellite TV network formed as a partnership between Microsoft and NBC, hence the name.

Although they shared a name, msnbc.com and MSNBC maintained separate corporate structures, with msnbc.com located on the Microsoft campus in Redmond, and MSNBC based at the NBC headquarters in NYC.

Living together on separate coasts proved problematic, and Microsoft sold off its stake in the MSNBC channel in 2005, and parted company with msnbc.com in July 2012.

One reason was that Microsoft had grown frustrated at having to feature only msnbc.com content on its websites. Also MSNBC was perceived as increasingly tailoring its programming to a liberal viewpoint. The led to a perception that msnbc.com was politically slanted too.

C#
July 15, 2000

Microsoft introduced C# (pronounced C sharp) a language based on C++ [Oct 14], and developed by a team led by Anders Hejlsberg [Dec 2].

The work had begun back in January 1999, when Hejlsberg formed a group to build a new language called Cool (C-like Object Oriented Language). Microsoft briefly considered keeping the name, but chose not to for trademark reasons.

James Gosling [May 19] said upon its release that "[C# is] sort of Java with reliability, productivity and security deleted."

The "sharp" suffix has been used by a number of other .NET languages, such as J# (derived from Java 1.1), A# (from Ada), and the functional programming language F# [May 30].

C# used to have a mascot called Andy (named after Hejlsberg). It was retired on January 29, 2004 although Hejlsberg is still working at Microsoft, but on TypeScript, a JavaScript-like language [July 4].

Stuxnet Worm
July 15, 2010

Although the Stuxnet worm was first identified by the security company VirusBlokAda in mid-June 2010, today's blog post by Brian Krebs was the first widely read article about it.

Stuxnet was notable for being the first worm to attack SCADA (Supervisory Control and Data Acquisition) systems used by

industrial equipment. It was also the first malware to feature a programmable logic controller (PLC) rootkit, specifically for Siemens devices. It was spread through infected USB drives.

It was later estimated that 60% of all systems infected with Stuxnet were in Iran, and almost one fifth of Iran's nuclear centrifuges were affected.

In 2015, Kaspersky Labs noted that the Equation Group had used two of Stuxnet's attack techniques in earlier malware. The Equation Group is suspected of having ties to the NSA [Oct 24].

For more virus nasties, see [Jan 26; March 26; April 30; May 5; July 13; July 17; Sept 5; Oct 26; Nov 21].