Nov. 13th

Valentino Annibale Pastore

Born: Nov. 13, 1868;

Turin, Italy
Died: Feb. 27, 1956

Pastore developed a novel approach to the mechanization of logic, which he converted into a machine in 1903 with the aid of physics professor Antonio Garbasso.

It utilized an assortment of pulleys, differential gears, and pendulums, arranged into three groups (for subjects, predicates, and middle terms), all connected by a series of belts. If a logical conclusion was true based on its premises then the wheels would rotate smoothly, if false then the wheels would protest by locking. Martin Gardner [Oct 21] later noted that the device strongly resembles a Rube Goldberg contraption [June 1].

A chart at the back of Pastore's explanatory book detailed the necessary belt connections for proving 256 combinations of premises and conclusions. Of the 256, Pastore decided that there were 32 valid conclusions, which exceeded the more usual 24 ascribed to by logicians.

For more logic machines, see those by Stanhope [Aug 3], Jevons [Sept 1], Marquand [Dec 10], and Peirce [Sept 10].

Max Vernon Mathews

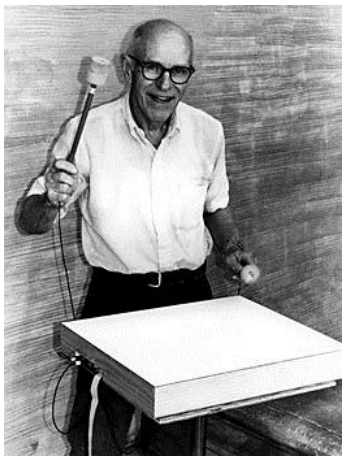
Born: Nov. 13, 1926;

Columbus, Nebraska
Died: April 21, 2011

At Bell Labs in 1957, Mathews used an IBM 704 [May 7] to play 17 seconds of music from the score of "The Silver Scale" composed by a colleague, Newman Guttman. While not the first person to make music with a computer (that honor probably belongs to Betty Holberton on the BINAC [April 4] or Geoff Hill on the CSIRAC [Aug 7]), Mathews' MUSIC software was the first to generate digital audio waveforms through direct synthesis. Consequently, he has been called the "father of computer music." MUSIC grew into a software family and a programming language, utilizing an extensive library of signal processing functions.

In 1961, Mathews arranged the music for "Daisy Bell", to accompany a computer-synthesized voice created by John L. Kelly Jr. and Carol Lochbaum. He can be seen listening to the tune in the Bell Labs short film, "The Incredible Machine" [Dec 00] released in 1968. He was also responsible for the first commercial albums of compter generated music [Dec 30].

Arthur C. Clarke [Dec 16] witnessed one of the demonstrations, and was so impressed that he incorporated "Daisy Bell" into his novel and script for "2001: A Space Odyssey" [April 2]. HAL 9000 [Jan 12] sings the song as it is shut down.



Max Mathews waving a Radio Baton. Photo by Finnianhughes101.

In 1970, Mathews and F. Richard Moore developed the GROOVE (Generated Real-time Output Operations on Voltage-controlled Equipment) system, the first music synthesizer for interactive composition and real-time performance.

Mathews was also responsible for the "Radio Baton", prefiguring the sort of controller later used in Nintendo Wii games [Nov 19].

A life-long violinist, Mathews built a series of twelve electric violins, including one made of sheet metal. One of his instruments appeared on the cover of *Playboy* magazine's "Sex and Music" issue in 1998.

Per Brinch Hansen

Born: Nov. 13, 1938;

Frederiksberg, Denmark
Died: July 31, 2007

Brinch Hansen developed the RC 4000 multiprogramming system in 1969, which premiered the concept of a microkernel OS. RC also included the first remote procedure call mechanism, which was used for distributed programming.

In the early 1970's, Brinch Hansen co-developed the monitor concurrent data structure with Tony Hoare [Jan 11]. By 1975 he had created Concurrent Pascal, the first parallel programming language based on the idea, and then went on to implement the Solo OS using it, to demonstrate that it was possible to write simple OSes in a high-level notation.

After Concurrent Pascal, Brinch Hansen went on to design Edison (1981) and Joyce (1987) to experiment with Hoare's concepts of conditional critical regions and message passing communication.

He coined the Danish word for computer: Datamat.

A quote: "Programming is the art of writing essays in crystal clear prose and making them executable."

Scott McNealy

Born: Nov. 13, 1954;

Columbus, Indiana

McNealy co-founded Sun Microsystems on [Feb 24] 1982 with Bill Joy [Nov 8], Vinod

Khosla [Jan 28], and Andy Bechtolsheim [Sept 30]. His background was in business, and he was approached by Khosla to provide much-needed organizational and business leadership for the new firm.

He served 22 years as the CEO, one of the few chief executives of a major corporation to last over twenty years. Indeed, he's in the top ten, but is easily beaten by Larry Ellison [Aug 17] (37 years) who finally stepped down at Oracle in 2014.

McNealy has claimed that the best preparation for business is to play hockey. However, the comment that most people now associate with him is: "You have zero privacy anyway. Get over it," which he espoused in Jan. 1999 during the launch of Sun Microsystems' Jini technology (for building distributed systems).

Another quote: "The only thing I'd rather own than [Microsoft] Windows is English or Chinese or Spanish, because then I could charge a $249 right to speak English. And I could charge you an upgrade fee when I add new letters like N and T."

Paul Graham

Born: Nov. 13, 1964;

Weymouth, Dorset, England

In 1996, Graham and Robert Morris [Nov 2] created Viaweb, which allowed users to build their own Internet stores. Viaweb was bought by Yahoo! [April 12] in 1998, and became Yahoo! Store.

Graham, along with Trevor Blackwell, Jessica Livingston, and Morris, started Y Combinator in 2005 to provide seed funding to technically oriented startups. In 2007, he founded "Hacker News" [Feb 19], a social news website focusing on computer science and entrepreneurship.

He's also known for his online essays on subjects ranging from "Beating the Averages", which introduced the hypothetical programming language Blub, to "Why Nerds are Unpopular"; as a result, Steven Levy [Jan 26] has called him a "hacker philosopher".

Aside from the usual background in computing, he also studied painting at the Accademia di Belle Arti in Florence. Michelangelo studied at the same institution, but not at the same time.

Forth Published

Nov. 13-15, 1972

Forth is a stack-based language and environment designed by Charles Havice Moore. Moore has said that the language was so named because in 1968 "the file holding the interpreter was labeled FOURTH, for 4th (next) generation software, but the OS running on the IBM 1130 [Feb 11] restricted file names to five characters."

Charles H. Moore (2006). Photo by Chuck Moore or his wife.

On this day Moore and Elizabeth Rather (of the US National Radio Astronomy Observatory (NRAO)) presented the paper, "The FORTH Program for Spectral Line Observing on NRAO's 36 ft. Telescope."

Moore and Rather formed FORTH, Inc. in 1973, and ported the language to dozens of platforms over the next decade. A complete Forth is only around 500 lines of assembly, and many implementations are much smaller. This makes it a good choice for programming extremely small hardware.

For that reason, it was used as the programming environment for an early UK home computer, the Jupiter Ace, a machine with hardware specs quite similar to the better known Sinclair ZX81 [March 5]. It employed a 3.25MHz 8-bit Zilog Z80 processor [March 9], 8KB ROM, and 1KB RAM. However, its Forth was between two and ten times faster than the interpreted BASICs on most home computers of the day.

Forth is also the most widely used language in the solar system in terms of distance since it runs on the Intersil RTX2000, a radiation hardened stack processor used on many NASA missions. These include the MESSENGER probe that orbited Mercury, the Cassini-Huygens which circled Saturn, and NEAR Shoemaker that landed on the Eros asteroid.

MicroRIM Incorporated

Nov. 13, 1981

R:BASE (or RBASE) was probably the first relational database for the PC, created by Wayne Erickson for a Heathkit computer [July 00] running CP/M. On this day, Erickson and his brother, Ron Erickson, incorporated the company MicroRIM to sell the database. The "RIM" part of the name came from "Relational Information Management", a mainframe database system developed by Erikson at Boeing Computer Services in the late 1970's. It formed part of NASA's IPAD project (Integrated Programs for Aerospace-Vehicle Design). RIM's features included active queries, a report writer, and a FORTRAN interface.

The first MS-DOS version of R:Base was released in Oct. 1983, and the ensuing "database wars" of the mid-1980's mainly involved R:Base versus the market leader, Ashton-Tate's dBase [Aug 00]. Microsoft didn't have their own database at the time, and actually resold R:Base in Europe. Coincidentally, Microsoft released Access on

this same day [three entries later] but in 1992.

Asteroids Record

Nov. 13, 1982

Fifteen-year-old Scott Safran of Cherry Hill New Jersey set a new world record score for Asteroids [June 17]. He reached 41,336,440 points after playing the game for 53 hours and four minutes at the All-American Billiard Company in Newton, Pennsylvania. His mother drove him to the event and lent him the quarter to play.

Scott Safran about to play (1982). CC BY-SA 3.0.

His record stood for 27 years, the longest-lasting high score in videogame history. But on April 5, 2010, John McAllister, in Portland, Oregon, reached 41,838,740 points in just under 58 hours, on a speeded-up version of Asteroids.

Walter Day [May 14], the founder of Twin Galaxies, attempted to contact Safran in 1998 following the re-release of Asteroids. Unfortunately Safran had died in 1989, after falling off his apartment's rooftop while trying to rescue his cat, Samson.

Make Money Fast

Nov. 13, 1989

Dave Rhodes, claiming to be a student in Maryland, uploaded his "MAKE MONEY FAST" (often abbreviated as MMF) letter to a BBS in 1986 or 1987. It began:

"My name is Dave Rhodes. In September my car was repossessed and the bill collectors were hounding me like you wouldn't believe." The letter goes on to ask readers to forward one dollar to a list of people provided, and to add their own name and address to the bottom after deleting the name and address at the top. In other words, it's a pyramid scheme.

On this day, MMF may have become the first spam post sent around USENET [Jan 29] (although "spamming" wasn't coined until [March 31] 1993). A possible alternative is a request for college funding that was distributed on [May 24] 1988.

MMF became so ubiquitous that it spawned its own newsgroup in 1994, alt.make.money.fast, to poke fun at MMF spammers. One memorable parody was entitled "Make Tenure Fast", substituting the listing of journal citations in place of the sending of money.

Some older folk claim that "Dave Rhodes" predates the Internet, remembering receiving mail from him through the US Postal Service, back in the 1970's.

For more USENET chain letters, see [March 23].

Microsoft Access

Nov. 13, 1992

Microsoft began developing its own MS-DOS database system, codenamed Omega, in the 1980's. It proved too resource hungry for 386 chips of the time [Oct 12; Oct 17], so the team was relocated to the Cirrus project, with the goal of creating a competitor for Paradox, dBase (from Borland [Aug 00]) and FoxPro, but running on Windows. When a beta version of Cirrus was shipped to developers in July 1992, Microsoft began to call it Access,

In the meantime, Microsoft had purchased FoxPro, and there were rumors that Cirrus/Access was heading for the chop. As it turned out, Access and FoxPro went on to be developed in parallel.

Access v1.0 was released on this day, quickly followed by v1.1, both of which proved to be buggy and slow. However, v2.0 in June 1994 was a definite improvement, and supported Windows 3.1 [April 6]. Microsoft was also lucky that the main database competitor (dBase) was slow to move from MS-DOS to Windows, which allowed Access to build an insurmountable lead.

The story that Microsoft was planning to combine Excel [May 2] with Access, to create "Microsoft Excess" is untrue.

Eat up Martha

Nov. 13, 1994

"Lisa on Ice" was the eighth episode of "The Simpsons" sixth season. At assembly, Kearney has Dolph write a note on his Apple Newton [Aug 3] to "Beat up Martin". However, the handwriting recognition software turns the text into "Eat up Martha".

For some reason, this quote was quickly adopted by the iPhone's [June 29] engineers. According to Nitin Ganatra, formerly Apple's director of iOS engineering: "In the hallways and while we were talking about the keyboard, you would always hear the words 'Eat Up Martha'. We needed to nail the keyboard. We needed to make sure the text input works on this thing."

Reflecting its importance in computing history, "The Simpsons" series 8 action figure of Kearney includes a tiny Newton with the words "Eat up Martha" shown on the screen. Amazon lists the toy's device as a cellphone.

For more Simpsons, see: [Jan 12], [Feb 15], [Nov 8] and [Nov 30].

Friend Finder

Nov. 13, 2016

Hackers broke into the "Friend Finder Networks", gaining access to over 300 million accounts on its sub-domain AdultFriendFinder, which marketed itself as the “World’s largest sex and swinger community.” The hack also exposed over 62 million accounts on Cams.com, a site for live webcam “sex chat,”and over seven million accounts on Penthouse.com, and over 1.4 million on Stripshow.com. The information included usernames, e-mail addresses, and passwords stored either as plain text or encrypted using the obsolete SHA-1 cipher.

Doomsday

Friday, Nov. 13, 2026

Heinz von Foerster and his colleagues P. M. Mora and L. W. Amiot published an article in the Nov. 1960 issue of *Science* expounding their Doomsday Equation.

It represented the best fit to historical data on world population, allowing the authors to predict that future population growth would become infinite on Friday, Nov. 13, 2026. This also happened to coincide with von Foerster's 115th birthday (although he died in 2002, aged 90).

von Foerster was no crank, having published nearly two hundred papers, gaining renown in fields from computer science, cybernetics, and AI to epistemology. He was one of the original Ratio Club members [Sept 14], and an editor of the Macy conference proceedings [March 21].

There's some debate over whether von Foerster meant his equation to be taken seriously due to its obvious problems, and the somewhat humorous responses he gave to letters sent to *Science* after its publication.