Feb. 24th

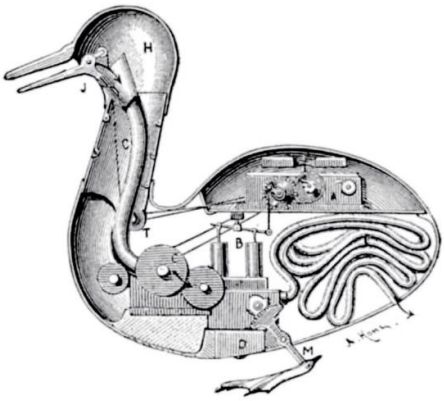
Jacques de Vaucanson

Born: Feb. 24, 1709;

Grenoble, France
Died: Nov. 21, 1782

Vaucanson constructed innovative automata, including "The Flute Player" and "The Digesting Duck" (considered his masterpiece).

"The Flute Player" was a life-sized figure that could play twelve different songs on its snare drum and flute. "The Digesting Duck" could flap its wings, drink, eat grain, and defecate (using a hidden compartment of "digested food"). It had over 400 moving parts in each wing alone.



An artist's incorrect drawing of how the Digesting Duck worked (1899).

His interest in automata found a practical outlet in 1741 when he was put in charge of reforming silk manufacturing in Lyon. This led to his creation of the world's first completely automated loom in 1745. The technology wasn't completely new – it drew on work by Basile Bouchon and Jean Falcon.

Not unsurprisingly, the machines were poorly received by weavers, who pelted Vaucanson with stones in the street on one occasion, and triggered strikes and social unrest in Lyon.

Vaucanson's technology was rediscovered and refined by Joseph-Marie Jacquard [July 7] some fifty years later.

David Cannon Evans

Born: Feb. 24, 1924;

Salt Lake City, Utah
Died: Oct. 3, 1998

Evans was one of the driving forces behind the development of computer graphics after founding the computer science department at the University of Utah in 1969. Utah alumni would later include Alan Kay [May 17], Edwin Catmull [March 31], James H. Clark [March 23], John Warnock [Oct 6], and Alan Ashton [Nov 26].

In 1968 Evans convinced Ivan Sutherland [May 16] to move to Utah, but only after agreeing that they start a computer graphics company together, Evans and Sutherland (E&S).

The business was located in former army barracks in the university grounds, and most of the employees were active or former students. E&S was responsible for several advances in real-time hardware, accelerated 3D imaging, and new printer languages.

Evans and Harry Huskey [Jan 19] lead Project Genie in the mid-1960's which produced an early multi-user timesharing system [Nov 30].

Terry Allen Winograd

Born Feb. 24, 1946;

Takoma Park, Maryland

Winograd is known for his work on natural language processing, particularly for his SHRDLU system from the early 1970's. SHRDLU could accept commands such as, "Find a block which is taller than the one you are holding and put it into the box," and then carry out the action using a simulated block-moving arm. The program could also respond verbally, for instance by saying, "I do not know which block you mean." SHRDLU's blocks-world has become one of the most famous planning domains in AI.

SHRDLU was so-named for several reasons, one of them being the sequence's appearance in the frequency order of English letters: ETAOINSHRDLU. Winograd also recalls being influenced by the word's many appearances in MAD magazine [Jan 10; Aug 26], and perhaps by the Frederic Brown short story, "ETAOIN SHRDLU", written in 1942, in which an intelligent Linotype machine (with natural language abilities) learns everything it typesets and tries to take over the world.

The book Winograd wrote with Fernando Flores, "Understanding Computers and Cognition" (1986), marked a turning point in his views on AI, being highly critical of classical AI and agreeing broadly with the views of Hubert Dreyfus [Oct 15]. Winograd subsequently redirected his research towards human-computer interaction.

Winograd is a founding member and past president of "Computer Professionals for Social Responsibility" (CSPR) [March 1].

Sidney K. Meier

Born: Feb. 24, 1954;

Sarnia, Ontario, Canada

Meier developed several influential strategy and simulation games, most notably Civilization (1991) which tries to: "Build an empire to stand the test of time". It begins in 4000 BC and the players must maintain and expand their empires through various epochs until modern times.

Civilization itself was built by a team of 8-10 people in under a year. Meier has explained the fast pace: "Ultimately we had 640 kilobytes [of memory] in the computer. When that was full, we were done. We couldn't put

any more code in there. So development time was a little less in those days."

Several of Meier's games have been inspired by board games designed by Francis Tresham, including Civilization. However, there were several earlier city building computer games included Don Daglow's Utopia [Sept 12] and Will Wright's SimCity [Feb 2].

Other games created by Meier at MicroProse, a company he co-founded with Bill Stealey in 1982, are "Silent Service" (1985), "F-15 Strike Eagle" (1984), Pirates! (1987), and "Railroad Tycoon". "Sid Meier's Pirates!" began the trend of placing his name in the titles. Meier's face was used in Civilization for the game's on-screen science adviser.

Steven Paul Jobs

Born: Feb. 24, 1955;

San Francisco, California
Died: Oct. 5, 2011

Jobs and Steve Wozniak [Aug 11] were pioneers of the microcomputer revolution, co-founding Apple Computer on [April 1] 1976. They had become friends in 1971 when a pal, Bill Fernandez, introduced them outside Wozniak's home where he was washing his car.

While Wozniak designed the Apple I [June 29] and Apple II [April 15], it was Jobs' business acumen that drove the company's commercial success. Jobs was an expert team leader, and instrumental in managing the development of the Lisa [Jan 19] and the Macintosh [Jan 24] computers.

After quitting Apple on [Sept 16] 1985, Jobs formed NeXT [Oct 12], and became CEO of Pixar [Feb 3]. On [Sept 16] 1997 (12 years later), Jobs crossed the Rubicon to triumphally return to Apple to lead the company into a glorious new age, which saw the introduction of the iMac [May 6], iPod [Oct 23], the iTunes music store [April 28], and of course the iPhone [June 29].

Jobs otherworldly skills of persuasion and salesmanship were dubbed the "Reality Distortion Field" [Aug 3], and were particularly evident during his keynote speeches (colloquially known as "Stevenotes") at Apple conferences.

Jobs suffered from koumpounophobia, the fear of buttons, which may explain his love of turtlenecks and the number of Apple's products without buttons. For example, Apple marketed the button-free 'Pro Mouse' [Aug 2] in 2000, and design engineer Abraham Faraq recalled that it came about by accident, after Jobs strolled past a prototype whose button-parts had yet to be installed.

'That's genius,' Jobs said, adding, 'We don't want to have any buttons.' Faraq and his team had to scramble to engineer circuitry for the new button-free 'design'.

Jobs appeared on the cover of *Time* magazine eight times:

- Feb. 15, 1982: cartoon; with 80's 'tache;
- Aug. 18, 1997: on the phone;
- Oct. 18, 1999: between Toy Story's [Nov 22] Buzz and Woody;
- Jan. 14, 2002: displayed on the screen of an iMac;
- Oct 16, 2005: with iPod and standing behind an iMac screen (without legs);
- May 14, 2007: a small pic; part of a mashup for "The Most Influential People in the World");
- Apr. 12, 2010: looking serious;
- Oct 7, 2011: after his death; a young Steve with Mac, circa 1984

However, Bill Gates [Oct 28] has this record beat, with eleven appearances on *Time*'s cover to date, but Job's first appearance in 1982 was two years before Gates.

Some quotes: "We have always been shameless about stealing great ideas."

"It's really hard to design products by focus groups. A lot of times, people don't know what they want until you show it to them."

British Entertainer Stephen Fry (who claims to have bought the third Macintosh in the UK; Douglas Adams [March 11] purchased the first two) has said of Jobs:

"He wasn't an inventor, he wasn't a code writer, he wasn't a designer, he wasn't a businessman, really. He was a visionary. He just saw things."

Sun Microsystems

Feb. 24, 1982

Sun Microsystems was incorporated by three youthful 26-year-old Stanford alumni: Andy Bechtolsheim [Sept 30], Vinod Khosla [Jan 28] and Scott McNealy [Nov 13].

The initial goal was to commercialize Bechtolsheim's Stanford University Network (SUN) workstation design, which was released as the Sun 1 a few months later [May 00].

The Sun Microsystems logo, as used on the Sun 1 workstation. Uploaded by NapoliRoma.

Bill Joy [Nov 8], the primary developer of the Berkeley Software Distribution (BSD [March 9]), joined soon after, and is nowadays counted as one of the founders. He led the software development to complement Bechtolsheim's hardware. John Gage, the company's fifth employee, coined the phrase "The network is the computer" in 1984.

Later products included servers and workstations [April 9] built around Sun's RISC-based SPARC [July 00] processor, and

software included the Solaris OS [Sept 4], Java [Jan 15], MySQL [March 3] (which Sun bought for $1 billion), and NFS. The company was also a major proponent of open systems, especially of UNIX.

Sun's SPARC servers were extremely popular with dot-com [Aug 9] companies so much so that Sun's slogan during the late 1990's was, "We're the dot in dot-com." The bubble's disappearance hit Sun hard, and their finances weren't helped by the company having spent several billion dollar on acquisitions (e.g. Cobalt Networks, StorageTek) which failed to live up to expectations.

On April 20, 2009, kindly Oracle Corporation [Aug 17] announced that it would acquire Sun for $7.4 billion, and the deal was signed on Jan. 27, 2010. James Gosling [May 19] left the company on April 2.

Ruby

Feb. 24, 1993

Yukihiro "Matz" Matsumoto marks today as the Ruby language's birthday, when the name was invented during an online chat session between Matsumoto and Keiju Ishitsuka, even before any code had been written. Indeed, the first release of Matz's Ruby Interpreter (MRI) wasn't until Dec. 21 1995.

Matsumoto describes Ruby as a Lisp language [April 15] at its core, with an object system like that of Smalltalk [May 17], with blocks inspired by higher-order functions, and practical utility reminiscent of Perl [Dec 18].

Ruby received a big push when David Heinemeier Hansson [Oct 15] released "Ruby on Rails" on Dec. 13 2005 – a Ruby framework for quickly developing web applications.

AIM is Your Buddy

Feb. 24 1997

AOL [Oct 2] Instant Messenger (AIM) wasn't the first instant messaging service, but it was the first to introduce the buddy list concept (a way of displaying all your contacts in a sidebar and showing when they were online).

Barry Appelman, Eric Bosco and Jerry Harris were the main engineers, and Appelman is named on the "buddy list" patent (US 6750881 B1) awarded on this day for "User definable on-line co-user lists".

AIM became immensely popular, despite the fact that the system was initially disliked by management. They felt that offering a piece of AOL for free went against the company's subscription-based model. Appelman later recalled, "They wanted to kill it and at some point they wanted to fire me for doing this stunt." As a consequence, AIM's launch received zero fanfare, without even a download page.

AIM used the OSCAR (Open System for CommunicAtion in Realtime) instant messaging protocol which, despite its use of the phrase "Open System," was proprietary, and AOL went to great lengths to keep competitors from implementing compatible clients. AIM's main rivals during its heyday were ICQ [Nov 15], Yahoo! [March 2] Messenger and MSN Messenger [Aug 24]. At one point, AOL even started blocking MSN Messenger from accessing AIM.

Even though AIM had the largest share of the instant messaging market in North America by the mid-2000's, it began to fall behind with the rise of social networks and the shift to mobile devices.

The AIM mascot, a yellow stickman-like figure, often called the Running Man, was designed by JoRoan Lazaro. It appeared on all the logos and at the top of the buddy list.

AOL closed AIM down on Dec. 15, 2017, at 1:21:42 EST as determined by Justin Tan. He had set up a Bash script to run a curl command at one second intervals to ensure that he posted the very last message. The text was borrowed from Leonard Nimoy's [Sept 8] final tweet:

> "A life is like a garden. Perfect moments can be had, but not preserved, except in memory. LLAP"

The first instant messaging system was probably MIT's CTSS [May 3] from 1961. AIM was also predated by Internet Relay Chat [Aug 16] introduced in 1988, SMS texting [Dec 3] in 1992, and ICQ [Nov 15] in 1996.

ThumbDrives Sold

Feb. 24, 2000

Trek 2000, a Singaporean company run by Henn Tan, began selling the first commercial USB flash drive under the brand name "ThumbDrive" at CeBIT 2000 in Hanover [March 12]. It had a storage capacity of 8 MB, more than five times the size of then-common 3½-inch floppy disks. Response to the product was overwhelming.

On Dec. 15, 2000, IBM released the first USB drives in North America – the "DiskOnKey", which was developed and manufactured by the Israeli company M-Systems. M-Systems filed the first patent for an early form of USB flash drive in April 1999, based on 1998 work by the company's founder, Dov Moran.

Another version of the flash drive, the pen drive, is credited to Pua Khein-Seng from Malaysia. Seng and his research group developed the USB "System on a Chip", or SoC.

As you might guess, numerous patent disputes have arisen over the years, with competing companies each attempting to enforce their patents.

Worm Causes Computer Crash

Feb. 24, 2009

When Mark Taylor's computer crashed, he thought a worm [Nov 2] might be the cause, and he was right. A five-inch earthworm had crawled into his Gateway laptop [Sept 5] through its air vent before becoming entangled in the internal fan and subsequently being "cooked".

Taylor later hypothesized that one of his pet cats had brought the worm into the house, and it had made a desperate bid to escape. Or perhaps the cats deliberately formulated the nefarious plan (which seems altogether much more likely knowing how cats think).

For the mother of all computer bugs, see [Sept 9].

Robonaut

Feb. 24, 2011

Robonaut 2 (a humanoid robotic wearing a disco-infused gold-colored crash helmet) travelled on the Space Shuttle to the International Space Station (ISS). Its mission was to assist with the crew's EVAs (Extravehicular Activities) by holding tools for them.

Robonaut R2 with a gun (?). NASA.

Work on the first Robonaut, R1, began in 1997 at NASA's Lyndon B. Johnson Space Center. Robonaut 2 (R2) was more than four times faster, more compact, and more dexterous. Its arms could move at up to 2 m/s, carry a 40 lb. payload, and its hands had a grasping force of roughly 5 lbs. per finger. The robot was equipped with over 350 sensors and used 38 PowerPC processors [Oct 2].

On Aug. 22, R2 was powered up in the ISS' Destiny lab module. On Oct. 13, it became operational, and (as a reward?) a pair of legs were delivered for it in April 2014. They enabled the R2 to perform IVAs (Intra-Vehicular Activities), such as vacuuming and cleaning.

Unfortunately, the legs upgrade didn't go according to plan, and created a persistent hardware fault. The legs' installation had required changes to Robonaut's processors and wiring, not to mention a complex mechanical assembly process that took 40 hours to complete.

In Feb. 2018, NASA announced that it was bringing Robonaut back to Earth to be fixed.

For more space shuttle stories, see [Jan 22], [March 11], [Apr 00], [Apr 10], [Aug 9], [Oct 4]. For more ISS stories, see [March 26], [Aug 14]. For more robot men, see [Feb 00], [March 23], [March 24], [April 16], [April 30], [July 17], [July 30], [Sept 15], [Nov 11], [Nov 30], [Dec 22].