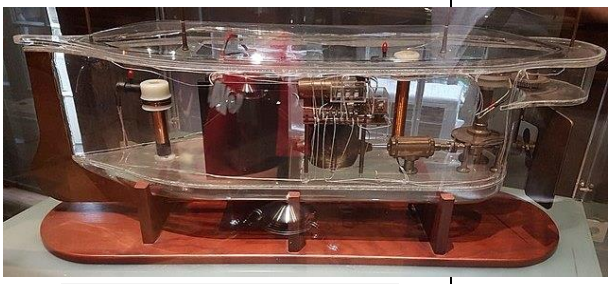
Dec. 8th

Tesla's Teleautomaton

Dec. 8 (or Sept.) 1898

During the First Annual Electrical Exhibition held at Madison Square Garden in NYC, Nikola Tesla [July 10] demonstrated his Teleautomaton, a remote controlled boat. It was the first ever radio controlled device, although not the first example of radio control: Marconi [Dec 11] and Oliver Lodge [Aug 14] had him beat by a few years.



The Teleautomaton (Musée de Belgrade). Photo by Boban Markovic. CC BY-SA 4.0.

Tesla was also promoting an underwater device which he tried, unsuccessfully, to sell to the military as a type of radio-controlled torpedo.

Tesla's most significant idea was hidden inside these gadgets – the use of an early form of AND-gate circuit. There's some argument about whether this work was preceded by Allan Marquand's [Dec 10] logic machine which he probably started developing in 1885. Nevertheless, in 1903, Tesla was granted patents for a "System of Signaling" and "Method of Signaling", which included his AND-gate design.

Andries van Dam

Born: Dec. 8, 1938;

Groningen, the Netherlands

In the late 1960's, van Dam and Ted Nelson [June 17] co-designed HES [April 18], the first hypertext-based system. However, van Dam is probably best known for his involvement with computer graphics. He founded the Graphics Group at Brown University in 1966, now the longest-running graphics research group, and organized Brown's CSCI 1230: "Introduction to Computer Graphics" – the longest-running graphics course. He also co-authored the seminal textbook, "Computer Graphics: Principles and Practice" (1982), with James Foley, Steven Feiner, and John Hughes, and co-founded the precursor of today's ACM SIGGRAPH conference.

The character of Andy in the film "Toy Story" [Nov 22] is rumored to be named after van Dam who taught many of the filmmakers. However, van Dam has said it's just an urban legend: "I can't shake it. It's simply not true." But it should be noted that "Computer Graphics: Principles and Practice" can be seen on Andy's bookshelf, and Steve Jobs [Feb 24] invited van Dam to the premiere, and wrote in van Dam's copy of the "Making of Toy Story" the words 'you made it so'.

EMCC

Dec. 8 , 1947

Prev: [March 31] Next: [March 31] !

J. Presper Eckert [April 9] and John Mauchly's [Aug 30] Electronic Controls Corporation opened its doors in downtown Philadelphia in March 1946, but today it was incorporated as the Eckert-Mauchly Computer Corporation (EMCC).

By 1948, they'd finished the company's first product, the BINAC [April 4], making it the world's first commercial digital computer. However, their estimates of the development costs had proved to be extremely unrealistic, and by the summer of 1948, EMCC had almost run out of money. Henry L. Straus came to the rescue, but only briefly [Oct 25]. They also managed to sell the BINAC to Northrop Aircraft in 1949.

A major reason for the cost overruns was that Eckert and Mauchly were developing a second, more sophisticated, computer called the UNIVAC (Universal Automatic Computer) at the same time. They delivered the first one on [March 31], 1951, and favorable reviews soon persuaded several government agencies and companies to purchase their own UNIVACs. But the orders came too late; budget overruns forced the partners to sell EMCC to Remington Rand [Jan 25] on Feb. 15, 1950.

Thomas Douglas Selkirk Duff

Born: Dec. 8, 1952;

Toronto, Ontario

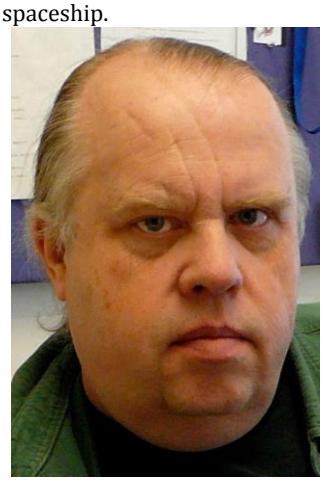
Duff is known for his work on computer graphics and animation, but has also contributed to OSes (e.g. Plan 9 [July 16]), computer security, and networking.

In 1984, he and Thomas Porter developed a new approach to combining images: Porter-Duff compositing, and he later won two Oscars (in 1995 and 1997) for this work, and for his design with Bill Reeves of Pixar's Marionette 3D animation system.

He authored "Duff's device" in 1988, a loop unrolling mechanism for speeding up C code. He also found time to develop the rc shell for UNIX [Oct 15].

Duff makes a cameo appearance in the Niven/Pournelle sci-fi

novel “Footfall” (1985) as the co-discoverer of an invading spaceship.



Tom Duff (2006). Own work. CC BY-SA 3.0.

Some Duff quotes: “Shared libraries are the work of the devil, the one true sign that the apocalypse is at hand.”

“With diligence it is possible to make anything run slowly.”

“Whenever possible, steal code.”

The Byte Shop Opens

Dec. 8, 1975

Paul Terrell opened the first "Byte Shop" at 1063 El Camino Real in Mountain View (on his birthday), making it the second retail computer store in the US (for the first, see [July 15]). Initially, he concentrated on selling the Altair [Dec 19], and accessories such as memory boards.

Terrell is probably best known for his influence on the development of the Apple I [June 29]. He ordered the first fifty for his shop, but only as fully-assembled boards as he had trouble selling kits such as the Altair. Jobs and Wozniak had actually been planning to sell the machine as a kit, but Terrell's insistence on a finished product (even though it lacked a case, power supply, and keyboard), helped shape the future of Apple. The Apple I went on sale in [July 00] 1976.

Terrell began franchising the "Byte Shop" name in Jan. 1976, and it quickly became the largest chain of computer stores in the US. The company later changed its name to MicroAge, and was a Fortune 500 company from 1985 until 1991 (when it filed for bankruptcy). Its chief competitor at the time was ComputerLand [Sept 21].

Common Lisp

Dec. 8, 1994

In the early 1980's several groups were at working on successors to MacLisp [Dec 25], but DARPA manager Bob Engelmore wanted to develop a single community Lisp dialect. Work on this "Common Lisp" began in 1981.

In 1982, Guy L. Steele, Jr. [Oct 2] gave the first overview of the language at a conference, and published “Common LISP: The Language” in 1984, which is sometimes called the “Aluminum” book because of the color of its cover.

Not everyone was happy – the language specification was criticized for being too hard to implement in a fast compiler (e.g. by Rodney Brooks [Dec 30] and Richard Gabriel). Several highly optimizing Lisp compilers, including "Lucid Common Lisp", developed by Brooks and Gabriel themselves, put paid to that opinion.

A X3J13 committee was formed in 1986 to draw up an ANSI Common Lisp standard based on Steele's book, and the results were approved on this day.

DVD War

Dec. 8, 1995

In the early 1990's, war clouds were forming over which optical disc storage format should be adopted. On one side stood the proud MultiMedia Compact Disc (MMCD), backed by Philips and Sony, and on the other the upstanding Super Density (SD) format supported by Toshiba, Time Warner, Hitachi, and others. It looked like there was going to be a rerun of the VHS versus Betamax clash of the 1980's.

Peacemaker, Alan E. Bell, from IBM’s Almaden Research Center, stepped in. He convened a meeting of people from many interested companies, including Apple, Microsoft, Sun Microsystems, and Dell.

On Aug. 14, 1995, the group issued a press release stating that they would only accept a single format. Furthermore, they threatened to boycott both formats unless the two camps agreed on a single standard. They recruited Lou Gerstner, Jr. [March 1], president of IBM, to persuade the warring factions to come to some kind of agreement.

After compromises from both sides, a single format was formalized on this day. Philips and Sony abandoned MMCD and agreed to support SD with modifications.

The first DVD players and movies appeared at the end of 1996 [Dec 20]; [March 19].

IBM Sells

Dec. 8 (or 7), 2004

IBM announced that it planned to sell its PC manufacturing division to Lenovo, the largest computer manufacturer in China, for $1.25 billion in cash and stock, and Lenovo’s agreement to relieve IBM of $500 million in liabilities.

With the acquisition (which went through on May 1, 2005), Lenovo gained IBM’s ThinkPad line and sales force, and became the world’s third largest PC business. In 2014 it also acquired IBM’s server line.

Lenovo was founded on Nov. 1, 1984 by Liu Chuanzi and ten colleagues. Its first product was a device to augment computers with Chinese language capabilities. The Chinese Academy of Sciences (CAS) provided $25,000 in funding to

start the company as part of the government's early experiments with privately managed firms. Liu and the other founders were all engineers from the Institute of Computing Technology, which was a member of the CAS.

Speaking about Lenovo's IBM acquisition, Liu recalled, "I remember the first time I took part in a meeting of IBM agents. I was wearing an old business suit of my father's and I sat in the back row. Even in my dreams, I never imagined that one day we could buy the IBM PC business. It was unthinkable. Impossible."

C11 Standard C Adopted

Dec. 8, 2011

C11, the informal name for ISO/IEC 9899:2011, is the current standard for C. It replaced C99, which had been in play since May 2000. Before C99, there was a C95, C90, and C89 dating from 1989.

The original language, by Dennis Ritchie [Sept 9] and Ken Thompson [Feb 4] is sometimes called K&R C due to the classic textbook by Brian Kernighan [Jan 1] and Ritchie. Although C has changed significantly over the years, the second edition of the book (dating from 1988) is still a treat to read.

Some of the more commonly used features of C99 are a Boolean type, a complex number type, long long ints, inline functions, variable-length arrays, C++ style comments, and the intermingling of declarations and code. C11 added Unicode support, anonymous structs and unions, threads, memory alignment, better bounds checking on functions, safer I/O functions, and generic macros.

Presidential Coding

Dec. 8, 2014

Barack Obama became the first US Presidential programmer when he wrote a line of JavaScript [July 4]:

```
moveForward(100);
```

The tutorial he was following featured the Disney characters Anna and Elsa from the cartoon movie Frozen (2013), and the President's command caused Elsa to move 100 pixels forward to complete a square. (In other words, he had "Let Elsa Go.")

He then powered on to complete a number of other coding exercises using Google's Blocky language.

President Obama Gets Programming Help. Official White House Photo by Pete Souza.

Obama had joined a group of 20 middle school students from the South Seventeenth Street School in Newark, New Jersey at a White House event to celebrate Computer Science Education Week.

However, it seems that Obama was not quite the novice he appeared since in a 2008 interview with Google CEO Eric Schmidt [April 27], he had remarked that bubble sort was a poor algorithm for sorting.

Even more shockingly, Schmidt did not retort that bubble sort's best case performance is O(n), and so is actually quite a good choice if the data is mostly sorted.