June 11th

Nicholas Constantine Metropolis

Born: June 11, 1915;

Chicago, Illinois
Died: Oct. 17, 1999

Metropolis worked on simulated annealing, devised the Metropolis–Hastings algorithm (a method for obtaining a sequence of random samples from a probability distribution), and came up with the memorable Monte Carlo name for the method invented by Stanislaw Ulam [April 13]. He was one of the original fifty scientists to move to Los Alamos in 1943 for the Manhattan Project.

One of his pastimes at Los Alamos was playing poker. After Metropolis won ten dollars off John von Neumann [Dec 28], the author of the standard work on game theory, he bought the book for five dollars and pasted the other bill inside the cover as a symbol of his victory.

He returned to Los Alamos in 1948 to lead the group that designed and built the MANIAC I (Mathematical Analyzer, Numerical (or Numerator) Integrator, and Computer) [March 15].

Metropolis convincingly played the part of a scientist in the Woody Allen comedy-drama "Husbands and Wives" (1992); Fellow computer scientist, Liam Neeson [June 7], also appeared. Probably due to this acting credential, Metropolis has an Erdős–Bacon number of 4 (the sum of his Erdős number (2) and Bacon number (2)). It's the lowest known value, although he shares the score with three other individuals, but they're arguably less computer oriented.

Owen Raymond Mock

Born: June 11, 1925;

Akron, Ohio
Died: Oct. 27 2000

In Dec. 1955, Owen Mock's group at North American Aviation (NAA) released the "North American 701 Monitor" for the IBM 701 [April 7]; it's considered by many to be the first OS.

At around the same time, Robert L. Patrick at General Motors Research (GMR) had been using an IBM 701 to build a multi-user batch processing OS for the next generation IBM 704 [May 7].

Patrick presented his work at SHARE 3 in Boston in Nov. 1955, and Mock introduced himself, and suggested they work together.

The resulting GM-NAA I/O was the first widely used OS, eventually employed in about forty 704 installations. Its main function was to automatically execute a new program once the current one had finished. It also provided routines to simplify access to IO devices.

Lessons learnt from GM-NAA I/O led to the SHARE Operating System (SOS) in 1959 for the IBM 709. SOS provided new ways to manage buffers and IO devices, and had more library routines.

Another candidate for first OS is "Director Tape" [March 8] for the Whirlwind [April 20].

Turing Times

June 11, 1949

The Times of London published a letter from Alan Turing [June 23] responding to Sir Geoffrey Jefferson's talk 'The Mind of Mechanical Man' given two days previously [June 9].

Turing commented: "I do not see why it [a computer] should not enter any one of the fields normally covered by the human intellect, and eventually compete on equal terms. I do not think you even draw the line about sonnets, though the comparison is perhaps a little bit unfair because a sonnet written by a machine will be better appreciated by another machine."

TMC0281 Announced

June 11, 1978

The Texas Instruments (TI) TMC0281 was probably the second speech synthesizer on a chip (the first being the TSI S14001A based on work by Forrest Mozer [Feb 13].)

The 281 employed linear predictive coding to formulate a speech sample as a combination of buzzes, hisses, and pops. Despite this unappetizing mix, it became the brains of TI's popular "Speak & Spell", a learning aid for ages 7 and up, that was also announced on this day.

Speak & Spell. Photo by Bill Bertram 2006. CC-BY-2.5.

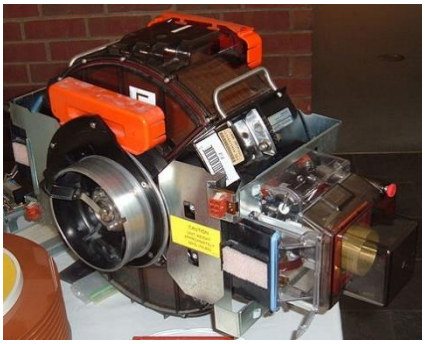
The "Speak & Spell" played a significant role in "E.T.", the 1982 Steven Spielberg movie [June 9 June 19; June 29]. The friendly alien uses it to build an interplanetary communicator, with the help of a coat hanger, a coffee can, and a circular saw. If it weren't for the 281, E.T. would've never have been able to "phone home."

Later refinements to the Speak & Spell chips resulted in the TMS 5100, 5200 and 5220 Voice Synthesis Processors for use in products needing output from digitally-stored words and phrases [May 10]. Plug-in modules increased the vocabulary and provided other languages. By 1984, there were around ten different plug-ins available.

IBM 3380

June 11, 1980

The IBM 3380 Direct Access Storage Device (DASD) was the first hard drive to break the 1 GB barrier, with each unit offering 2.52 GB, almost four times the previous maximum.



An IBM 3380 HDA. Photo by ArnoldReinhold. CC BY 2.5.

It had a data transfer rate of 3 MB per second, twice the speed of the next fastest drive, the IBM 3350. Design innovations reduced the average time to locate information from 25 ms to 16 ms.

However, it was far from being portable, housed in a cabinet 1 meter wide, 1 meter deep, and 2 meters tall. Each one contained two hard disk assemblies (HDAs), each weighing just over 60 pounds.

Although the 3380 was announced on this day, shipment to customers started over a year later, on Oct. 16, 1981. The delay was due to problems with the read/write heads.

UNIX Magic at USENIX

June 11-13, 1986

The UNIX [Oct 15] Magic poster drawn by Gary Overacre was (probably) first available at the USENIX [May 15] Summer 1986 Conference in Atlanta.

The drawing features a white bearded medieval-style wizard with UNIX related things scattered around his chamber, including a spool of thread, a black cat, a boot, a fork, pipes [Oct 11], buckets, a number of jars labeled with things like tar, null, awk [Aug 9], and uucp [Jan 29]. There's a 'C' urn and a partially obscured and broken 'B' container [July 21]. The wizard is pouring mysterious liquids into a giant shell.

One of the more obscure references is a jar marked "Oregano", which refers to when one of the designers of BSD [March 9] was stopped while crossing the Canadian/US border with a bag of what was assumed to be an illegal substance, but turned out to be oregano.

The letters "jfo" on the nroff bag refer to Joe Ossanna [Nov 28]. The ribbon on the wizard's pointy hat bears the initials "dmr," "kt," and "bwk" – for Dennis M. Ritchie [Sept 9], Ken Thompson [Feb 4], and Brian W. Kernighan [Jan 1].

The poster was so successful that Overacre followed it with two more: UNIX Feuds and UNIX Views. A large image of the UNIX Magic print can be downloaded from `https://archive.org/details/unix-magic-poster-gary-overcare-1`

A very nice collection of some of Overacre's other works can be found at `https://www.universityonline.club/artist/6372/1/` The artist's own website seems to have vanished, but can be viewed on the Internet Archive [May 12] at `https://web.archive.org/web/20121107182326/http://www.garyoveracre.com/index.html`

For USENIX playing cards. see [June 6].

Acorn Archimedes Released

June 11, 1987

The Archimedes was Acorn's first general-purpose home computer based on its ARM architecture [April 26].

The initial 300 and 400 series included the Arthur OS (later replaced by the RISC OS), BBC BASIC and an emulator for Acorn's old BBC Micro [Dec 1].

The Archimedes was one of the most powerful home machines of the late 1980's and early 1990's. For example, a 8 MHz 68000 [Sept 26] had an average performance of 1 MIPS while the 8 MHz ARM-2 yielded 4.8 MIPS.

Although it was fast, the Archimedes sold poorly due to its high price, except in educational markets. Its success in British schools was due to the popularity of the BBC Micro, and later to the "Computers for Schools" scheme organized by the Tesco supermarket chain in association with Acorn.

The DOS Boat

June 11, 1991

Bill Gates [Oct 28] and Steve Ballmer [March 24] unveiled MS-DOS 5.0. aboard the cruise yacht "New Yorker", more commonly remembered as the "DOS Boat".

The new OS featured a full-screen editor, undelete and unformat utilities, and task swapping. GW-BASIC was dumped in favor of QBASIC, based on Microsoft's QuickBASIC [Aug 18].

A select audience of 500 executives and press were flown in from around the country to attend the event in NYC harbor. It included jazz performed by

the Dave Brubeck Quartet, and a five-hour cruise along the Hudson River. Some commentators pointed out that this meant that no one could escape, except by jumping ship, and swimming for the shore.

Microsoft later released a CD containing the jazz quartet's performance of "Take Five", a standard composed by Paul Desmond. It should be mentioned that the "five" refers to 5/4 time, not DOS 5, and was in any case written in 1959.

Microsoft's First Exchange

June 11, 1996

Microsoft Exchange Server 4.0 Standard Edition (build 4.0.837) was finally released, after missing many shipping dates. Nevertheless, it eventually became the de-facto messaging system for corporate email and messaging.

Despite the version number, Exchange was an entirely new X.400-based client-server mail system with a database store. Of course, Microsoft had sold a number of email products before Exchange, such as Microsoft Mail.

During Exchange's development, Microsoft migrated their own internal email from a XENIX-based system [Aug 25], with all 32,000 mailboxes swapped over to Exchange by late 1996.

Most importantly, Exchange included a chess game to show off the advantages of public folder replication and "electronic forms".

First Camera Phone Picture

June 11, 1997

Philippe Kahn [March 16] took the first camera phone photograph (of his newborn daughter) and wirelessly sent it to more than 2,000 people around the world. He had hacked together the device from a digital camera and a separate phone.

Kahn later said "I had always wanted to have this all working in time to share my daughter's birth photo, but I wasn't sure I was going to make it. It's always the case that if it weren't for the last minute, nothing would ever get done."

In 2016 *Time* magazine included Kahn's picture in their list of the 100 most influential photos of all time.

Kahn went on to found LightSurf in 1998 to take advantage of the convergence of wireless messaging, the Internet, and digital media. The LightSurf 6 Open Standards MMS Platform was a suite of services that allowed users to capture, view, annotate, and share multimedia messages with any handset or email address.

The first commercial digital camera phone was Sharp's J-SH04 J-Phone, introduced on Nov. 1, 2000.

Google Earth

June 11, 2001

The Google Earth 3D satellite mapping service was originally developed by Keyhole Corp. as Keyhole EarthViewer in 2001, for uses such as real estate, urban planning, defense, and intelligence. Google acquired the company on Oct. 27, 2004.

The name "KeyHole" has a long history in photographic reconnaissance [Feb 22], and Google Earth/EarthViewer wasn't the first 3D service – that was probably TerraVision, released on [April 22] 1994.

A flight simulator was added to Google Earth 4.2, originally as a hidden feature, but later as a labeled item in the Tools menu. It is very easy to crash the F-16.

Many strange and mysterious places are viewable with the service (e.g. try them by requesting the following latitudes and longitudes):

- A giant equilateral triangle containing 5 concentric circles); 37.629562, -116.849556; Nevada, USA
- Another giant equilateral triangle, but without the circles; 33.747252, -112.633853; Arizona, USA
- Desert Polygons; 40.458148, 93.393145; China
- The Badlands Guardian; 50° 0'38.20"N 110° 6'48.32"W; Alberta, Canada
- Big red lips in the desert; 12°22'13.32"N, 23°19'20.18"E; Sudan
- The Batman symbol; 26.357896, 127.783809; Okinawa, Japan
- A giant target; 37.563936, -116.85123; Nevada, USA
- A disappointingly phallic building; 41.84201, -89.485937; Illinois, USA

For more on Google Earth, see [July 2] and [Aug 25].