Dec. 21st

George Barnard Grant

Born: Dec. 21, 1849;

Gardiner, Maine
Died: Aug. 16, 1917

Grant is called the "Father of the American Gear Cutting Industry," because of how his work on building mechanical calculating machines affected that industry.

While a student at Harvard, he became interested in Charles Babbage's [Dec 26] and Per Georg Scheutz's [Sept 23] differential engines, and designed one himself. He published his work in the Aug.1871 issue of the *American Journal of Science and Arts*, and was awarded two patents. Later, he exhibited an improved version at the 1876 Centennial International Exhibition in Philadelphia. It was eight feet long and five feet high, consisting of around 15000 pieces, and weighed 2,000 pounds. It could calculate 10 to 12 terms per minute when powered by hand-cranking, and manage more than double that speed when power-driven.

In later life, Grant moved to California to concentrate on botany. The *Trifolium grantianum* and *Ribes grantii* flowers are named after him.

Adele Goldstine

(née Katz)

Born: Dec. 21, 1920;

New York City
Died: Nov. 1964

Katz met Herman Goldstine [Sept 13], the military liaison and administrator for the construction of the ENIAC [Feb 15], at the University of Michigan, and the two were married in 1941. During WWII, she became a math instructor for the women "computers" at the Moore School [July 8], and recruited and trained some of the six ENIAC 'Refrigerator Ladies' [May 00].

In 1945, she wrote the "Manual for the ENIAC"; the first technical description of the machine, detailed right down to the resistor level.

In 1946, Goldstine, Jean Bartik [Dec 27] and Dick Clippinger, implemented Clippinger's stored program modifications to the ENIAC, with John von Neumann [Dec 28] acting as a consultant on the instruction set.

Douglas Taylor Ross

Born: Dec. 21, 1929;

China (his US parents were missionaries)
Died: Jan. 31, 2007

Ross developed the APT (Automatically Programmed Tools [Feb 25]) language for programming numerically controlled manufacturing tools (e.g. milling machines). This was followed by AED (Automated Engineering Design or ALGOL Extended for Design) a precursor of modern CAD and CAM systems. In fact, Ross coined the term "CAD".

Ross worked on numerous projects associated with MIT's Whirlwind [April 20], including its keyboard and light pen [July 4], and the first graphics software for hand-drawing shapes ("One of the few programs that I ever wrote that worked the first time", he later said). Ross and John Ward implemented "Mouse in the Maze" (perhaps the first game to use a light pen) on the TX-0 [Nov 20], the transistorized version of the Whirlwind.

He was also the inventor of SADT, the "Structured Analysis and Design Technique", and an early developer of structured analysis methods.

He is unrelated to Dr. Douglas "Doug" Ross, a fictional character from the TV series ER, portrayed by actor George Clooney.

Lawrence (Larry) Gilman Roberts

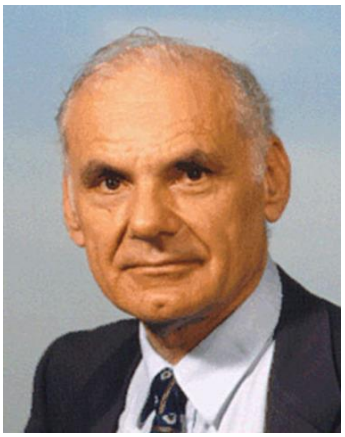
Born: Dec. 21, 1937;

Connecticut
Died: Dec 30, 2018

Roberts is often called one of the "Fathers of the ARPANET," [Oct 29] a title he earned by being its principal architect, and directing the team that built it. Other ARPANET fathers include Bob Kahn [Dec 23], Vint Cerf [June 23], and Jon Postel [Aug 6].

Roberts first became interested in timesharing networks after reading J.C.R. Licklider's [March 11] memos on the "Intergalactic Computer Network" [May 1] , and after meeting him at a conference in Virginia in Nov. 1964.

In Oct. 1966, Roberts and Thomas Marill published, "Towards a Cooperative Network of Time-Shared Computers", which described their work on linking two machines: the Q32 based at SDC [Oct 00] in California, and the TX-2 [Feb 26] at Lincoln Labs in Massachusetts.



Larry Roberts (2017). https://www.livinginternet.com/i/ii_roberts.htm. CC BY-SA 4.0.

In Dec 1966, Roberts was recruited by Robert Taylor [Feb 10] to join the ARPA Information Processing Techniques Office (IPTO [Oct 1]) as the program manager for its timesharing network project. He had already refused the job multiple times

because he didn't much want to move from Boston to Washington D.C.

At the 1967 ACM Symposium on Operating System Principles, Roberts presented the first plan for the network, which he called ARPA Net. The conference also allowed him to discuss his ideas with Roger Scantlebury, a member of Donald Davies' [June 7] team, who was presenting their research on packet switching. He also sought out Paul Baran [April 29] (the other inventor of packet switching), and Leonard Kleinrock [June 13].

In [July 29] 1968, ARPA issued a request for quotations (RFQ) to build the ARPANET, and the task was eventually awarded to Bolt, Beranek and Newman (BBN [Oct 15]).

When Robert Taylor was sent to Vietnam in Sept. 1969, Roberts became the IPTO director. In 1973, he left ARPA to form the first packet switching utility company, Telenet [Aug 16], and served as its CEO until 1980.

Snow White

Dec. 21, 1937

Walt Disney's first full length animated cartoon, "Snow White and the Seven Dwarfs" premiered at the Carthay Circle Theatre in Hollywood. There were many naysayers calling the project "Disney's Folly", but they were proved very wrong.

At the 11th Academy Awards, the film won an Academy Honorary Award for Disney, who received a full-size Oscar statuette and seven miniature ones for the dwarfs (Dopey, Grumpy, Doc, Happy, Bashful, Sneezy and Sleepy).

In the 1960's, IBM [Feb 14] and its major competitors came to be known as "Snow White and the Seven Dwarfs". IBM was Snow White of course, and the dwarfs were Burroughs [Jan 28], Honeywell, NCR, Control Data Corporation (CDC [July 8]), General Electric (GE), RCA [July 00] and UNIVAC [Jan 25].

GE and RCA were the first to leave the team - GE on [Sept 30] 1970, and RCA one year later ([Sept 17]). The computer industry - always keen on acronyms - named this reduced lineup "IBM and the BUNCH", BUNCH standing for Burroughs, UNIVAC, NCR, CDC and Honeywell.

This was an opportunity lost in my opinion. They should have been called "The Wild BUNCH", after Sam Peckinpah's western released in 1969. The drawback was that there were seven members of the movie's bunch.

Harley Hahn

Born: Dec. 21, 1952; USA

Hahn has written several books on UNIX [Oct 15] and Linux [March 14], including the popular "Harley Hahn's Internet Yellow Pages", which was republished annually during the 1990's, and was the first Internet text to sell more than 1 million copies.

Hahn also composed "The UNIX Sysadmin Song" for his 1995 book "The UNIX Companion", which is sung to the tune of the "I Am the Very Model of a Modern Major-General" from Gilbert and Sullivan's "Pirates of Penzance". It begins:

I am the very model of a modern UNIX Sysadmin,
I've information relevant to programs in slash usr bin,
I know the tricks of emacs and the vi bugs historical,
From a to ZZ upper case, in order categorical;

However, this wasn't the first musical composition related to UNIX. Predating Hahn's efforts is the 1985 "The Christmas Song for UNIX Hackers", by Frank Carey of Bell Labs, sung to the tune of "Santa Claus is Coming to Town". It begins:

better !pout !cry
better watchout
lpr why
santa claus < north pole >town

F-14 Tomcat Flies

Dec. 21, 1970

The MP944 was developed between June 1968 and June 1970 for the US Navy F-14 Tomcat fighter. It was designed by Steve Geller and Ray Holt [Dec 28] for the plane's Central Air Data Computer (CADC).

The CADC calculated altitude, vertical speed, air speed, and Mach number, and was 20 times smaller and much more reliable than the earlier mechanical system.

The MP944 contained six 20-bit chips: the Parallel Multiplier Unit (PMU), the Parallel Divider Unit (PDU), the Random Access Storage (RAS), the Read Only Memory (ROM), the Special Logic Function (SLF), and the Steering Logic Unit (SLU).

A F-14 Tomcat. Photo by SDASM.

The MP944 is sometimes called the first microprocessor, along with two other claimants: Bob Booher's D200 [Dec 9], and Lee Boysel's AL1 [Dec 31]. However, all of these required multiple chips to implement a fully functional CPU, and so most historians believe that the honor of first microprocessor belongs to the Intel 4004 [Nov 15].

In 1971, Holt wrote an article about the system for *Computer Design* magazine, but the CADC was considered so advanced that the Navy refused to allow its publication until 1997.

The full story of the MP944 appears in Holt's book, "The Accidental Engineer".

The first flight of a prototype F-14 took place on this day.

Encounter!
Dec. 21, 1976

According to some sources, the first commercial microcomputer game, "Encounter!", was released by the company "Objective Design" on this day. However, other sources suggest it shipped in 1975 or in Feb. 1977.

“Encounter!” was a real-time combat game played on a chessboard like grid. It was probably written by the company's founder, Larry R. Weinstein, and distributed on paper tape, and later as a Tarbell cassette.

The Feb. 1977 version was written in Intel 8080 assembly [April 18] and ran in 4K of RAM. It also required the computer to have two keyboards since both players could type commands simultaneously. The May 1977 issue of *Creative Computing* includes a review of the game.

Other contenders for first commercial game include MicroChess [Dec 18] and Cromemco’s Dazzler version of Spacewar! [Nov 12].

“Rape in Cyberspace”
Dec. 21, 1993

Julian Dibbell published an article in *The Village Voice* called “Rape in Cyberspace or How an Evil Clown, a Haitian Trickster Spirit, Two Wizards, and a Cast of Dozens Turned a Database Into a Society“.

The piece describes a “cyberrape,” that had occurred in LambdaMOO, a text-based MUD [April 6] centered around a mystical mansion. An avatar named "Mr. Bungle" ran a “voodoo doll” script that allowed him to perform actions that were assigned to other avatars. These unfortunately included sexual acts. After several hours of bad behavior, a LambdaMOO Wizard took it upon himself to terminate the "Mr. Bungle" account.

Dibbell 's article used the incident to raise questions about the boundaries between real-life and life online, and how LambdaMOO should be governed.

Lawrence Lessig later said that Dibbell’s piece was a key influence on his interest in cyberlaw. Sociologist David Trend has called it, “one of the most frequently cited essays about cloaked identity in cyberspace.”

Dibbell went on to teach cyberlaw at the Stanford Law School Center for the Internet and Society.

First Net Strike
Dec. 21, 1995

The "Strano Network", an Italian hacker group, is often credited with running the first DDOS (distributed denial-of-service) protest. The group sent out requests asking that activists visit a range of French government agencies’ websites during a a one-hour “net strike” to protest the government’s testing of nuclear weapons in the Pacific Ocean. The hope was that the flood of visitors would overwhelm the site's servers and knock them offline. According to some reports, this did in fact happen.

The next major DDOS attack was carried out by the "Electronic Disturbance Theater" on [April 10]1998.

For more online activism, see [Jan 18], [Oct 4], [Nov 5].

Lindows is Sued
Dec. 21, 2001

Lindows, Inc. was founded in Aug. 2001 by Michael Robertson to offer a version of Linux capable of running MS Windows applications via the Wine API [July 4]. Lindows OS, was originally based on Debian GNU/Linux [Sept 15] and later on Ubuntu [Oct 20].

A court case brought by Microsoft against Lindows on this day, claimed that the name “Lindows” was a violation of its “Windows” trademark. Lindows retaliated by temporarily changing its name to "Lin—s" (pronounced Lindash).

The court rejected Microsoft’s claim, stating that the term “Windows” had been used to describe GUIs long before MS Windows was released on [Nov 20] 1985. Even worse, in Feb. 2004, another judge raised “serious questions” about the validity of the entire "Windows" trademark.

Microsoft became worried that the court might redefine “Windows” as a generic term, resulting in its loss of the trademark. It quickly settled with Lindows, paying the company an estimated $20 million to have it transfer the Lindows trademark to Microsoft and change its name to Linspire.

Coincidentally, "Lindow Man", a preserved body of an Iron age man, was discovered in a peat bog at Lindow Moss near Wilmslow [March 21; June 23] in England on Aug. 1, 1984. If the lawcase had gone in Microsoft's favor, I suppose its name would have to have been changed too. Fortunately, he's also known by the nickname “Pete Marsh”.