June 13th

John Forbes Nash, Jr.

Born: June 13, 1928;

Bluefield, West Virginia
Died: May 23, 2015

Nash made fundamental contributions to game theory (the Nash equilibrium, a crucial concept in non-cooperative games), differential geometry, and the study of partial differential equations.

In 2011, the NSA [Oct 24] declassified a letter written by Nash in the 1950's, in which he anticipated several ideas in modern cryptography. Nash makes a distinction between polynomial time and exponential time [Dec 14], and argues that there are problems that cannot be solved faster than in exponential time. He uses this conjecture as the basis for the security of his cryptosystem.

Nash was the co-inventor (independently of the Danish mathematician Piet Hein) of the two-player game, Hex, partly inspired by a defeat at Go [May 23].

Hex is played on a hexagonal grid, usually an 11×11 rhombus. Players take turns placing markers on unoccupied spaces to try to link the opposite sides of the board. One player must win; a draw is impossible. The game is mathematically related to the Brouwer fixed-point theorem.

At Princeton, Nash was known as "The Phantom of Fine Hall" (Princeton's mathematics center) – an unseen figure who would write inspiring equations on blackboards in the middle of the night

Nash was the subject of the movie "A Beautiful Mind" (2001) which focused on his mathematical genius and schizophrenia.

A quote: "I seem to be thinking rationally again in the style that is characteristic of scientists. However, this is not entirely a matter of joy as if someone returned from physical disability to good physical health."

Leonard Kleinrock

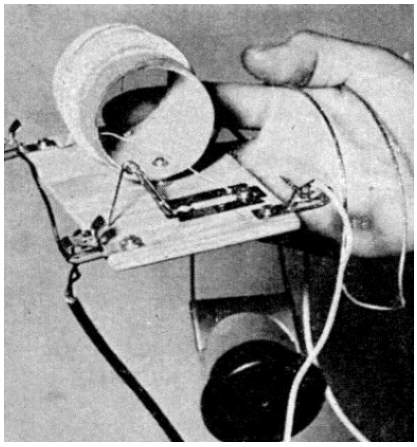
Born: June 13, 1934;

New York City

Kleinrock's early work on queuing theory had applications in many fields, among them packet switching invented by Paul Baran [April 29] and Donald Davies [June 7]. He also outlined some of the basic ideas of the ARPANET, the precursor to the Internet, in his thesis "Information Flow in Large Communication Nets" in 1961.

He later claimed that his thesis "laid out the basic principles for packet switching." This was not received calmly by some other Internet pioneers, who said that his brief mention of breaking messages into smaller pieces was only the beginnings of a proposal for packet switching.

On [Oct 29] 1969, he supervised the sending of the first ARPANET message by UCLA student programmer Charles Kline.



A foxhole radio. Picture from an article by John W. Campbell Jr. (1944).

His interest in engineering was sparked while reading a "Superman" comic when he was he was 6-years old. According to the story, he found plans for building a crystal radio with no battery in the centerfold. He used a toilet paper roll, one of his father's razor blades, some wire, and graphite from a pencil, and convinced his mother to buy a variable capacitor at an electronics store. This design is usually called a "Foxhole radio", which were invented during the Allied invasion of Italy in the spring of 1944.

The earliest comic book article I found about building a radio was from issue 68 of "Superboy", dated Oct. 1958 (when Kleinrock was 24). A single page entitled "Superboy's Workshop" shows how to build a "Razor Blade Radio". However, ads selling the plans for radios appeared much earlier including in the very first Superman story in "Action Comics" #1, dated June 1938.

Dabbala (Raj) Rajagopal Reddy

Born: June 13, 1937;

Katur, Andhra Pradesh, India

Reddy's early research was conducted in the AI labs at Stanford. He and his colleagues created several historic demonstrations of spoken language systems. His "Hearsay I" was one of the first capable of continuous speech recognition, and introduced the influential blackboard model for coordinating multiple knowledge sources.

Subsequent systems like Hearsay II, Dragon, Harpy, and Sphinx I/II developed many of the ideas underlying modern commercial speech recognition technology [June 12].

In 1965, Reddy founded the Robotics Institute at Carnegie-Mellon University. In 1994, he was the first person of Asian origin to receive the Turing Award [June 23].

A quote: "We thought speech, robotics and all sorts of other problems would be solved in a matter of years. We had no idea how difficult achieving human-level intelligence would be."

Mauchly Visits Atanasoff

June 13-16, 1941

On Dec. 26, 1940, John Atanasoff [Oct 4] attended the annual meeting of the American Association for the Advancement of Science (AAAS) in Philadelphia. John Mauchly [Aug 30] was also there, to give a lecture about his "harmonic analyzer" for weather forecasting. Atanasoff introduced himself, and the two began a discussion about computing machines. Atanasoff invited Mauchly to visit his lab to see his computer.

Mauchly traveled to Iowa State University, arriving on this day. He studied the Atanasoff-Berry computer (ABC) [Jan 15], and spent four days discussing how it was designed and worked with Atanasoff and Clifford Berry [April 19]. Mauchly read the documentation Atanasoff had written on the machine [Aug 14] in 1940, and took notes.

In August 1942, Mauchly circulated a confidential memorandum on "The Use of High Speed Vacuum Tube Devices for Calculating." This is often cited as the beginnings of his work with J. Presper Eckert [April 9], on the ENIAC [Feb 15].

Much, much later, in [Oct 19] 1973, Mauchly and Atanasoff found themselves in a court battle over who should be deemed the legal inventor of the electronic digital computer. Atanasoff emerged the victor.

NEAC 2201

June 13 -23, 1959

Japan's first commercial transistor computer, NEC's NEAC 2201, was demonstrated at the UNESCO AUTO-MATH show at the Grand Palais in Paris.

NEC (Nippon Electric Company) had been formed on July 17, 1899 as the first Japanese/foreign joint-venture (with Western Electric), to produce telephones and switches. NEC moved into transistor research and development in the 1950's, and completed the NEAC-1101 and NEAC-1102 in 1958

By the 1980's, NEC had become the biggest PC vendor in Japan.

First ACGNJ Meeting

June 13, 1975

The Amateur Computer Group of New Jersey (ACGNJ) was founded by Sol Libes in May 1975, and held its first meeting at UCTI (Union County Technical Institute) in Scotch Plains. ACGNJ is now the oldest continuously running computer club in the US.

The group was originally called the Amateur Computer *Society* of New Jersey, but Steven B. Grey, who published a quarterly known as *The Amateur Computer Society Newsletter* [May 5] wrote to Libes complaining that the ACSNJ name infringed his organization.

Meetings typically had an attendance of 200-300, with several sub-groups for CP/M [June 22], Apple, RadioShack [Feb 2], Atari, and other manufacturers. For the first five years, the monthly meeting included a flea market.

In 1976 ACGNJ created one of the first free access Bulletin Board systems [Feb 16], which remained in operation until 1996. The board offered an online software library, chat rooms, and a simple email facility. The BBS was linked to the Internet in 1990.

Also in 1976, Allen Katz, Sol Libes, and the ACGNJ began organizing the annual Trenton Computer Festival [May 2].

Other notable user groups, in chronological order of their foundation, include SHARE [Aug 22], DECUS [March 00], USENIX [May 15], the Amateur Computer Society (ACS [May 5]), the Amateur Computer Club (ACC [Dec 13]), the Homebrew Computer Club [March 5], ACGNJ, A.P.P.L.E. [Feb 21], and the Chaos Computer Club (CCC) [Sept 12].

Interactive TV from Microsoft

June 13, 1993

Microsoft teamed up with Time Warner [Jan 10] to develop Interactive TV (iTV), based around a digital set-top box. A key feature was the ability to buy stuff during a show.

The OS for the set-top box was initially codenamed "Pandora", making it the Pandora's (set-top) Box of interactive TV. The name was latter changed.

Pandora opening her box, by James Gillray (1809).

Ten years later, after approximately $10 billion had been spent on the product line, Microsoft TV had pretty much failed. But hope springs eternal, and the service kept being resurrected for the Xbox [Nov 15], Zune [Nov 14], and beyond.

Music Piracy Contained

June 13, 2006

In an article in *USA Today*, Mitch Bainwol, CEO of the Recording Industry Association of America (RIAA [Feb 4; Sept 8; Dec 7]), confidently reported that music piracy has been contained. "The problem has not been eliminated," admitted Bainwol, "but we believe digital downloads have emerged into a growing, thriving business, and file-trading is flat."

According to the article, roughly 10 million people were online sharing files at any given time in May 2006, up from the 8.7 million people engaging in file sharing in May 2005.

Bainwol's announcement was largely met with ridicule by the Internet community. In 2017, users of pirate sites made 73.9 billion visits to illegally access music. During 2020, some estimates claimed that digital *video* piracy cost the US economy between $29.2 and $71 billion, but music videos were probably only a small fraction of that.

Do you Remember Yahoo!?

June 13 2017

Prev: [July 29]

Verizon acquired Yahoo! [March 2] for $4.8 billion, not including Yahoo's remaining 15% stake [Aug 11] in the Alibaba Group [April 4] and its 35.5% share of Yahoo! Japan. Those assets, worth a combined $40 billion, were moved to a new Yahoo!, boringly renamed Altaba Inc.
