April 13th

John Hays Hammond Jr.

Born: April 13, 1888;

San Francisco, California
Died: Feb. 12, 1965

Hammond laid the foundations for modern radio remote control devices by conducting some of the earliest experiments in FM broadcasting and inventing single-dial radio tuning. In fact, he was eventually credited with more than 800 patents, mostly in the fields of radio control and naval weaponry, and is often called the "The Father of Radio Control".

John Hays Hammond Jr. (1922). Part of the National Photo Company Collection (Library of Congress).

His "Electric Dog" of [June 7] 1912 was joint work with Benjamin Miessner. He also experimented with radio controlled boats, and in 1914 successfully guided an unmanned forty-four-foot yacht from Gloucester Harbor in Massachusetts to Boston and back, a round trip of 120 miles, using his "System for Radio Control of Moving Bodies." This developed into a target-seeking system that allowed a remote-controlled ship to home in on an enemy ship's searchlights. It later developed into the first radio-guided torpedo.

Between 1926 and 1929, he built a castle (complete with a drawbridge) as his home and lab, and as a showplace for his large collection of Roman, medieval, and Renaissance artifacts (including the skull of one of Christopher Columbus' crewmen). The Hammond Castle in Gloucester, Massachusetts is now a museum, and well worth a visit, although Hammond's large pipe organ is no longer functional.

Stanisław Marcin Ulam

Born: April 13, 1909;

Lemberg, Austria-Hungary
Died: May 13, 1984

Ulam was a Polish-American mathematician and nuclear physicist. During his time with the Manhattan Project, he became familiar with the capabilities of the ENIAC [Feb 15], and realized that computers would be ideal for running mathematical test quickly enough to gather statistical insights about the results.

Nicholas Metropolis [June 11] dubbed this approach "The Monte Carlo method" in honor of Ulam's uncle, Michał Ulam, "who just had to go to Monte Carlo to gamble" according to Ulam.

Metropolis and Ulam published the first unclassified paper on the Monte Carlo method in 1949, and it was soon adopted for a wide range of problems involving finance, environmental risk assessment, linguistics, sports, and many more.

Ulam's contributions to cellular automata grew out of his work at the Los Alamos National Lab in the 1940's, when he studied the growth of crystals using a lattice network model.

Ulam and John von Neumann [Dec 28] utilized this model in the late 1950's to create a method for calculating the motion of liquid viewed as a group of discrete units. Each unit's motion was calculated based on its neighbors' behaviors, making it essentially the first 2D cellular automata.

Gian-Carlo Rota, a friend and fellow mathematician, described Ulam thus: "Ulam's mind is a repository of thousands of stories, tales, jokes, epigrams, remarks, puzzles, tongue-twisters, footnotes, conclusions, slogans, formulas, diagrams, quotations, limericks, summaries, quips, epitaphs, and headlines."

Sophie Wilson

(born Roger Wilson)

Born: April 13, 1957;

Leeds, UK

At Acorn Computers [Dec 5], Wilson and Steve Furber [March 21] took less than a week to design and implement the prototype of what became the BBC Micro [Dec 1]. Wilson also wrote its OS and BASIC interpreter.

In 1985 Wilson and Furber co-designed the 32-bit Acorn RISC Machine (ARM [April 26]), with Furber working on the architecture while Wilson developed the instruction set. The chip was initially employed in the BBC Micro as a second processor [Dec 1], and later in the Acorn Archimedes [June 11] and the Apple Newton [Aug 3].

Wilson's first design work was concerned with the regulation of cow feed. Her device utilized a 6502 processor [Sept 16], and non-volatile EEPROM to release personalized amounts of feed based on reading tags attached to the cows. During the following summer, ideas from the cow-feeder project fed into her design for the Acorn System 1 (1979), one of the UK's first microcomputers.

In the BBC TV drama "Micro Men" [Feb 00] a young Wilson was played by Stefan Butler, and Wilson herself had a cameo as a kindly pub landlady.

AT&T Data Fail

April 13, 1998

Software problems with one of AT&T's relay switches caused the failure of its nationwide network of high-speed data services. The interruption lasted for nearly a day beginning at 3:00pm. Industry experts later remarked that it was the data network equivalent of the breakdown of AT&T's long-distance switching system back on [Jan 15] 1990.

At the time, AT&T's data network consisted of 145 switching hubs. The problem began with a single transmission between a hub in Albany and one in Cambridge. The outage was caused by one of the hubs running out-dated software, which caused it to transmit a large number of error messages to its neighboring switches. This deluge overloaded those hubs, and the problem cascaded uncontrollably across the network

Thankfully, the breakdown didn't affect the conventional and cellular telephone services, or interrupt Internet access. But the flow of data required for transactions involving credit cards, bank accounts, and the like, was disrupted.

For more network outages, see [Jan 15], [April 20], [May 8], [Oct 4].

Metallica Sues Napster

April 13, 2000

The heavy metal group Metallica sued Napster [Nov 22] alleging copyright infringement and racketeering after several radio stations played an unfinished demo of their latest song, "I Disappear," which they'd downloaded from Napster in advance of its official release.

This made "Metallica vs. Napster" the first case that involved an artist suing a peer-to-peer file-sharing network.

The band compiled a list of 335,435 Napster users who had allegedly shared the band's songs in violation of copyright laws, and delivered a 60,000-page hardcopy of the list to Napster's office in a truck. The lawsuit also named several universities that were to be held accountable for allowing their feckless students to illegally download music using their academic networks.

Metallica founding member, Lars Ulrich (2009). Photo by Alberto Cabello. CC BY 2.0.

On July 12, 2001, Napster reached a settlement with Metallica which apparently involved Napster being sold to Bertelsmann for $94 million. However, the deal fell through, and Napster was forced to file for Chapter 7 and to liquidate its assets in 2002.

When the band's drummer, Lars Ulrich, looked back on the Napster lawsuit in 2014, he explained: "If I wanna give my s— away for free, I'll give it away for free. That choice was taken away from me."

3D Robotics Solo Drone

April 13, 2015

3D Robotics was co-founded in 2009 by Chris Anderson, then the editor of *Wired* magazine [Jan 2], and Jordi Muñoz. The company's mission was to design and market unmanned aerial vehicles (UAVs), specifically consumer drones for aerial photography and mapping

It all began when Anderson happened across Muñoz's blog posts. Muñoz, a 20-year-old Mexican immigrant, had just arrived in the US, and was waiting for a green card. He had passed his time by building a drone prototype in his garage out of gaming console bits and pieces, and regularly reporting on how things were going in his blog. When Anderson read about the prototype, he immediately sent Muñoz a $500 check to support his work, and their collaboration started from there.

3D Robotics announced its "Solo Drone" in April 2015, calling it the 'smartest' drone ever. However, a combination of missed deadlines, buggy components, and stiff competition from other drone-building startups, caused the company to drop out of hardware production, to focus on software. The company also became a founding member of the "Dronecode Consortium", a non-profit organization with the goal of using Linux [Oct 26] to write cheap and more reliable UAV software

FCC Net Neutrality

April 13, 2015

The Federal Communications Commission (FCC) published a ruling that broadband Internet access was covered by the Communications Act of 1934, and therefore ISPs were required to follow FCC guidelines that included net neutrality as a principle. These rules went into effect on June 12.

Net neutrality is the treatment of all data sent across the Internet as being equal regardless of the user, its content, or the platform. It effectively treats the Internet as a public utility, in the same way as the electricity, gas, and water supplies.

Unsurprisingly, many ISPs and tech companies opposed the

idea, claiming it would discourage investment in infrastructure. However, consumer advocates and civil rights organizations pointed out that net neutrality would protect freedom of speech and make the Internet accessible to more people.

The FCC solicited public comments on a proposal to eliminate net neutrality in mid 2017 [July 19], but the results were deemed suspicious. Then, a change in the US administration meant that on Dec. 14, 2017, the FCC decided to partially repeal the ruling, classifying Internet access once again as an information service.

Alan Turing's Notebook

April 13, 2015

A 56-page notebook belonging to Alan Turing [June 23], containing his handwritten notes on logic and mathematics, sold for $1,025,000 in the "Fine Books and Manuscripts Sale" at Bonhams Auction House in NYC [Oct 22]. This book is almost certainly the only extensive handwritten manuscript by Turing still in existence.

Part of it reads: "The Leibniz notation [July 1] I find extremely difficult to understand in spite of it having been the one I understood the best once!"

The notes, dating from 1942 when he worked at Bletchley Park [Aug 15], were entrusted to mathematician Robin Oliver Gandy after Turing's death. Gandy later became a Professor of Logic at the University of Manchester [June 21].

Gandy deposited most of Turing's papers at King's College in Cambridge in 1977, but retained the notebook because of a personal message written inside. The notebook was put up for sale after his death.
