April 25th

Father Giovanni Caselli

Born: April 25, 1815;

Siena, Italy
Died: June 8, 1891

Caselli invented the pantélégraphe, the world's first practical fax machine. It could transmit handwriting or drawings covering an area up to 15 × 10 cm. The name is a portmanteau word, borrowing from "pantograph", a tool that copies words and drawings, and "telegraph" since the faxed data was sent over telegraph lines.

Caselli was influenced by Alexander Bain's [Oct 12] fax device but solved the problem of synchronizing the transmitting and receiving parts by utilizing a regulating pendulum clock.

Caselli presented a prototype to Leopold II, Grand Duke of Tuscany in 1856, and later moved to Paris to introduce his invention to Napoleon III. Napoleon was impressed, and ordered the setting up of a pantélégraphe service within the French national telegraph network. It went into regular service between Paris and Marseilles in 1867, some ten years before the invention of a workable telephone. In its first year, the system transmitted almost 5,000 faxes.

Dudley Allen Buck

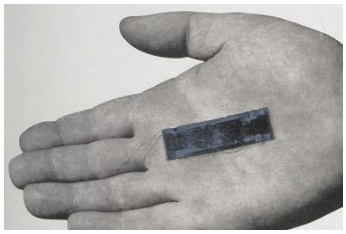
Born: April 25, 1927;

San Francisco, California
Died: May 21, 1959

In the 1950's, Buck invented the cryotron, a superconducting switch he hoped would become a building block for digital computers, instead of antiquated tubes or transistors. .

By wiring together just a few cryotrons, Buck showed that it was possible to build a logic gate, a flip-flop, and a fan-out amplifier – all the basics required for computer memory and logic. Cryotrons were also small and fast, and consumed very little power.

Buck proposed using 75,000 cryotrons to form a content-addressable memory, about as large as a briefcase, which he called a "recognition unit." Each of the memory locations could be checked simultaneously to see whether they contained information. The idea may have been motivated by Buck's earlier involvement with Naval code-breaking machines, and from his consulting work for the NSA [Oct 24]).



A cryotron (1959). From the Bibliothèque nationale de France. CC0.

Although the transistor won out, research on cryotrons continued, and in the early 1970's, IBM developed modified cryotrons known as Josephson junctions which they used for building superconducting computers. More recently, Josephson junctions have become a mainstay of quantum computing [May 2] research.

Buck never saw these developments, dying of pneumonia at the end of the 1950's. Indeed, his sudden, early death has been the subject of some speculation. At the time he was working with boron trichloride gas in a process for creating boron that also generated hydrogen chloride gas. Exposure to either can cause fatal pulmonary edema, which can look similar similar to pneumonia. One biography even speculated that he was targeted by the KGB.

Noyce's and Kilby's Patents

April 25, 1961

Robert Noyce [Dec 12] was granted a patent (US 2,981,877) for a "Semiconductor Device-and-Lead Structure," better known today as the integrated circuit (IC). He had filed the application on July 30, 1959.

This occurred while the patent office was still considering Jack Kilby's [Nov 8] similar application for "Miniaturized Electronic Circuits," which had been filed on [Feb 6], some six months earlier.

As might be expected, this patent muddle precipitated a prolonged hullabaloo over the ownership of the IC idea. But there were differences between their work. Kilby had created a germanium chip, while Noyce had made a version based on silicon. Noyce's IC design also solved a few problems that Kilby's approach still suffered from, most notably how to easily interconnect all the components. Noyce did this by adding a metal layer and then removing parts of it to create the wires needed to link the parts. Noyce utilized Jean Hoerni's [Sept 26] planar process for this task, making his design more suitable for mass production.

After a long legal battle the inventor's companies, Noyce's Fairchild Semiconductor [Oct 1] and Kilby's Texas Instruments [Oct 1], decided to cross-license their technologies. Fairchild was the first to start selling ICs in 1961.

Kilby and Noyce were eventually credited as co-inventors of the integrated circuit.

Activision Fantastic Four

April 25, 1980

Four ex-Atari [June 27] game designers: David Crane, Larry Kaplan, Alan Miller, and Bob Whitehead, nicknamed the

"Fantastic Four" and also the "Gang of Four", teamed up with businessman Jim Levy to form Activision, the first ever independent video game software company.

Activision was actually founded in Oct. 1979 after Crane and Miller left Atari, but Kaplan and Whitehead joined the team on this day.

Co-founder David Crane (2013). Photo by Jason Scott. CC BY 2.0.

Crane has said that the "Activision" name was based on Levy's notion of combining 'active' and 'television'. It also meant that the company appeared above Atari in alphabetical lists, including the all-important show guide at CES [June 24].

The principal reason behind forming the business was the programmers' increasing irritation at never being credited, or properly rewarded, for the creation of Atari games that became multi-million dollar sensations. When they'd taken their grievances to Atari CEO Ray Kassar in May 1979, Kassar had reportedly said, "You guys are no more important to this product than the people on the assembly line who put the cartridges together."

Before Activision, all games had been published exclusively by console's manufacturer. Activision also introduced the possibility of developer "rock stardom" by adding credits to the packaging.

The company's first releases (Boxing, Checkers, Dragster, and Fishing Derby) were all Atari 2600 games [Oct 14], and all hits. Meanwhile Atari struggled since the departed programmers had accounted for more than half of its cartridge sales. Naturally, legal action followed, which wasn't settled until 1982.

That year saw Activision release Pitfall!, one of its biggest hits, and a game that would kickoff an entirely new genre, platform games.

After the Great Video Game Crash of 1983 [Dec 7], various members of Activision left to form new companies, including in order: Accolade, Acclaim Entertainment, and Absolute Entertainment, all of which moved higher in the "A"s listings of companies.

Do You Yahoo!?

April 25, 1996

Prev: [April 12] Next: [May 28]

Yahoo! [March 2] began advertising its search service on national TV, featuring the tag line "Do You Yahoo?". One hair-raising example is online at https://www.youtube.com/watch?v=xKmTHHlZ4Vw; another somewhat fishy one is at https://www.youtube.com/watch?v=Aa0WaSSVeIw

The ads first aired during "Late Night with David Letterman", "Saturday Night Live", and "Star Trek: the Next Generation", and are a very early example of the Internet impinging on mainstream media.

Microsoft and Nokia

April 25, 2014

Microsoft finalized its acquisition of Nokia's [May 12] mobile phone business for around $7 billion. This was a bargain since at Nokia's height in the 1990's the company had been worth close to $300 billion. Unfortunately, its market share had plummeted in recent years.

The deal was intended to secure Microsoft's rightful place as a mobile superpower. It had been arranged by outgoing Microsoft CEO Steve Ballmer [March 24], who called it his "best idea". He also promised that Finland would become "the hub and the center for our phone R&D".

The Microsoft/Nokia marriage was destined to be short lived. On July 8, 2015, Microsoft wrote off $7.6 billion related to its Nokia acquisition as an "impairment charge". Less than a year later, on May 4, 2016, Microsoft sold its Nokia-related feature phone assets to Foxconn Technology and HMD Global for a mere $350 million.

HMD Global was a recently-founded company based in Helsinki, run by former Nokia and Microsoft executive Arto Numella. His dream was to start selling Nokia-branded phones once again, which became a reality on Dec 1, 2016.