May 23rd

John Bardeen

Born: May 23, 1908;

Madison, Wisconsin
Died: Jan. 30, 1991

Bardeen is the only person to have won the Nobel Prize in Physics twice: first on [Dec 10] 1956 with Walter Brattain [Feb 10] and William Shockley [Feb 13] for the transistor [Dec 16]; and again in 1972 with Leon Neil Cooper and John Robert Schrieffer for the BCS theory of superconductivity (named using their initials).

John Bardeen (1956). The Nobel foundation.

On [Dec 23], 1947, Bardeen and Brattain – working without Shockley – created the point-contact transistor. Bardeen's main contribution was to formulate the problems related to the semiconductor's surface which limited its charge carrying abilities.

In public, Shockley took the lion's share of the credit for the work, and also essentially blocked Bardeen and Brattain from working on the junction transistor, which meant that neither of them had much to do with the development of the transistor beyond the first year.

Bardeen left Bell Labs in July 1951, and Brattain refused to work with Shockley further, and was assigned to another group.

At the University of Illinois, Bardeen resumed research he had begun in the 1930's on superconductivity.

Bardeen only brought one of his three children to the 1956 Nobel Prize ceremony in Stockholm. King Gustav VI humorously told him off, so Bardeen said he'd make sure to bring all his children the next time. He kept his promise.

Casio FP-200 Launched

May 23, 1983

The Casio [June 1] FP-200 was a popular early laptop (310 x 220 x 55.5 mm; 1.5 kg without batteries), unveiled at the Japan Microcomputer Show at the Ryutsu Center in Tokyo.

The device featured an 8-line x 20-character black and white LCD (or 160 x 64 pixels in graphic mode), an Intel 80C85 chip, 8K RAM (expandable to 32K), and 32K ROM. It included support for a printer, cassette recorder, modem, and floppy disk drive. It ran on four AA alkaline batteries that could last for about ten hours.

BASIC and a simple spreadsheet program (CETL; Casio Easy Table Language) were included.

Its main competitors were the Epson HX-20 [Nov 18] and the TRS-80 Model 100 [March 29], and its main advantage was a lower price.

Windows Pioneers

May 23-26 1994

Seven individuals were presented with "Windows Pioneers" awards by Bill Gates [Oct 28] during the "Windows World" part of Spring COMDEX [Dec 3]. The ceremony was held in the ballroom of the Ritz-Carlton Hotel in Atlanta.

Gates praised the men (no women were deemed pioneering enough) for using Windows when it was still seen as "sugarcoating", and as interfering with the "real things" that a user wanted to do.

He also took time to report that Microsoft had sold over 50 million copies of Windows [April 6] – this a year before the introduction of Windows 95 [Aug 24].

The seven pioneers were:

- Alan Cooper [June 3] – the father of Visual Basic [May 20];
- Lyle Griffin – creator of Micrografx Designer, the earliest graphics application for Windows;
- Joe Guthridge – he led the development of Samna Amí, the first Windows word processor, later renamed Lotus Word Pro [Jan 26];
- Ted Johnson – development lead of PageMaker [July 15], and co-founder of Visio Corporation;
- Ian Koenig – he led the development of the Reuters Terminal financial information software;
- Ray Ozzie [Nov 20] – creator of Lotus Notes [Dec 7], and later Microsoft's Chief Software Architect;
- Charles Petzold [Feb 2] – the author of the bestselling "Programming Windows" series published by Microsoft Press.

No further Windows Pioneers have been created since this event.

Java Announced

May 23, 1995

Prev: [Feb 23] Next: [Jan 23]

John Gage, director of the Science Office at Sun Microsystems [Feb 24], along with Marc Andreesen [July 9], co-founder of Netscape Communications [March 25],

announced Java [Jan 00] and the HotJava browser at SunWorld '95.

Java's big slogan at the event (and for many years afterwards) was "write once, run anywhere", which meant that the same Java application could run unchanged on a wide range of OSes, *provided* a JVM (Java Virtual Machine) had been installed on those systems.

Java 'applets' could run inside the HotJava browser, a clone of NCSA Mosaic [Sept 28]. However, the really big surprise was that Andreessen said that the Netscape browser would be supporting Java applets as well. This meant that Java would be able to run on any machine that had the world's most popular browser. This ensured that as the popularity of the Web soared, so did Java.

The only negatives were that the alpha and beta releases of Java in 1995 proved to be highly unstable and slow. The many issues were gradually fixed as the Java Development Kit (JDK [Jan 23]) was revised.

"Java is the most distressing thing to happen to computing since MS-DOS." – Alan Kay [May 17].

AlphaGo Beats Ke Jie

May 23, 2017

AlphaGo was developed by Google's DeepMind team in London to play the board game Go. On this day "AlphaGo Master" (its successor) beat Ke Jie, the world No. 1 ranking Go player, three games out of three at "The Future of Go Summit" in Wuzhen, China.

Ke Jie had been ranked the top player since late 2014. As a consequence, the software was awarded professional 9-dan by the Chinese Weiqi Association.

Before the event, DeepMind had believed that "Master" was about three go-stones stronger than the AlphaGo that won a 2016 match against Lee Sedol, 4-1. That wasn't AlphaGo's first win – on [Oct 5] 2015, it became the first Go program to beat Fan Hui, the European Go champion.

Two even more powerful versions appeared later that year: AlphaGo Zero (Oct), and AlphaZero (Dec).

AlphaGo Zero reached the level of "Master" in just 21 days by playing games against itself.

AlphaZero was a generalized version of AlphaGo Zero that could also play chess and Shōgi . With just eight hours of training it outperformed AlphaGo, and also defeated a top chess program (Stockfish) and a top Shōgi program (Elmo). AlphaGo Zero's neural network was trained using TensorFlow [July 00].

Robert Arthur Moog

(rhymes with "vogue")

Born: May 23, 1934;

NYC
Died: Aug. 21, 2005

Moog created the ubiquitous Moog synthesizer, which was much smaller than other machines, much cheaper, and could be played via a keyboard, making it attractive to ordinary musicians. *New Scientist* magazine called it the first commercial synthesizer.

One of Moog's earliest customers was Wendy Carlos, whom Moog later credited with providing valuable feedback on the synthesizer's development.

In Oct. 1968, Carlos released "Switched-On Bach", a collection of Bach pieces performed by Carlos and Benjamin Folkman on a moog. The album played a key role in introducing synthesizers to popular music; previously they were mainly confined to experimental music genres.

Even so, recording music with a synthesizer was still a tedious and time-consuming process. Only one note could be played at a time, so each track had to be painfully assembled. For instance, "Switched-On Bach" took approximately 1,000 hours to produce.

The first moogs were also quite unreliable and often needed tuning; Carlos recalled hitting hers with a hammer in order to reset the levels.

The Minimoog synthesizer. Photo by Krash.

A more portable model, the Minimoog, was released in 1970, and is often called the most influential synthesizer in history.