Sept. 21st

Kevin W. Ashton
Birth: Sept. 21, 1968;
Birmingham, UK

Ashton coined the phrase "the Internet of Things" (IoT) to describe a version of the Internet intimately connected to the physical world via ubiquitous sensors. The phrase came to him while preparing a PowerPoint [April 20; Dec 14] presentation in the spring of 1999.

At the time, he was working at Procter & Gamble (P&G), and was interested in using RFID (radio-frequency identification) to help manage P&G's supply chain. In particular, he was the brand manager for a popular "Oil of Olay" lipstick which was always out of stock at his local cosmetics shop. It occurred to him: "What if I took the radio microchip out of a credit card and stuck it on my lipstick?"

This led to his co-founding of the Auto-ID center at MIT with Sanjay Sarma, Sunny Siu and David Brock, to examine the potential for "smart packaging".

This wasn't quite the first use of "Things" as a technical term – Neil Gershenfeld [Oct 10] at MIT was then the leader of a research program called "Things That Think." IoT is also quite similar in meaning to "ubiquitous computing", a phrase conceived of by Mark Weiser [June 24] in the late 1980s while at Xerox PARC [July 1]. Ashton has also said that he really prefers IfT, "Internet for Things".

The TI-2500 Datamath
Sept. 21, 1972

Texas Instruments (TI) entered the handheld electronic calculator market on this day, with the release of the TI-2500 Datamath single-chip calculator.

It offered four arithmetic functions (addition, subtraction, multiplication, and division) and a red eight-digit LED display. However, due to its limited functionality, the world's first *scientific* pocket calculator is generally considered to be the HP-35 [Jan 4].

The TI-2500B Datamath. Photo by Mister rf. CC BY-SA 4.0.

The company also introduced two *desktop* models, the TI-3000 and TI-3500, which employed the TMS1802 "calculator-on-a-chip", which had been released the previous September as a belated response to the Mostek 6010 [Nov 15] "calculator-on-a-chip". A sibling chip, the TMS1803, was used in the first American-made *pocket-sized* calculator, the Bowmar "Brain" [March 14].

TI had started working on portable calculators back in 1966 in its "Cal-Tech" project [Sept 29]. Canon's Pocketronic calculator ([April 15] 1970) was a Cal-Tech design, and considered the first handheld calculator.

Computer Shack
Sept. 21, 1976

Following the success of the IMSAI 8080 [Dec 16], which had been sold by mail-order and through independent dealers, IMSAI founder William H. Millard decided to launch a computer store franchise.

"Computer Shack" was founded on this day, and a test store

opened in Hayward, California in Nov. 1976, run by Ed Faber, an ex-IBM manager.

The first 'real' "Computer Shack" opened on South Street in Morristown, New Jersey, on Feb. 18, 1977, and proved immediately popular: 112 people visited that day. The novel idea was to be a "full service" center, offering everything needed for a PC, including support. There was one hiccup: after legal threats from "Radio Shack" [April 00], the franchise name was changed to ComputerLand.

The chain became the largest computer retailer of the mid-1980s, peaking at approximately 800 stores in the US, Canada, Europe, China [May 15], and Japan.

At around this time, Millard sold his stake following a management struggle, and retired to the Pacific island of Saipan. This turned out to be an opportune decision, since the rapid commoditization of PCs heralded the company's decline, with most of its retail locations gone by 1990. The company ceased operation in Feb. 1999.

For the very first retail computer store, see [July 15].

Apple Sues Jobs
Sept. 21, 1985

Prev: [Sept 17]

Apple filed a $5 million lawsuit against its co-founder and former chairman, Steve Jobs [Feb 24], charging that he had breached his fiduciary responsibilities and that his planned new company (NeXT) would use confidential information from Apple. The knives were out, with the word "nefarious" appearing in the suit.

A few months later, on Jan. 18, 1986, the "lovers tiff" was over. The settlement gave Apple the right to inspect NeXT products before they were marketed to determine if they contained precious trade secrets. Moreover, NeXT agreed not to

market any computers until at least July 1, 1987. Indeed, their first machine was only released on [Oct 12] 1988.

John Sculley [April 6] said, "I'd like to see the time come when Steve Jobs is as welcome at Apple as Steve Wozniak is." That day would be [Sept 16] 1997, but Sculley had already left on [Oct 15] 1993.

Get ALife
Sept. 21 - 25, 1987

The world's first "Artificial Life" conference was held at the Los Alamos National lab. Artificial life (often abbreviated as ALife or A-Life) is the study of systems related to life and evolution through the use of computer simulations, robotics, and biochemistry.

The discipline was named by Christopher Langton, an American theoretical biologist, in 1986. However, the first modern presentation of ALife probably occurred some 40 years earlier at Caltech, given by John von Neumann [Dec 28] in a lecture entitled "The General and Logical Theory of Automata". He argued that natural organisms would in the end be found to follow similar simple rules as automata, and also spoke about the idea of self-replicating machines.

Later work by von Neumann and Stanislaw Ulam [April 13] led to the first cellular automaton (CA), a logic-based system built upon the changing states of cells in an infinite grid.

Perhaps the most famous CA is the "Game of Life", created by John Horton Conway [Dec 26], and popularized through Martin Gardner's [Oct 21] column in *Scientific American*.

Taiwan Quake
Sept. 21, 1999

At 1:41am, an earthquake registering 7.6 on the Richter scale struck Taiwan, killing thousands, causing billions of dollars of damage, and leaving an estimated 100,000 people homeless.

Manufacturing stopped for over two weeks which, due to the high number of computer components made in Taiwan (e.g. 12-15% of the world's RAM chips), caused global shortages, and chip prices rose sharply.

Taiwanese chip fabrication factories are now built with seismic safety in mind, and manufacturing has expanded west to the Chinese mainland.
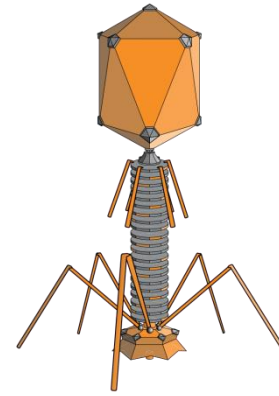
Bean me up Phage
Sept. 21, 2000

The PalmOS/Phage virus was discovered by security researchers at F-Secure and McAfee [Sept 18], making it the first (and only) virus to target the Palm OS [March 10].

Phage could arrive on a PDA [Jan 7] by being 'beamed' to it inside an infected file. Palm beaming employed infrared light to allow two devices to communicate within a few feet of each other.

The virus prepended its code to all Palm executables, destroying them in the process, and infected files could shrink to half their original size.

In biology, a phage virus is more formally known as a bacteriophage, which infects and replicates within a bacterium. However, it seems more likely that the software was named after a disease that affected an alien race in "Star Trek: Voyager" (season 1, episode 5; first transmitted on Feb. 6, 1995).

An artistic rendering of a T4 bacteriophage by Adenosine. CC BY-SA 3.0.

Logan Shirt Scare
Sept. 21, 2007

A MIT EE sophomore, and a member of its MITERS student-run machine shop, walked into Logan International Airport wearing a glowing device, thereby triggering a bomb alert, and her arrest at gunpoint in Terminal C.

The circuit board, decorated with green LEDs and a nine-volt battery, was attached to the front of her black, hooded sweatshirt. The 'bomb' also featured several ounces of Play-Doh, a substance that could perhaps be mistaken for plastic explosives.

The student was charged with "possession of a hoax device", but claimed that she had no such intention in mind. A spokesman for the airport police said she claimed that "it was a piece of art and she wanted to stand out on career day."

The hoax device charge was dropped in June 2008, but the judge ordered the student to publicly apologize and to complete 50 hours of community service. Her ssweatshirt was impounded.