# June 8th

## Robert W. Floyd

(Floyd legally changed his middle name "Willoughby" to "W")

### Born: June 8, 1936;

New York City
Died: Sept. 25, 2001

Floyd is perhaps best known for the Floyd–Warshall algorithm which efficiently finds all shortest paths in a graph (although some may argue for his cycle-finding technique). He developed the algorithm in 1962 at the same time as similar work by Stephen Warshall, and hence the name. However, Bernard Roy was probably first, with a 1959 publication.

Floyd was also a pioneer of operator-precedence grammars, and his 1960's invariants method, where assertions are attached to crucial points in a program, remains the basis for proving that code meets its specifications.

Floyd worked closely with Donald Knuth [Jan 10] for many years, in particular as the major reviewer for Knuth's seminal books "The Art of Computer Programming"; Floyd is the most cited person in that work.

He was an avid, near professional level, backgammon player.

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## Alexander G. (Sandy) Fraser

### Born: June 8, 1937;

Croydon, London, UK

Fraser made pioneering contributions to communication networks through his development of virtual circuit switching technology. At Bell Labs, he invented several cell-based networks (e.g. the DataKit Virtual Circuit Switch and the Spider ring networks), which evolved into the Asynchronous Transfer Mode (ATM) protocol.

Unlike the data packets used in the Internet Protocol (IP [May 5]), ATM packets are a fixed size (and called cells), and the technology establishes a fixed link between the two ends of the communication. ATM was a promising contender in the 1990's, but IP eventually won out [Jan 1] since it was easier and cheaper to implement on existing hardware.

Fraser's other work includes the UNIX Circuit Design Aids System which automatically produced wire-wrap circuit boards from schematic circuit diagrams. He and S.C. Johnson also developed compiler techniques for instruction set optimization, which were used by RISC machines [Sept 22] of the time.

In the late 1960's, at the University of Cambridge, he designed and implemented the file system for the Titan (aka the Atlas 2 [Feb 9]).

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## Sir Timothy John Berners-Lee **(TimBL)**

### Born: June 8, 1955;

London, England

Berners-Lee is the world's most widely known Web developer, not in the sense of his mastery of HTML, CSS, and JavaScript (which I'm sure is stellar), but because he invented the whole kit and caboodle.

On [March 12] 1989, Berners-Lee submitted "Information Management: A Proposal" to his management at CERN [Sept 29], arguing for a hypertext-based way of linking and sharing information at that institution. This wasn't Berners-Lee's first dalliance with hypertext [Dec 8], which can be traced back to the early 1980's [June 23].

After a few rewrites with the help of Robert Cailliau [Jan 26], he sent in a second proposal on [Nov 12] 1990, now entitled "WorldWideWeb: Proposal for a HyperText Project."

This received (somewhat guarded) official approval, and by [Dec 25],1990, Berners-Lee had finished the necessary tools for a working Web: a browser/editor called WorldWideWeb and the CERN httpd server; the first Web page went live on his NeXTcube [Sept 18] later that day.

The first public mention of the project occurred on [Aug 6], 1991, when Berners-Lee posted a brief summary of his work to the alt.hypertext newsgroup. Later that year, on [Dec 15], 1991, he presented his ideas at the Hypertext '91 conference.

Tim Berners-Lee. Photo by Paul Clarke. CC BY 2.0.

On July 16, 2004, he was appointed to the rank of Knight Commander of the Most Excellent Order of the British Empire (KBE) by Queen Elizabeth II. Other computing KBE include: Vannevar Bush [March 11], Lou Gerstner Jr [March 1], Bill Gates [March 2], and Jony Ive [Feb 27]. Since Berners-Lee and Ive are British, they must be properly addressed as Sir.

During the 2012 Summer Olympics opening ceremony, he was somehow persuaded to sit at a vintage NeXTcube in the middle of a vast open-air stadium and tweet "This is for everyone". This message was helpfully spelled out in LCD lights attached to the chairs of the 70,000 people in the audience, and on a giant display.

As a viewer of the ceremony (one of an estimated 900 million), I couldn't help wonder why Berners-Lee's never typed anything on the NeXTcube, and why the screen was blank.

Berners-Lee is the son of two English mathematicians, Conway Berners-Lee and Mary Lee Woods, who were members of the team that programmed the Ferranti Mark I in 1951 [Feb 12].

A quote: “It staggers me that people have actually put up with HTML. It was never supposed to be something that you would see, but something produced by an editor program.”

## Missile Mail

### June 8, 1959

The submarine USS Barbero assisted the US Post Office in its search for faster, more efficient forms of mail transportation, namely "Missile Mail", although the idea of delivering mail by rocket was far from new [Feb 2].

Shortly before noon, off the northern Florida coast, under command of her new skipper Robert H. Blount, Barbero fired a Regulus missile at the Naval Auxiliary Air Station in Mayport. Twenty-two minutes later the missile landed at its target without exploding. Instead the warhead contained two mail containers carrying 3,000 pieces of mail consisting of commemorative postal covers addressed to the President and other officials. The postage (four cents domestic, eight cents international) had been cancelled "USS Barbero 8 June 9.30 am 1959" before the boat put to sea.

## Steve Mann

### Born: June 8, 1962;

Hamilton, Ontario

Due to his creation of the first general-purpose wearable computer, Mann is called the “father of wearable computing” and sometimes “the world’s first cyborg”.

Mann worked in a television repair shop as a teenager, and became fascinated by the mini-TVs inside camcorders. He was also taught welding by his grandfather.

He developed the first version of his EyeTap device in high school in 1978 (or perhaps 1981). It was worn in front of one eye, acting as both a camera and a display. He carried the accompanying computer in a steel-reinforced backpack.

In 1992 Mann became the first member of MIT's Media Lab [Dec 1] Wearable Computing project, and in 1994, began transmitted his everyday life 24 hours a day, seven days a week, so becoming the first lifecaster. (for others, see [April 14], [March 19], and [Dec 3]). However, he's also a strong advocate of privacy rights, and coined the phrase sousveillance, meaning “inverse surveillance”.

Another of his neologisms is “McVeillance” for placing people under surveillance while simultaneously forbidding them from using their own cameras. This relates to an incident on July 1, 2012 when he and his family were forcibly removed from a McDonalds on the Champs Elysees because he was wearing his vision system.

## Intel 8086

### June 8, 1978

Intel introduced the 16-bit 8086, the first chip with a complete 16-bit architecture, and the basis for all later processors used in “IBM Compatible” PCs [July 10; Nov 4]. Indeed, the current line of Intel “Core” processors are still based on the same architecture.

However, Intel's modified 8-bit 8088 [July 1] was actually used in the first IBM PC [Aug 12], primarily to reduce costs, and for its compatibility with 8-bit components.

When 8086 development began in May 1975, the chip was viewed as a stopgap while the much more ambitious 32-bit 8800 was being designed. Nevertheless, something was needed to counter the increasingly popular Zilog Z80 [March 9] which was eating into Intel’s profits for the 8-bit 8080 [April 18].

The 8086 project was led by Stephen Morse, but other team members included Bill Pohlman, Jim McKevitt, and Bruce Ravenel. Intel leadership stayed out of Morse’s way, and he later remarked, “because nobody expected the design to live long, no barriers were placed in my way, and I was free to do what I wanted.”

## Prestel Announced

### June 8, 1979

The UK Post Office started calling its viewdata system Prestel (derived from "press telephone"). The idea was to transmit data via telephone lines to TV set-top boxes in homes. The telephone interface allowed Prestel to offer rudimentary interactive services, and a crude form of e-mail, via a builtin modem running at speeds of 1200bps for incoming data and 75bps going out.

Prestel was powered by five GEC 4000 minicomputers in London, and seven more around the UK. Each one had 384 KB of memory, six 760 MB hard drives, and 100 user ports. The drives were washing-machine-sized 14-inch platter units.

Prestel's database maintained 164,000 pages with 35kbits used per page, so the graphics were quite limited. At its height, the system had around 90,000 subscribers.

Prestel was based on research by Samuel Fedida at the Post Office Research Station in Martlesham, Suffolk. He had originally wanted to build a video system (the Viewphone), but transferring a reasonably good signal was beyond the capabilities of the 1970's telephone network.

Aside from a user having to purchase a TV set-top box, which only a qualified Post Office engineer could install, it was also necessary to pay a monthly subscription and pay

for the system's telephone calls. These were major drawbacks when Prestel was compared to the UK's competing teletext services, Ceefax [Sept 23] and Oracle, which were free of charge, and delivered data as part of regular television transmissions.

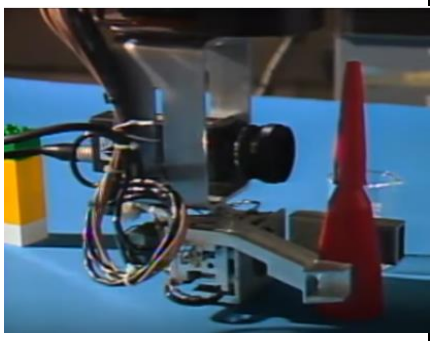
In France, the similar Minitel system was a much bigger success [May 10]. One key difference was that the French government handed out Minitel terminals for free. Minitel grew to have millions of users, and was only turned off in 2012.

## SAM Described

### June 8, 1991

SAM (the Speech Activated Manipulator) was a 450-pound six-axis robot arm that could manipulate objects resting on a table. It obtained necessary information from sensors and by interacting with a human partner via natural (spoken) language. The robot understood a vocabulary of about 200 words.

SAM was first described in a paper by Michael K. Brown, Bruce M. Buntschuh, and Jay G. Wilpon, but a fun video introduction to the system from 1989 is online at `https://www.youtube.com/watch?v=5vPvxjeewz4`



A still from "The Intelligent Robot SAM", 1989; AT&T Archives.

At one stage in the video, Michael Brown asks SAM to hunt for an object using an ultrasonic ranger and camera mounted on its arm, When it bumps into a bottle, SAM asks Brown to "please describe this object."

## PHP Released

### June 8, 1995

Rasmus Lerdorf released the first version of the scripting language PHP (Personal Home Page), primarily as a tool for Web development. In the 2000's, it became immensely popular, reportedly used in 82% of all websites.

The mascot of the PHP project is the elePHPant, a blue elephant with the PHP logo printed on its side.

A blogger known as Eevee wrote an infamous article in 2012 entitled "PHP: A fractal of bad design" which was was less than complementary about the language: "Virtually every feature in PHP is broken somehow. The language, the framework, the ecosystem, are all just bad. And I can't even point out any single damning thing, because the damage is so systemic. Every time I try to compile a list of PHP gripes, I get stuck in this depth-first search discovering more and more appalling trivia. (Hence, fractal.)"

## Swordfish Released

### June 8, 2001

Swordfish is an American action thriller directed by Dominic Sena and starring John Travolta, Hugh Jackman, and Halle Berry.

Ex-con and super-cool hacker, Stanley Jobson (Jackman), is recruited to take part in a bank heist because of his formidable hacking skills (and good looks).

Another hacker is called Axl Torvalds, a double homage to rock-star Axl Rose, and "rock-star" author of the Linux kernel, Linus Torvalds [Dec 28]. The name of the movie's FBI Assistant Director character, Bill Joy, is most probably honoring Sun Microsystems co-founder [Nov 8].

One of the many computers featured is a Dell Latitude C840, (utilizing a 2.2. GHz Pentium 4 in the real-world) but miraculously transformed into a device capable of hacking into the US Department of Defense in less than a minute using an interface known only as the "Compiler". This rapid ingress of the nation's defenses is even more impressive considering Jackman's overwrought state at the time.

Swordfish first appeared as a password in the 1932 Marx Brothers movie "Horse Feathers" – in a scene where Groucho, as Professor Wagstaff, attempts to gain access to a speakeasy guarded by Chico.