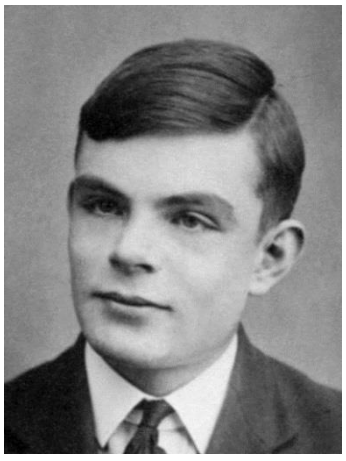
June 23rd

Alan Mathison Turing

Born: June 23, 1912;

Maida Vale, London
Died: June 7, 1954; Wilmslow
[March 21] [Dec 21]

Turing is widely considered to be the father of theoretical computer science, in part due to his [Nov 12] 1936 paper which introduced the idea of a universal computer, now known as the Turing Machine.



Alan Turing (aged 16).

During WWII, he worked at Bletchley Park [Sept 4], where he and Gordon Welchman [March 18] developed the Bombe for decrypting Enigma messages [Feb 23].

After the war, he worked at the National Physical Laboratory [Oct 1], where he designed the ACE [Feb 19], one of the first stored-program computer.

At the end of the 1940's, he became Deputy Director of Max Newman's [Feb 7] Computing Machine Lab in Manchester, and worked on software for the Ferranti Mark 1 [Feb 12].

In [Oct 00] 1950 he proposed the Turing Test for judging AI, which he summarized like so: "a computer would deserve to be called intelligent if it could deceive a human into believing that it was human."

Turing was a talented long-distance runner, and occasionally ran the 40 miles to London from Bletchley Park when he was needed for high-level meetings, and tried out for the 1948 British Olympic team.

He once told a friend that he didn't want to drive as "I might suddenly go mad and crash."

He liked to play outdoor endurance chess, where a player's move is followed by a run around the (large) garden while their opponent considers their move.

Turing is the new face of the £50 bank note that was put into circulation on this day in 2021. It also includes a table and formulae from his Turing machine paper, a picture of the Pilot ACE [May 10], technical drawings for the Bombe, his signature from the visitors' book at Bletchley, and ticker tape showing the binary 10101111111100101100110000, which is 23061912 in decimal, his birthday. There's also a quote from Turing's interview in *The Times* [June 11]: "This is only a foretaste of what is to come, and only the shadow of what is going to be."

Georg Nees

Born: June 23, 1926;

Nuremberg, Germany
Died: Jan. 3, 2016

Nees was one of the "3N" computer graphics pioneers along with Frieder Nake [Dec 16] and A. Michael Noll [Aug 29]. They all participated in the "Cybernetic Serendipity" exhibition held on [Aug 1] 1968 in London.

Nees organized the purchase of a flatbed plotter, Konrad Zuse's [June 22] Graphomat Z64, for the Siemens research center in 1963. He subsequently wrote several ALGOL 60 [Jan 11] libraries for controlling the machine.

During Feb. 1965, Nees' work was exhibited in the Study Gallery at the Technical University of Stuttgart, making it perhaps the first computer art exhibition. The exhibition booklet, entitled "rot 19", was probably the first computer art publication (it was the 19th booklet in the "rot" series). Short pseudocode was included next to the drawings for generating them.

As a student at the university, he produced one of the first theses on computer graphics, which was published as "Generative Computergraphik" in 1969.

Philip Donald Estridge

Born: June 23, 1937;

Jacksonville, Florida, USA
Died: Aug. 2, 1985

Estridge is known as the father of the IBM PC [Aug 12], a title he shares with William Lowe [Jan 15]. His PC work began when he was put in charge of IBM Entry Level Systems in Boca Raton in 1980, after the former boss, Lowe, was promoted.

Estridge made the decision – uncommon for the time – that the machine would be made from off-the-shelf parts, and that the design would be made public.

After the IBM PC's success, Steve Jobs [Feb 24] offered him the job of president of Apple, which he turned down.

He spent most of his early career working at the Kennedy Space Center on computer systems for the Apollo missions [Aug 25]. ''There was nothing like watching [Frank] Borman come from behind the far side of moon for the first time,'' he recalled. ''We knew to the tenth of a second when he would appear, and that if it didn't happen then he'd never come out. And there he was.''

Eckert and Mauchly

June 23 - August 29, 1941

J. Presper Eckert [April 9] and John Mauchly [Aug 30] met for the first time at the Moore School of Electrical Engineering at the University of Pennsylvania. Mauchly was attending a ten-week summer course to improve his knowledge of electronics, and Eckert was a teaching assistant.

The course was being run as part of the Engineering, Science, and Management War Training (ESMWT) programme, which was perhaps only second in scope to the G.I. Bill. Over 200 colleges and universities provided 68,000 courses for 1,800,000 students.

Vinton (Vint) Gray Cerf

Born: June 23, 1943;

New Haven, Connecticut

Cerf was one of the fathers of the Internet, the other being Bob Kahn [Dec 23]. In 1973-74, Cerf and Kahn invented the Transmission Control Protocol (TCP) [Sept 9], which later became the communication heart of the Internet, a term they also invented as an abbreviation for "inter-networking of networks."

When Cerf worked in Leonard Kleinrock's [June 13] networking group at UCLA in the later 1960's, he helped connect the first two nodes of the ARPANet [Aug 30]. During that time, he first met Kahn, who was working on the ARPANet's architecture.

While at MCI, Cerf was instrumental in the development of the first commercial email system (MCI Mail).

Recently he's been working on an Interplanetary Internet for NASA. In June 2016 a network node was installed on the International Space station.

Cerf is known for his sartorial style, typically seen gallivanting around town in a smart three-piece suit.

Cerf attended the same high school (Van Nuys in Los Angeles) as two other Internet pioneers, Jon Postel [Aug 6] and Steve Crocker [Oct 15].

First Bipolar Junction Transistor

June 23, 1948

Prev: [Dec 23] Next: [June 30]

The bipolar junction transistor (BJT) was invented by William Shockley [Feb 13] at Bell Labs on this day. The company announced Shockley's breakthrough on July 4, 1951.

This transistor type arrived just six months after the bipolar point-contact device ([Dec 16] 1947) by John Bardeen [May 23] and Walter Brattain [Feb 10], under Shockley's management. Bardeen and Brattain weren't involved with the BJT as Shockley had blocked them from working on it.

The BJT was the popular choice for building discrete and integrated circuits for the next three decades, being more rugged and easier to manufacturer than the point-contact variant.

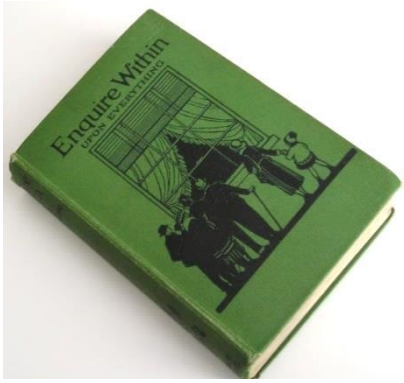
ENQUIRE at CERN

June 23, 1980

Tim Berners-Lee [June 8] began working as an independent contractor at CERN on this day. During this first period (which only lasted until Dec.), he found time to propose a hypertext project for sharing information among researchers, and even built a prototype named ENQUIRE.

ENQUIRE was made up of cards and hyperlinks, similar to Apple's HyperCard [Aug 11]. However, it supported a wider variety of link types, and was designed to run on several platforms. It was coded in Pascal [Feb 15] and initially implemented on a Norsk Data NORD-10, a Norwegian mini-computer.

Berners-Lee named it after a Victorian advice book and encyclopedia he had loved as a child, *Enquire Within Upon Everything." Topics covered by the book included how to model a flower in wax, and how to bury a relative.



Enquire Within, 116th edition. Photo by Paul Dean (StoneColdCrazy). CC BY 2.5.

Berners-Lee returned to CERN in 1984, this time as a fellow, during which time CERN was becoming the largest Internet node in Europe.

Berners-Lee saw an opportunity to combine his old hypertext concept with the Internet, and wrote a new proposal in [March 12] 1989.

Habitat: the First MMORPG

June 23, 1986

Habitat was a massive multiplayer online role-playing game (MMORPG) released by Lucasfilm [Sept 12]. It's now considered the first large-scale, commercial, 2D graphical virtual community. (Meridian 59 [Dec 15] was the first 3D MMORPG.)

It was developed by Randy Farmer and Chip Morningstar, and was first made available in

beta form by Quantum Link [Nov 1], an online service for the Commodore 64.

Uniquely, Habitat didn't impose a fixed set of objectives on its inhabitants, and the world was persistent, meaning that user changes would be remembered between games. Players could utilize in-game money, own belongings, and even possess housing.

The game was closed down in 1988 because of its escalating running costs, but Lucasfilm released a slimmed down version called Club Caribe later that year.

A unique element of Club Caribe was that a player could remove their character's head, carry it around, and even leave it somewhere. However, someone else could then pick it up and carry it off. This explained the presence of many headless people in the game.

Mathematica 1.0 Released

June 23, 1988

Wolfram Mathematica is a computer algebra system conceived by Stephen Wolfram. It builds on ideas in the Symbolic Manipulation Program (SMP) designed by Wolfram and Chris A. Cole at Caltech in June 1981, which was influenced in turn by Macsyma [June 00] and Reduce. Mathematica's front end, designed by Theodore Gray, introduced the idea of "computational notebooks" [July 8].

When Wolfram decided to start Wolfram Research to sell Mathematica, the headline in the April 18, 1988, edition of *Forbes* announced: “Physics Whiz Goes Into Biz.”

Mathematica's source code has changed enormously since version 1. The number of lines in the kernel has grown from 150,000 to several million, coded in a mix of C, C++, Java, and Mathematica.

The current version, 12.3, was released on May 20, 2021.

Sonic the Hedgehog

June 23, 1991

Sega released "Sonic the Hedgehog" for the Sega Genesis [Oct 29] (it was originally called "Mr. Needlemouse"). It became so popular that it was later pronounced the Genesis console’s first "killer app" [Sept 8].

The game was created in just fourteen months by a five-person team, led by Naoto Oshima (character designer), Hirokazu Yashuhara (game planner), designers Jinya Itoh and Rieko Kodama , and Yuji Naka (programmer). The score was composed by Masato Nakamura, who was the bass player in the Japanese band "Dreams Come True".

The game featured the first appearance of Sonic's arch-nemesis Dr. Eggman, and future staples of the franchise such as enemy robots, golden rings, South Island, and the Chaos Emeralds.

One of Sonic's few weaknesses is an inability to swim. Apparently, the team mistakenly thought that hedgehogs couldn't swim.

Nintendo 64

June 23, 1996

The Nintendo 64 (N64) game console released in Japan faced strong competition from the Sony PlayStation [Dec 3] and the Sega Saturn [Nov 22], but 300,000 units were sold on the first day, and 1.3 million were purchased by the end of the year. The device was jointly designed by Nintendo [Sept 23] and Silicon Graphics [March 23].

Reviewers praised the console’s 3D graphics and gameplay, while criticizing the lack of games. This changed with the release of "Super Mario 64" [May 28] and "The Legend of Zelda: Ocarina of Time" [Nov 21], which are now considered to be two of the most influential games of all time.

Time magazine named the N64 their "Machine of the Year", saying it had “done to video-gaming what the 707 did to air travel”.

AMD Athlon

June 23, 1999

The AMD [May 1] Athlon processor (also called the K7, since it followed the K6 [May 26]) ran about 10% faster than the Pentium III [Feb 26] for business applications, and 20% faster for gaming. Indeed, on [March 6] 2000, an Athlon was the first chip to break the 1 GHz speed barrier.

As a result, AMD’s sales soared from $2.5 billion in 1998 to $4.6 billion in 2000.

John Dvorak [March 22; Sept 27; Dec 26] thought the Athlon name “sounds more like a pair of sneakers. Or perhaps a new ointment.” In fact, Athlon comes from the the Ancient Greek for a sports contest, or the prize awarded at such a contest.

Turing’s Memorial

June 23, 2001

A statue of Alan Turing [today] holding an apple and sitting on a bench was unveiled in Manchester in Sackville Park.

The bronze bench is inscribed with the text ‘Founder of Computer Science’ encoded by an Enigma machine as ‘IEKYF ROMSI ADXUO KVKZC GUBJ’. However, the encryption has been disputed, as the ‘u’ in ‘computer’ matches up with the ‘u’ in ‘ADXUO, but an Enigma machine would never allow a letter to be encoded as itself.

Keen eyed observers may also notice mysterious Chinese characters inscribed on the back of the statue. Sadly, they only mean “cast at the Tianjin Focus Foundry”.

The sculptor, Glyn Hughes, also buried his old Amstrad computer [April 12] under the plinth.

Alan Turing Memorial. Photo by Lmno. CC BY-SA 3.0.

This wasn't the first Turing sculpture. Earlier ones include:

- A bust by Wayne Chabre (1989) at the University of Oregon, attached to a wall of its computer science building.
- A bust by Sir Eduardo Paolozzi (2000) in the Turing Room at the University of Edinburgh's School of Informatics.

Another tribute includes an edition of the "Monopoly" board game [March 24; Dec 11], where the game's squares and cards tell the story of Turing's life.

Of course there have been multiple portrayals of Turing in the theatre [Oct 21], movies [Nov 28], literature [Sept 4], and music (e.g. the song "Alan et la Pomme" by francophone singer-songwriter Salvatore Adamo).

Second Life

June 23, 2003

Linden Lab launched its multiplayer virtual 3D world, Second Life. 'Residents' could create virtual representations (avatars) that could interact with objects and other characters. The game also had its own currency, the Linden Dollar, which was exchangeable with real-world money. There was a Linden Scripting Language that could be employed to add more interactivity to objects.

On May 1, 2006, resident Anshe Chung was featured on the cover of *BusinessWorld* magazine, as the first person to become a millionaire due to her Second Life business. Philip Rosedale, Linden Lab's founder, noted in the article: "We don't see this as a game. We see it as a platform that is, in many ways, better than the real world."

In March 2009, Linden Lab started the Zindra project, a whole new continent inside Second Life specifically focussing on adult content.

For more Second Life events, see [May 1; Nov 19].

Reddit

June 23, 2005

Reddit was founded by University of Virginia roommates Steve Huffman and Alexis Ohanian as a social news aggregation and discussion site. Their goal was to make Reddit the "front page of the Internet."

The content is organized into areas of interest called subreddits. In the early days, the three most active were "NSFW", "programming", and "science", but one of the most popular is IAmA ("I Am A") where a user may post AMAs (for "Ask Me Anything"). Notable participants have included Barack Obama [Dec 8], Bill Gates [Oct 28], and Donald Trump [Jan 12; Aug 5].

The Reddit effect (also called the Slashdot effect) occurs when a small website suffers a sudden influx of traffic after being linked to on Reddit (or Slashdot [Oct 5]). The effect is also called the "Reddit Hug of Death".

LINE

June 23, 2011

LINE is a freeware app for instant communication on smartphones, tablets, and PCs created by NHN Japan in response to the Tōhoku earthquake on March 18. An 8.9 magnitude quake triggered a 30-foot high tsunami which damaged the Fukushima Daichi nuclear plant, and prompted a meltdown. Nationwide, more than 18,000 people were killed, and large portions of Japan's phone system were destroyed. The Internet, however, mostly kept working.

Three months later (on this day), LINE Messenger was released, and gained 50 million users in under a year. By 2016, it was being used by 700 million people, the majority of them in Japan, Taiwan, Thailand, and Indonesia.

A key feature is that users can text and call people from their smartphones through an existing Web data plan. Since this entails using the Internet rather than the phone network, users aren't charged for a telephone call.

Another much loved element are its virtual stickers of cute cartoon characters (e.g. Brown the bear and Cony the bunny). They're utilized during chat sessions as large sized emoji [Sept 19]. Close to 2 billion are sent per day, and LINE is constantly adding new ones.

50th Turing Award

June 23-24, 2017

The Turing Award is an annual prize given by the Association for Computing Machinery (ACM [Sept 15]) to an individual (or individuals) who have made contributions "of lasting and major technical importance to the computer field". It's often called the "Nobel Prize of computing", and since 2014 has been accompanied by prize money totalling $1 million.

The first recipient, in 1966, was Alan Perlis [April 1]. The first female recipient was Frances E. Allen [Aug 4] in 2006 (it only took 40 years).

To celebrate the first 50 years of the award, the ACM sponsored a year-long series of events in 2017. At the conference banquet, Tim Berners-Lee [June 8] received that year's award, and many news organizations claimed he was the 50th Turing Award winner. Not so. According to the ACM, that honor belongs to the previous year's winners, Whitfield Diffie [June 5] and Martin Hellman [Oct 2].

James H. Wilkinson [Sept 27] with his 1970 Turing Award. The Computer History Museum archive.

To further muddy the waters, if multiple winners are counted separately then Berners-Lee was the 65th awardee, and the 50th winner was Peter Naur [Oct 25] in 2005.