

This document presents historical events known to mankind and occasionally provides a reference to a documentary or movie describing the event.

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By Virtuosek.

Part I

Prehuman

13.6 Billion years ago

1.1 Formation of the Milky Way



The Milky Way began as one or several small overdensities in the mass distribution in the Universe shortly after the Big Bang. Some of these overdensities were the seeds of globular clusters in which the oldest remaining stars in what is now the Milky Way formed. Nearly half the matter in the Milky Way may have come from other distant galaxies. Nonetheless, these stars and clusters now comprise the stellar halo of the Milky Way. Within a few billion years of the birth of the first stars, the mass of the Milky Way was large enough so that it was spinning relatively quickly. Due to conservation of angular momentum, this led the gaseous interstellar medium to collapse from a roughly spheroidal shape to a disk. Therefore, later generations of stars formed in this spiral disk. Most younger stars, including the Sun, are observed to be in the disk.

Since the first stars began to form, the Milky Way has grown through both galaxy mergers (particularly early in the Milky Way's growth) and accretion of gas directly from the Galactic halo. The Milky Way is currently accreting material from several small galaxies, including two of its largest satellite galaxies, the Large and Small Magellanic Clouds, through the Magellanic Stream. Direct accretion of gas is observed in high-velocity clouds like the Smith Cloud. However, properties of the Milky Way such as stellar mass, angular momentum, and metallicity in its outermost regions suggest it has undergone no mergers with large galaxies in the last 10 billion years. This lack of recent major mergers is unusual among similar spiral galaxies; its neighbor the Andromeda Galaxy appears to have a more typical history shaped by more recent mergers with relatively large galaxies.

4.54 Billion years ago

2.1 Formation of planet Earth



The history of Earth concerns the development of planet Earth from its formation to the present day. Nearly all branches of natural science have contributed to understanding of the main events of Earth's past, characterized by constant geological change and biological evolution.

The geological time scale (GTS), as defined by international convention, depicts the large spans of time from the beginning of the Earth to the present, and its divisions chronicle some definitive events of Earth history. (In the graphic: Ga means "billion years ago"; Ma, "million years ago".) Earth formed around 4.54 billion years ago, approximately one-third the age of the universe, by accretion from the solar nebula. Volcanic outgassing probably created the primordial atmosphere and then the ocean, but the early atmosphere contained almost no oxygen. Much of the Earth was molten because of frequent collisions with other bodies which led to extreme volcanism. While Earth was in its earliest stage (Early Earth), a giant impact collision with a planet-sized body named Theia is thought to have formed the Moon. Over time, the Earth cooled, causing the formation of a solid crust, and allowing liquid water on the surface.

4.5 Billion years ago

3.1 Formation of The Moon

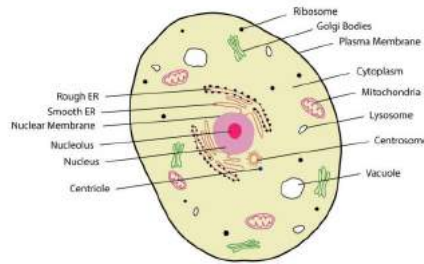


Giant-impact hypothesis:

The giant-impact hypothesis, sometimes called the Big Splash, or the Theia Impact suggests that the Moon formed out of the debris left over from a collision between Earth and an astronomical body the size of Mars, approximately 4.5 billion years ago, in the Hadean eon; about 20 to 100 million years after the solar system coalesced. The colliding body is sometimes called Theia, from the name of the mythical Greek Titan who was the mother of Selene, the goddess of the Moon. Analysis of lunar rocks, published in a 2016 report, suggests that the impact may have been a direct hit, causing a thorough mixing of both parent bodies.

1.6 Billion years ago

4.1 Eukaryotic cells appeared



Eukaryotes are organisms whose cells have a nucleus enclosed within membranes, unlike prokaryotes (Bacteria and Archaea). Eukaryotic cells also contain other membrane-bound organelles such as mitochondria and the Golgi apparatus, and in addition, some cells of plants and algae contain chloroplasts. Unlike unicellular archaea and bacteria, eukaryotes may also be multicellular and include organisms consisting of many cell types forming different kinds of tissue. Animals and plants are the most familiar eukaryotes.

Eukaryotes can reproduce both asexually through mitosis and sexually through meiosis and gamete fusion. In mitosis, one cell divides to produce two genetically identical cells. In meiosis, DNA replication is followed by two rounds of cell division to produce four haploid daughter cells. These act as sex cells (gametes). Each gamete has just one set of chromosomes, each a unique mix of the corresponding pair of parental chromosomes resulting from genetic recombination during meiosis.

The domain Eukaryota appears to be monophyletic, and makes up one of the domains of life in the three-domain system. The two other domains, Bacteria and Archaea, are prokaryotes and have none of the above features. Eukaryotes represent a tiny minority of all living things.[8] However, due to their generally much larger size, their collective worldwide biomass is estimated to be about equal to that of prokaryotes. Eukaryotes evolved approximately 1.6–2.1 billion years ago, during the Proterozoic eon.

Part II
400-300 BC

356 BC

5.1 July 20/21

5.1.1 Birth of Alexander III of Macedon



Alexander was born on the sixth day of the ancient Greek month of Hekatombaion, which probably corresponds to 20 July 356 BC, although the exact date is disputed, in Pella, the capital of the Kingdom of Macedon. He was the son of the king of Macedon, Philip II, and his fourth wife, Olympias, the daughter of Neoptolemus I, king of Epirus. Although Philip had seven or eight wives, Olympias was his principal wife for some time, likely because she gave birth to Alexander.

Statue of Alexander the Great in Thessaloniki, Macedonia, Greece Several legends surround Alexander's birth and childhood. According to the ancient Greek biographer Plutarch, on the eve of the consummation of her marriage to Philip, Olympias dreamed that her womb was struck by a thunder bolt that caused a flame to spread "far and wide" before dying away. Sometime after the wedding, Philip is said to have seen himself, in a dream, securing his wife's womb with a seal engraved with a lion's image. Plutarch offered a variety of interpretations of these dreams: that Olympias was pregnant before her marriage, indicated by the sealing of her womb; or that Alexander's father was Zeus. Ancient commentators were divided about whether the ambitious Olympias promulgated the story of Alexander's divine parentage, variously claiming that she had told Alexander, or that she dismissed the suggestion as impious

Part III

6th century

541

6.1

6.1.1 Plague of Justinian (first plague pandemic)



The Plague of Justinian (541–542 AD) was a pandemic that afflicted the Eastern Roman (Byzantine) Empire, especially its capital Constantinople, the Sasanian Empire, and port cities around the entire Mediterranean Sea. One of the deadliest plagues in history, the devastating pandemic resulted in the deaths of an estimated 25–50 million people in two centuries of recurrence, equivalent to 13–26% of the world’s population at the time of the first outbreak. The plague’s social and cultural impact during the period of Justinian has been compared to that of the similar Black Death that devastated Europe 600 years after the last outbreak of Justinian plague. Procopius, the principal Greek historian of the 6th century, viewed the pandemic as world-wide in scope

In 2013 researchers confirmed earlier speculation that the cause of the pandemic was *Yersinia pestis*, the bacterium responsible for plague. Ancient and modern *Yersinia pestis* strains closely related to the ancestor of the Justinian plague strain have been found in Tian Shan, a system of mountain ranges on the borders of Kyrgyzstan, Kazakhstan, and China, suggesting that the Justinian plague may have originated in or near that region.

Part IV

12th century

1162

8.1

8.1.1 Birth of Genghis Khan



Little is known about Genghis Khan's early life, due to the lack of contemporary written records. The few sources that give insight into this period often contradict.

Genghis Khan's birth name, Temüjin, was derived from the Mongol word *temür* meaning "of iron", while *jin* denotes agency. Temüjin thus means "blacksmith".

Genghis Khan was probably born in 1162 in Delüün Boldog, near the mountain Burkhan Khaldun and the rivers Onon and Kherlen in modern-day northern Mongolia, close to the current capital Ulaanbaatar. The Secret History of the Mongols reports that Temüjin was born grasping a blood clot in his fist, a traditional sign that he was destined to become a great leader. He was the second son of his father Yesügei who was a Kiyad chief prominent in the Khamag Mongol confederation and an ally of Toghrul of the Keraite tribe. Temüjin was the first son of his mother Hoelun. According to the Secret History, Temüjin was named after the Tatar chief Temüjin-üge whom his father had just captured.

Part V

13th century

1265

9.0.1 Renaissance



Many argue that the ideas characterizing the Renaissance had their origin in late 13th-century Florence, in particular with the writings of Dante Alighieri (1265–1321) and Petrarch (1304–1374), as well as the paintings of Giotto di Bondone (1267–1337). Some writers date the Renaissance quite precisely; one proposed starting point is 1401, when the rival geniuses Lorenzo Ghiberti and Filippo Brunelleschi competed for the contract to build the bronze doors for the Baptistry of the Florence Cathedral (Ghiberti won). Others see more general competition between artists and polymaths such as Brunelleschi, Ghiberti, Donatello, and Masaccio for artistic commissions as sparking the creativity of the Renaissance. Yet it remains much debated why the Renaissance began in Italy, and why it began when it did. Accordingly, several theories have been put forward to explain its origins.

During the Renaissance, money and art went hand in hand. Artists depended entirely on patrons while the patrons needed money to foster artistic talent. Wealth was brought to Italy in the 14th, 15th, and 16th centuries by expanding trade into Asia and Europe. Silver mining in Tyrol increased the flow of money. Luxuries from the Eastern world, brought home during the Crusades, increased the prosperity of Genoa and Venice.

Jules Michelet defined the 16th-century Renaissance in France as a period in Europe's cultural history that represented a break from the Middle Ages, creating a modern understanding of humanity and its place in the world

Part VI

14th century

1347

10.1

10.1.1 Black Death (second plague pandemic)



In the Late Middle Ages (1340–1400) Europe experienced the most deadly disease outbreak in history when the Black Death, the infamous pandemic of bubonic plague, hit in 1347, killing a third of the European human population. Some historians believe that society subsequently became more violent as the mass mortality rate cheapened life and thus increased warfare, crime, popular revolt, waves of flagellants, and persecution. The Black Death originated in Central Asia and spread from Italy and then throughout other European countries. Arab historians Ibn Al-Wardni and Almaqrizi believed the Black Death originated in Mongolia. Chinese records also showed a huge outbreak in Mongolia in the early 1330s. Research published in 2002 suggests that it began in early 1346 in the steppe region, where a plague reservoir stretches from the northwestern shore of the Caspian Sea into southern Russia. The Mongols had cut off the trade route, the Silk Road, between China and Europe which halted the spread of the Black Death from eastern Russia to Western Europe. The epidemic began with an attack that Mongols launched on the Italian merchants' last trading station in the region, Caffa in the Crimea. In late 1346, plague broke out among the besiegers and from them penetrated into the town. When spring arrived, the Italian merchants fled on their ships, unknowingly carrying the Black Death. Carried by the fleas on rats, the plague initially spread to humans near the Black Sea and then outwards to the rest of Europe as a result of people fleeing from one area to another.

Part VII

15th century

1453

11.1 May 29

11.1.1 The Fall of Constantinople



The Fall of Constantinople was the capture of the capital of the Byzantine Empire by an invading Ottoman army on 29 May 1453. The attackers were commanded by the 21-year-old Sultan Mehmed II, who defeated an army commanded by Emperor Constantine XI Palaiologos and took control of the imperial capital, ending a 53-day siege that began on 6 April 1453. After conquering the city, Sultan Mehmed transferred the capital of his Empire from Edirne to Constantinople and established his court there.

The capture of the city (and two other Byzantine splinter territories soon thereafter) marked the end of the Byzantine Empire, a continuation of the Roman Empire, an imperial state dating to 27 BC, which had lasted for nearly 1,500 years. The conquest of Constantinople also dealt a massive blow to Christendom, as the Muslim Ottoman armies thereafter were left unchecked to advance into Europe without an adversary to their rear.

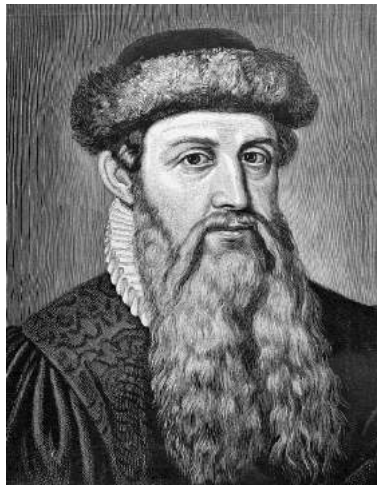
It was also a watershed moment in military history. Since ancient times, cities had used ramparts and city walls to protect themselves from invaders, and Constantinople's substantial fortifications had been a model followed by cities throughout the Mediterranean region and Europe. The Ottomans ultimately prevailed due to the use of gunpowder (which powered formidable cannons).

The conquest of the city of Constantinople and the end of the Byzantine Empire was a key event in the Late Middle Ages which also marks, for some historians, the end of the Medieval period.

1468

12.1 February 02

12.1.1 Birth of Johannes Gutenberg



Johannes Gensfleisch zur Laden zum Gutenberg (February 3, 1468) was a German blacksmith, goldsmith, inventor, printer, and publisher who introduced printing to Europe with the printing press. His introduction of mechanical movable type printing to Europe started the Printing Revolution and is regarded as a milestone of the second millennium, ushering in the modern period of human history. It played a key role in the development of the Renaissance, Reformation, the Age of Enlightenment, and the scientific revolution and laid the material basis for the modern knowledge-based economy and the spread of learning to the masses.

1492

13.1 December 26

13.1.1 First Spanish settlement La Navidad in the New World



La Navidad was a settlement that Christopher Columbus and his men established in present-day Haiti in 1492 from the remains of the Spanish ship, the Santa María. La Navidad was the first European colony established in the New World during the Age of Discovery, though it was destroyed the following year.

Part VIII

16th century

1543

14.1

14.1.1 Modern scientific revolution



The Scientific Revolution was a series of events that marked the emergence of modern science during the early modern period, when developments in mathematics, physics, astronomy, biology (including human anatomy) and chemistry transformed the views of society about nature. The Scientific Revolution took place in Europe towards the end of the Renaissance period and continued through the late 18th century, influencing the intellectual social movement known as the Enlightenment. While its dates are debated, the publication in 1543 of Nicolaus Copernicus's *De revolutionibus orbium coelestium* (On the Revolutions of the Heavenly Spheres) is often cited as marking the beginning of the Scientific Revolution.

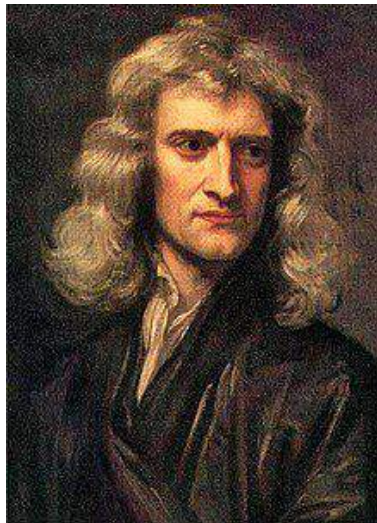
Part IX

17th century

1643

15.1 January 04

15.1.1 Birth of Sir Isaac Newton



Sir Isaac Newton was an English mathematician, physicist, astronomer, theologian, and author (described in his own day as a "natural philosopher") who is widely recognized as one of the most influential scientists of all time, and a key figure in the scientific revolution. His book *Philosophiæ Naturalis Principia Mathematica* ("Mathematical Principles of Natural Philosophy"), first published in 1687, laid the foundations of classical mechanics. Newton also made seminal contributions to optics, and shares credit with Gottfried Wilhelm Leibniz for developing the infinitesimal calculus.

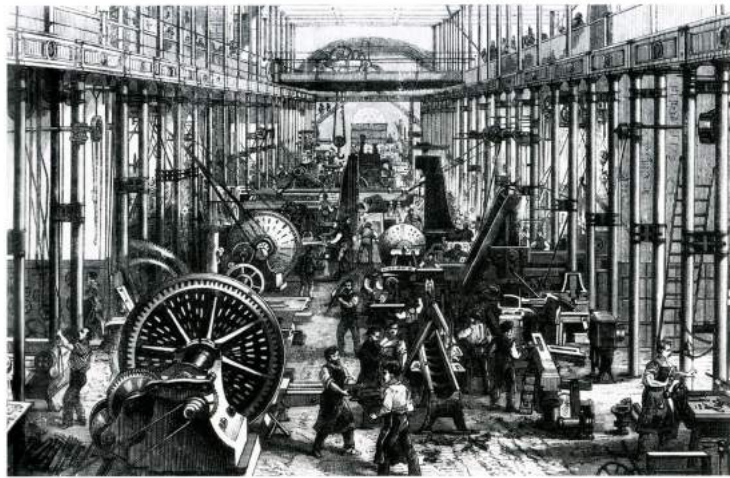
Part X

18th century

1760

16.1

16.1.1 Industrial revolution



The Industrial Revolution was the transition to new manufacturing processes in Europe and the US, in the period from about 1760 to sometime between 1820 and 1840. This transition included going from hand production methods to machines, new chemical manufacturing and iron production processes, the increasing use of steam power, the development of machine tools and the rise of the factory system. The Industrial Revolution also led to an unprecedented rise in the rate of population growth.

1766

17.1 December 25

17.1.1 George Washington's crossing of the Delaware River



George Washington's crossing of the Delaware River, which occurred on the night of December 25–26, 1776, during the American Revolutionary War, was the first move in a surprise attack organized by George Washington against the Hessian forces in Trenton, New Jersey, on the morning of December 26. Planned in partial secrecy, Washington led a column of Continental Army troops across the icy Delaware River in a logistically challenging and dangerous operation. Other planned crossings in support of the operation were either called off or ineffective, but this did not prevent Washington from surprising and defeating the troops of Johann Rall quartered in Trenton. The army crossed the river back to Pennsylvania, this time laden with prisoners and military stores taken as a result of the battle.

Part XI

19th century

1821

18.1 December 25

18.1.1 Birth of Clara Harlowe Barton



Clarissa "Clara" Harlowe Barton (December 25, 1821 – April 12, 1912) was a pioneering nurse who founded the American Red Cross. She was a hospital nurse in the American Civil War, a teacher, and patent clerk. Nursing education was not very formalized at that time and she did not attend nursing school, so she provided self-taught nursing care. Barton is noteworthy for doing humanitarian work at a time when relatively few women worked outside the home. She was inducted into the National Women's Hall of Fame in 1973.

Mid 19th century

19.1

19.1.1 Modern pandemic (third plague pandemic)

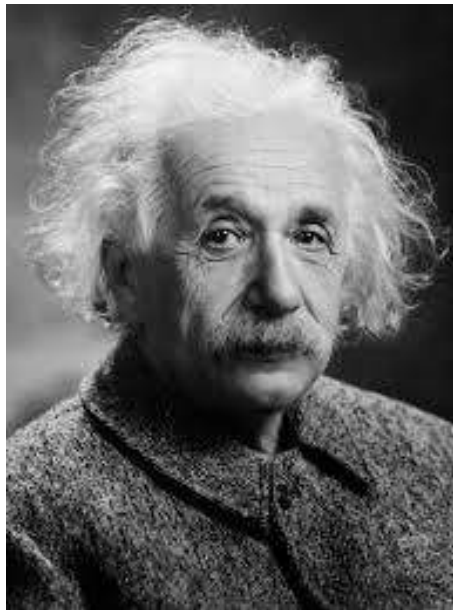
The plague resurfaced for a third time in the mid-19th century. Like the two previous outbreaks, this one also originated in Eastern Asia, most likely in Yunnan Province of China, where there are several natural plague foci. The initial outbreaks occurred in the second half of the eighteenth century. The disease remained localized in Southwest China for several years before spreading. In the city of Canton, beginning in January 1894, the disease killed 80,000 people by June. Daily water-traffic with the nearby city of Hong Kong rapidly spread the plague there, killing over 2,400 within two months.

Also known as the modern pandemic, the third pandemic spread the disease to port cities throughout the world in the second half of the 19th century and early 20th century via shipping routes. The plague inflicted people in Chinatown in San Francisco from 1900-1904, and the people of Oakland and east bay again from 1907-1909. During the outbreak from 1900-1904 in San Francisco is when authorities made permanent the Chinese Exclusion Act. This law was originally signed into existence by President Chester A. Arthur in 1882. The Chinese Exclusion Act was supposed to last for ten years but was renewed in 1892 with the Geary Act and subsequently made permanent in 1902 during the outbreak of plague in Chinatown, San Francisco. The last major outbreak in the United States occurred in Los Angeles in 1924, though the disease is still present in wild rodents, and can be passed to humans that come in contact with them. According to the World Health Organization, the pandemic was considered active until 1959, when worldwide casualties dropped to 200 per year. In 1994, a plague outbreak in five Indian states caused an estimated 700 infections (including 52 deaths) and triggered a large migration of Indians within India as they tried to avoid the plague.

1879

20.1 March 14

20.1.1 Birth of Albert Einstein



Albert Einstein (14 March 1879 – 18 April 1955) was a German-born theoretical physicist who developed the theory of relativity, one of the two pillars of modern physics (alongside quantum mechanics). His work is also known for its influence on the philosophy of science. He is best known to the general public for his mass–energy equivalence formula $E = mc^2$, which has been dubbed "the world's most famous equation". He received the 1921 Nobel Prize in Physics "for his services to theoretical physics, and especially for his discovery of the law of the photoelectric effect", a pivotal step in the development of quantum theory.

1887

21.1 January 28

21.1.1 Construction of the Eiffel Tower begins



Work on the foundations started on 28 January 1887. Those for the east and south legs were straightforward, with each leg resting on four 2 m (6.6 ft) concrete slabs, one for each of the principal girders of each leg. The west and north legs, being closer to the river Seine, were more complicated: each slab needed two piles installed by using compressed-air caissons 15 m (49 ft) long and 6 m (20 ft) in diameter driven to a depth of 22 m (72 ft) to support the concrete slabs, which were 6 m (20 ft) thick. Each of these slabs supported a block of limestone with an inclined top to bear a supporting shoe for the ironwork.

1889

22.1 April 16

22.1.1 Birth of Charles Chaplin



Charles Spencer Chaplin was born on 16 April 1889 to Hannah Chaplin (born Hannah Harriet Pedlingham Hill) and Charles Chaplin Sr. There is no official record of his birth, although Chaplin believed he was born at East Street, Walworth, in South London. His mother and father had married four years previously, at which time Charles Sr. became the legal guardian of Hannah's illegitimate son, Sydney John Hill. At the time of his birth, Chaplin's parents were both music hall entertainers. Hannah, the daughter of a shoemaker, had a brief and unsuccessful career under the stage name Lily Harley, while Charles Sr., a butcher's son, was a popular singer. Although they never divorced, Chaplin's parents were estranged by around 1891. The following year, Hannah gave birth to a third son – George Wheeler Dryden – fathered by the music hall entertainer Leo Dryden. The child was taken by Dryden at six months old, and did not re-enter Chaplin's life for 30 years.

22.2 September 23

22.2.1 Nintendo is founded



Nintendo was founded as a playing card company by Fusajiro Yamauchi on 23 September 1889. Based in Kyoto, the business produced and marketed Hanafuda cards. The handmade cards soon became popular, and Yamauchi hired assistants to mass-produce cards to satisfy demand. In 1949, the company adopted the name Nintendo Karuta Co., Ltd., doing business as The Nintendo Playing Card Co. outside Japan. Nintendo continues to manufacture playing cards in Japan and organises its own contract bridge tournament called the "Nintendo Cup". The word Nintendo can be translated as "leave luck to heaven", or alternatively as "the temple of free hanafuda"

1892

23.1 January 03

23.1.1 Birth of J.R.R Tolkien



John Ronald Reuel Tolkien, (3 January 1892 – 2 September 1973) was an English writer, poet, philologist, and university professor who is best known as the author of the classic high fantasy works *The Hobbit*, *The Lord of the Rings*, and *The Silmarillion*.

He served as the Rawlinson and Bosworth Professor of Anglo-Saxon and Fellow of Pembroke College, Oxford, from 1925 to 1945 and Merton Professor of English Language and Literature and Fellow of Merton College, Oxford, from 1945 to 1959. He was at one time a close friend of C. S. Lewis, they were both members of the informal literary discussion group known as the Inklings. Tolkien was appointed a Commander of the Order of the British Empire by Queen Elizabeth II on 28 March 1972.

1896

24.1 April 06-15

24.1.1 First international Olympic Games



The 1896 Summer Olympics officially known as the Games of the I Olympiad, was the first international Olympic Games held in modern history. Organised by the International Olympic Committee (IOC), which had been created by Pierre de Coubertin, it was held in Athens, Greece, from 6 to 15 April 1896.

Winners were given a silver medal, while runners-up received a copper medal. Retroactively, the IOC has converted these to gold and silver, and awarded bronze medals to third placed athletes. Ten of the 14 participating nations earned medals. The United States won the most gold medals, 11, host nation Greece won the most medals overall, 46. The highlight for the Greeks was the marathon victory by their compatriot Spyridon Louis. The most successful competitor was German wrestler and gymnast Carl Schuhmann, who won four events.

Part XII

20th Century

Year 1903

25.1 June 16

25.1.1 Ford is founded



Henry Ford's first attempt at a car company under his own name was the Henry Ford Company on November 3, 1901, which became the Cadillac Motor Company on August 22, 1902, after Ford left with the rights to his name. The Ford Motor Company was launched in a converted factory in 1903 with \$28,000 in cash from twelve investors, most notably John and Horace Dodge (who would later found their own car company). The first president was not Ford, but local banker John S. Gray, who was chosen to assuage investors' fears that Ford would leave the new company the way he had left its predecessor. During its early years, the company produced just a few cars a day at its factory on Mack Avenue and later its factory on Piquette Avenue in Detroit, Michigan. Groups of two or three men worked on each car, assembling it from parts made mostly by supplier companies contracting for Ford. Within a decade, the company would lead the world in the expansion and refinement of the assembly line concept, and Ford soon brought much of the part production in-house in a vertical integration that seemed a better path for the era.

25.2 December 17

25.2.1 First flight by the Wright brothers



In camp at Kill Devil Hills, they endured weeks of delays caused by broken propeller shafts during engine tests. After the shafts were replaced (requiring two trips back to Dayton), Wilbur won a coin toss and made a three-second flight attempt on December 14, 1903, stalling after takeoff and causing minor damage to the Flyer. (Because December 13, 1903, was a Sunday, the brothers did not make any attempts that day, even though the weather was good, so their first powered test flight happened on the 121st anniversary of the first test flight that the Montgolfier brothers had done, on December 14, 1782.) In a message to their family, Wilbur referred to the trial as having "only partial success", stating "the power is ample, and but for a trifling error due to lack of experience with this machine and this method of starting, the machine would undoubtedly have flown beautifully." Following repairs, the Wrights finally took to the air on December 17, 1903, making two flights each from level ground into a freezing headwind gusting to 27 miles per hour (43 km/h). The first flight, by Orville at 10:35 am, of 120 feet (37 m) in 12 seconds, at a speed of only 6.8 miles per hour (10.9 km/h) over the ground, was recorded in a famous photograph. The next two flights covered approximately 175 and 200 feet (53 and 61 m), by Wilbur and Orville respectively. Their altitude was about 10 feet (3.0 m) above the ground. The following is Orville Wright's account of the final flight of the day:

Year 1907

26.1 August 31

26.1.1 The Triple Entente is created



The Triple Entente refers to the understanding linking the Russian Empire, the French Third Republic, and United Kingdom of Great Britain and Ireland after the signing of the Anglo-Russian Entente on 31 August 1907. The understanding between the three powers, supplemented by agreements with Japan and Portugal, was a powerful counterweight to the Triple Alliance of Germany, Austria-Hungary, and Italy.

However, Italy did not side with Germany and Austria during World War I and joined the Entente instead in the Treaty of London (1915).

Historians continue to debate the importance of the alliance system as one of the causes of World War I. At the start of World War I in 1914, all three Triple Entente members entered it as Allied Powers against the Central Powers: Germany and Austria-Hungary.

However, the Triple Entente, unlike the Triple Alliance or the Franco-Russian Alliance, was not an alliance of mutual defense. Thus, Britain felt free to make its own foreign policy decisions in the 1914 July Crisis.

1912

27.1 April 14-15

27.1.1 Sinking of the RMS Titanic



RMS Titanic sank in the early morning of 15 April 1912 in the North Atlantic Ocean, four days into the ship's maiden voyage from Southampton to New York City. The largest passenger liner in service at the time, Titanic had an estimated 2,224 people on board when she struck an iceberg at around 23:40 (ship's time) on Sunday, 14 April 1912. Her sinking two hours and forty minutes later at 02:20 (ship's time; 05:18 GMT) on Monday, 15 April, resulted in the deaths of more than 1,500 people, which made it one of the deadliest peacetime maritime disasters in history.

On 14 April 1912, Titanic's radio operators received six messages from other ships warning of drifting ice, which passengers on Titanic had begun to notice during the afternoon. The ice conditions in the North Atlantic were the worst for any April in the previous 50 years (which was the reason why the lookouts were unaware that they were about to steam into a line of drifting ice several miles wide and many miles long). Not all of these messages were relayed by the radio operators. At the time, all wireless operators on ocean liners were employees of the Marconi's Wireless Telegraph Company and not members of their ship's crew; their primary responsibility was to send messages for the passengers, with weather reports as a secondary concern.

1914

28.1 June 28

28.1.1 Assassination of Franz Ferdinand



The assassination of Archduke Franz Ferdinand of Austria, heir presumptive to the Austro-Hungarian throne, and his wife Sophie, Duchess of Hohenberg, occurred on 28 June 1914 in Sarajevo when they were mortally wounded by Gavrilo Princip. Princip was one of a group of six assassins (five Serbs and one Bosniak) coordinated by Danilo Ilić, a Bosnian Serb and a member of the Black Hand secret society. The political objective of the assassination was to break off Austria-Hungary's South Slav provinces so they could be combined into a Yugoslavia. The assassins' motives were consistent with the movement that later became known as Young Bosnia. The assassination led directly to the First World War when Austria-Hungary subsequently issued an ultimatum to the Kingdom of Serbia, which was partially rejected. Austria-Hungary then declared war, triggering actions leading to war between most European states.

28.2 July 28

28.2.1 Austria-Hungary declares war on Serbia (World War I¹ begins)



On July 28, 1914, one month to the day after Archduke Franz Ferdinand of Austria and his wife were killed by a Serbian nationalist in Sarajevo, Austria-Hungary declares war on Serbia, effectively beginning the First World War.

Threatened by Serbian ambition in the tumultuous Balkans region of Europe, Austria-Hungary determined that the proper response to the assassinations was to prepare for a possible military invasion of Serbia. After securing the unconditional support of its powerful ally, Germany, Austria-Hungary presented Serbia with a rigid ultimatum on July 23, 1914, demanding, among other things, that all anti-Austrian propaganda within Serbia be suppressed, and that Austria-Hungary be allowed to conduct its own investigation into the archduke's killing. Though Serbia effectively accepted all of Austria's demands except for one, the Austrian government broke diplomatic relations with the other country on July 25 and went ahead with military preparedness measures. Meanwhile, alerted to the impending crisis, Russia—Serbia's own mighty supporter in the Balkans—began its own initial steps towards military mobilization against Austria.

¹Documentary: They Shall Not Grow Old (2018)

28.3 July 31

28.3.1 Russia mobilizes its army in defense of Serbia

Reacting to the Austrian attack on Serbia, Russia begins full mobilization of its troops. Germany demands that it stop.

28.4 August 01

28.4.1 Germany declares war on Russia

Germany declares war on Russia. France and Belgium begin full mobilization.

28.5 August 03

28.5.1 Germany declares war on France

Germany declares war on France, and invades neutral Belgium. Britain then sends an ultimatum, rejected by the Germans, to withdraw from Belgium.

28.6 August 04

28.6.1 Germany invades neutral Belgium



The German invasion of Belgium was a military campaign which began on 4 August 1914. Earlier, on 24 July, the Belgian government had announced that if war came it would uphold its historic neutrality. The Belgian government mobilised its armed forces on 31 July and a state of heightened alert (Kriegsgefahr) was proclaimed in Germany. On 2 August, the German government sent an ultimatum to Belgium, demanding passage through the country and German forces invaded Luxembourg. Two days later, the Belgian Government refused the demands and the British Government guaranteed military support to Belgium. The German government declared war on Belgium on 4 August, troops crossed the border and began the Battle of Liège.

28.7 August 05

28.7.1 Battle of Liège



The Battle of Liège (French: Bataille de Liège) was the opening engagement of the German invasion of Belgium and the first battle of the First World War. The attack on Liège, a town protected by the Fortified position of Liège, a ring fortress built from the late 1880s to the early 1890s, began on 5 August 1914 and lasted until 16 August, when the last fort surrendered. The siege of Liège may have delayed the German invasion of France by 4–5 days. Railways in the Meuse river valley needed by the German armies in eastern Belgium were closed for the duration of the siege and German

troops did not appear in strength before the Fortified Position of Namur at the confluence of the Sambre and Meuse rivers until 20 August.

28.8 August 15-24

28.8.1 Battle of Cer



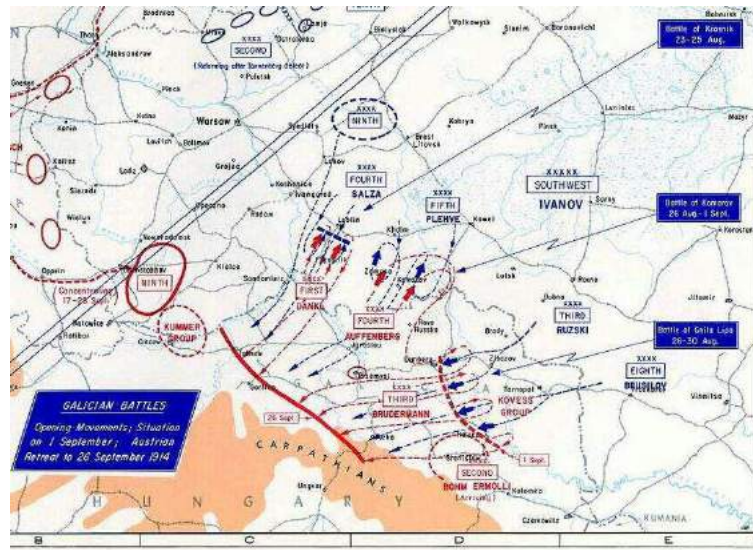
The Battle of Cer was a military campaign fought between Austria-Hungary and Serbia in August 1914 during the early stages of the Serbian Campaign of the First World War. It took place around Cer Mountain and several surrounding villages, as well as the town of Šabac.

The battle, part of the first Austro-Hungarian invasion of Serbia, began on the night of 15 August when elements of the Serbian 1st Combined Division encountered Austro-Hungarian outposts that had been established on the slopes of Cer Mountain earlier in the invasion. The clashes that followed escalated into a battle for control over several towns and villages near the mountain, especially Šabac. On 19 August, the morale of the Austro-Hungarians collapsed and thousands of soldiers retreated back into Austria-Hungary, many of them drowning in the Drina River as they fled in panic. On 24 August the Serbs re-entered Šabac, marking the end of the battle. Serbian casualties after nearly ten days of fighting were 3,000–5,000 killed and 15,000 wounded. Those of the Austro-Hungarians were significantly higher, with 6,000–10,000 soldiers killed, 30,000 wounded and 4,500 taken as prisoners of war. The Serb victory over the Austro-Hungarians

marked the first Allied victory over the Central Powers in the First World War, and the first aerial dogfight of the war took place during the battle.

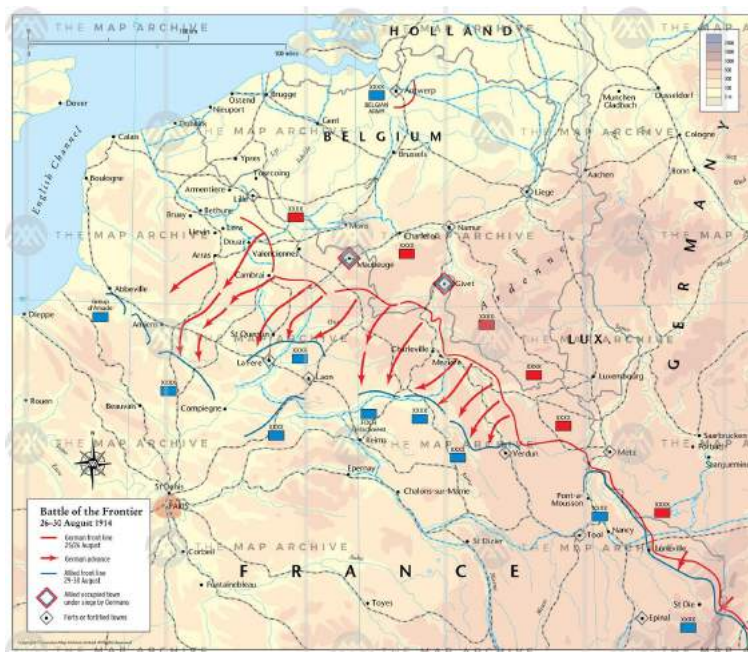
28.9 August-September

28.9.1 Battle of Galicia



The Battle of Galicia, also known as the Battle of Lemberg, was a major battle between Russia and Austria-Hungary during the early stages of World War I in 1914. In the course of the battle, the Austro-Hungarian armies were severely defeated and forced out of Galicia, while the Russians captured Lemberg and, for approximately nine months, ruled Eastern Galicia until their defeat at Gorlice and Tarnów.

28.9.2 Battle of Frontiers



The Battle of the Frontiers (Dutch: Slag der Grenzen; French: Bataille des Frontières; German: Grenzschlachten) was a series of battles fought along the eastern frontier of France and in southern Belgium, shortly after the outbreak of the First World War. The battles resolved the military strategies of the French Chief of Staff General Joseph Joffre with Plan XVII and an offensive interpretation of the German Aufmarsch II deployment plan by Helmuth von Moltke the Younger. The German concentration on the right (northern) flank, to wheel through Belgium and attack the French in the rear, was delayed by the movement of French Fifth Army (General Charles Lanrezac) towards the north-west to intercept them and the presence of the British Expeditionary Force (BEF) on his left flank. The Franco-British were driven back by the Germans, who were able to invade northern France. French and British rearguard actions delayed the German advance, allowing the French time to transfer forces on the eastern frontier to the west to defend Paris, resulting in the First Battle of the Marne.

28.10 December 25

28.10.1 The Christmas truce



The Christmas truce occurred during the relatively early period of the war (month 5 of 51). Hostilities had entered somewhat of a lull as leadership on both sides reconsidered their strategies following the stalemate of the Race to the Sea and the indecisive result of the First Battle of Ypres. In the week leading up to the 25th, French, German, and British soldiers crossed trenches to exchange seasonal greetings and talk. In some areas, men from both sides ventured into no man's land on Christmas Eve and Christmas Day to mingle and exchange food and souvenirs. There were joint burial ceremonies and prisoner swaps, while several meetings ended in carol-singing. Men played games of football with one another, giving one of the most memorable images of the truce. Peaceful behavior was not ubiquitous; fighting continued in some sectors, while in others the sides settled on little more than arrangements to recover bodies.

1917

29.1 February 23 - March 03

29.1.1 Russian Revolution (February)

29.2 October 25-26

29.2.1 Russian Revolution (October)

1918

30.1 January

30.1.1 Spanish flu

30.2 November 11

30.2.1 World War I ends¹

30.3 October 29

30.3.1 The German Revolution



The German Revolution or November Revolution (German: Novemberrevolution) was a civil conflict in the German Empire at the end of the First World War that resulted in the replacement of the German federal constitutional monarchy with a democratic parliamentary republic that later became known as the Weimar Republic. The revolutionary period lasted

¹Documentary: They Shall Not Grow Old (2018)

from November 1918 until the adoption in August 1919 of the Weimar Constitution.

1919

31.1 June 28

31.1.1 Treaty of Versailles

1922

32.1 November 04

32.1.1 The discovery of Tutankhamun

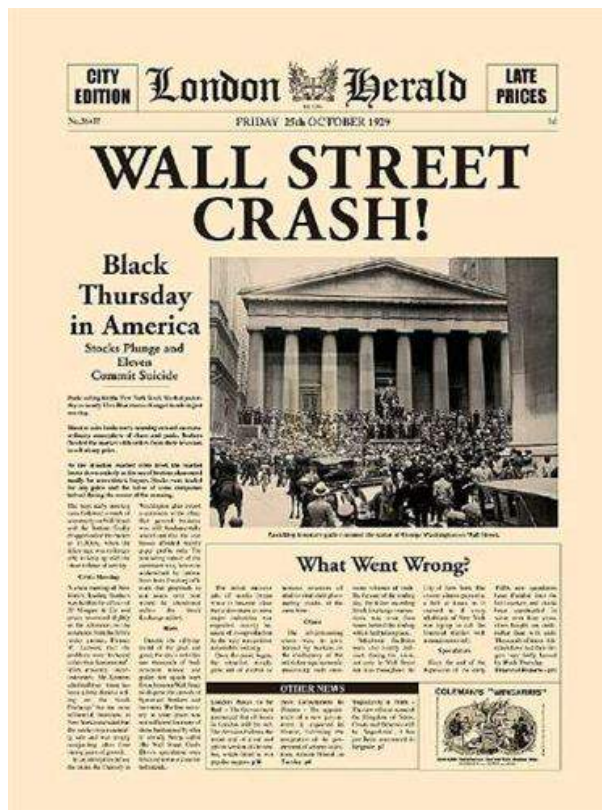


In 1907, Egyptologist and archaeologist Howard Carter was hired by George Herbert, the 5th Earl of Carnarvon to oversee excavations in Egypt's Valley of the Kings. Carter had built a reputation for scrupulously recording and preserving discoveries. Carter searched the valley for years with little to show for it, which drew the ire of his employer. In 1922, Lord Carnarvon told Carter that he had only one more season of digging before his funding would be ended. Revisiting a previously abandoned dig site at a group of huts, Carter started digging again, desperate for a breakthrough. On Nov. 4, 1922, his crew discovered a step carved into the rock. By the end of the next day, a whole staircase had been uncovered. Carter wired Carnarvon, imploring him to come at once. On Nov. 26, with Carnarvon at his side, Carter chipped open a small breach in the corner of the doorway at the end of the stairs. The team had discovered the tomb of Tutankhamun, the boy king who ruled Egypt from about 1332 to 1323 BC.

1929

33.1 October 24 (Black Thursday)

33.1.1 The Wall Street Crash



The Wall Street Crash of 1929, also known as the Stock Market Crash of 1929 or the Great Crash, is the stock market crash that occurred in late October, 1929. It started on October 24 ("Black Thursday") and continued until October 29, 1929 ("Black Tuesday"), when share prices on the New York Stock Exchange collapsed.

1930

34.1 March 12

34.1.1 Salt March¹



The Salt March, also known as the Dandi March and the Dandi Satyagraha, was an act of nonviolent civil disobedience in colonial India led by Mohandas Karamchand Gandhi to produce salt from the seawater in the coastal village of Dandi (now in Gujarat), as was the practice of the local populace until British officials introduced taxation on salt production, deemed their sea-salt reclamation activities illegal, and then repeatedly used force to stop it. The 24-day march lasted from 12 March 1930 to 6 April 1930 as a direct action campaign of tax resistance and nonviolent protest against the British salt monopoly. It gained worldwide attention which gave impetus to the Indian independence movement and started the nationwide Civil Disobedience Movement. Mahatma Gandhi started this march with 78 of his trusted volunteers. Walking ten miles a day for 24 days, the march spanned over 240 miles.

The march was the most significant organised challenge to British authority since the Non-cooperation movement of 1920–22, and directly followed the Purna Swaraj declaration of sovereignty and self-rule by the Indian National Congress on 26 January 1930.

¹Movie/Documentary: Gandhi (1982)

34.2 July 13-30

34.2.1 First FIFA World Cup



The 1930 FIFA World Cup was the inaugural FIFA World Cup, the world championship for men's national association football teams. It took place in Uruguay from 13 to 30 July 1930. FIFA, football's international governing body, selected Uruguay as host nation, as the country would be celebrating the centenary of its first constitution, and the Uruguay national football team had successfully retained their football title at the 1928 Summer Olympics. All matches were played in the Uruguayan capital, Montevideo, the majority at the Estadio Centenario, which was built for the tournament.

1933

35.1 December 26

35.1.1 Nissan is founded



Nissan Motor Co., Ltd. is a Japanese multinational automobile manufacturer headquartered in Nishi-ku, Yokohama. The company sells its cars under the Nissan, Infiniti, and Datsun brands with in-house performance tuning products labelled Nismo. The company traces its name to the Nissan zaibatsu, now called Nissan Group.

1934

36.1 October 16

36.1.1 The Long March

The Long March (October 1934 – October 1935) was a military retreat undertaken by the Red Army of the Communist Party of China, the forerunner of the People's Liberation Army, to evade the pursuit of the Kuomintang (KMT or Chinese Nationalist Party) army. There was not one Long March, but a series of marches, as various Communist armies in the south escaped to the north and west. The best known is the march from Jiangxi province which began in October 1934. The First Front Army of the Chinese Soviet Republic, led by an inexperienced military commission, was on the brink of annihilation by Generalissimo Chiang Kai-shek's troops in their stronghold in Jiangxi province. The Communists, under the eventual command of Mao Zedong and Zhou Enlai, escaped in a circling retreat to the west and north, which reportedly traversed over 9,000 kilometers (5600 miles) over 370 days. The route passed through some of the most difficult terrain of western China by traveling west, then north, to Shaanxi.

1939

37.1 September 01

37.1.1 World War II begins

1940

38.1 May 15

38.1.1 McDonald's is founded ¹



McDonald's is an American fast food company, founded in 1940 as a restaurant operated by Richard and Maurice McDonald, in San Bernardino, California, United States. They rechristened their business as a hamburger stand, and later turned the company into a franchise, with the Golden Arches logo being introduced in 1953 at a location in Phoenix, Arizona. In 1955, Ray Kroc, a businessman, joined the company as a franchise agent and proceeded to purchase the chain from the McDonald brothers. McDonald's had its original headquarters in Oak Brook, Illinois, but moved its global headquarters to Chicago in early 2018.

¹Movie/Documentary: The Founder (2016)

1941

39.1 October 02

39.1.1 Battle of Moscow



The Battle of Moscow was a military campaign that consisted of two periods of strategically significant fighting on a 600 km (370 mi) sector of the Eastern Front during World War II. It took place between October 1941 and January 1942. The Soviet defensive effort frustrated Hitler's attack on Moscow, the capital and largest city of the Soviet Union. Moscow was one of the primary military and political objectives for Axis forces in their invasion of the Soviet Union.

The German strategic offensive, named Operation Typhoon, called for two pincer offensives, one to the north of Moscow against the Kalinin Front by the 3rd and 4th Panzer Armies, simultaneously severing the Moscow–Leningrad railway, and another to the south of Moscow Oblast against the Western Front south of Tula, by the 2nd Panzer Army, while the 4th Army advanced directly towards Moscow from the west. According to Andrew Roberts, Hitler's offensive towards the Soviet capital was nothing less than an 'all-out attack': "It is no exaggeration to state that the outcome of the Second World War hung in the balance during this massive attack"

39.2 December 07

39.2.1 Attack on Pearl Harbor



The Attack on Pearl Harbor was a surprise military strike by the Imperial Japanese Navy Air Service against the United States naval base at Pearl Harbor, Hawaii Territory, on the morning of December 7, 1941. The attack, also known as the Battle of Pearl Harbor, led to the United States' entry into World War II. The Japanese military leadership referred to the attack as the Hawaii Operation and Operation AI, and as Operation Z during its planning.

Japan intended the attack as a preventive action to keep the U.S. Pacific Fleet from interfering with its planned military actions in Southeast Asia against overseas territories of the United Kingdom, the Netherlands, and the United States. Over the course of seven hours there were coordinated Japanese attacks on the U.S.-held Philippines, Guam and Wake Island and on the British Empire in Malaya, Singapore, and Hong Kong.

1942

40.1 January 08

40.1.1 Birth of Stephen Hawking



Stephen William Hawking (8 January 1942 – 14 March 2018) was an English theoretical physicist, cosmologist, and author, who was director of research at the Centre for Theoretical Cosmology at the University of Cambridge at the time of his death. He was the Lucasian Professor of Mathematics at the University of Cambridge between 1979 and 2009.

His scientific works included a collaboration with Roger Penrose on gravitational singularity theorems in the framework of general relativity and the theoretical prediction that black holes emit radiation, often called Hawking radiation. Hawking was the first to set out a theory of cosmology explained by a union of the general theory of relativity and quantum mechanics. He was a vigorous supporter of the many-worlds interpretation of quantum mechanics.

1945

41.1 September 02

41.1.1 World War II ends



The war in Europe concluded with an invasion of Germany by the Western Allies and the Soviet Union, culminating in the capture of Berlin by Soviet troops, the suicide of Adolf Hitler and the German unconditional surrender on 8 May 1945. Following the Potsdam Declaration by the Allies on 26 July 1945 and the refusal of Japan to surrender under its terms, the United States dropped atomic bombs on the Japanese cities of Hiroshima and Nagasaki on 6 and 9 August respectively. With an invasion of the Japanese archipelago imminent, the possibility of additional atomic bombings, the Soviet entry into the war against Japan and its invasion of Manchuria, Japan announced its intention to surrender on 15 August 1945, cementing total victory in Asia for the Allies. Tribunals were set up by fiat by the Allies and war crimes trials were conducted in the wake of the war both against the Germans and the Japanese.

1946

42.1 May 07

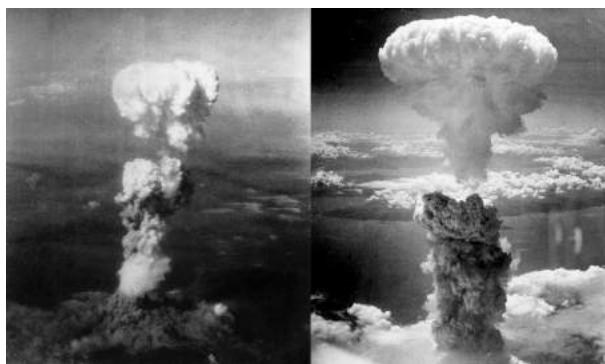
42.1.1 Sony is founded

The Sony logo is displayed in a large, bold, black serif font. Below it, the tagline "make.believe" is written in a smaller, lowercase, black sans-serif font.

Sony began in the wake of World War II. In 1946, Masaru Ibuka started an electronics shop in a department store building in Tokyo. The company started with a capital of 190,000 Yen and a total of eight employees. In May 1946, Ibuka was joined by Akio Morita to establish a company called Tokyo Tsushin Kogyo (Tōkyō Tsūshin Kōgyō) (Tokyo Telecommunications Engineering Corporation). The company built Japan's first tape recorder, called the Type-G. In 1958, the company changed its name to "Sony"

42.2 August 06 and 09

42.2.1 Bombing of Hiroshima and Nagasaki



During the final stage of World War II, the United States detonated two nuclear weapons over the Japanese cities of Hiroshima and Nagasaki on August 6 and 9, 1945, respectively. The United States dropped the bombs after obtaining the consent of the United Kingdom, as required by the Quebec Agreement. The two bombings killed 129,000–226,000 people, most of whom were civilians. They remain the only use of nuclear weapons in the history of armed conflict.

In the final year of the war, the Allies prepared for what was anticipated to be a very costly invasion of the Japanese mainland. This undertaking was preceded by a conventional and firebombing campaign that destroyed 67 Japanese cities. The war in Europe had concluded when Germany signed its instrument of surrender on May 8, 1945. As the Allies turned their full attention to the Pacific War, the Japanese faced the same fate. The Allies called for the unconditional surrender of the Imperial Japanese armed forces in the Potsdam Declaration on July 26, 1945—the alternative being “prompt and utter destruction”. The Japanese rejected the ultimatum and the war continued.

1947

43.1 August 14

43.1.1 The birth of Pakistan ¹



Pakistan, or the Islamic Republic of Pakistan as it is officially known, is a relatively young country, emerging on 14 August 1947. On 14 August 1947 the new independent nation of Pakistan was born, followed closely by India's independence on 15 August 1947.

¹Movie/Documentary: Gandhi (1982)

43.2 August 15

43.2.1 Independence of India ²



European traders had established outposts in the Indian subcontinent by the 17th century. Through overwhelming military strength, the British East India company subdued local kingdoms and established themselves as the dominant force by the 18th century. Following the First War of Independence of 1857, the Government of India Act 1858 led the British Crown to assume direct control of India. In the decades following, civic society gradually emerged across India, most notably the Indian National Congress Party, formed in 1885. The period after World War I was marked by British reforms such as the Montagu–Chelmsford Reforms, but it also witnessed the enactment of the repressive Rowlatt Act and calls for self-rule by Indian activists. The discontent of this period crystallised into nationwide non-violent movements of non-cooperation and civil disobedience, led by Mohandas Karamchand Gandhi

During the 1930s, the reform was gradually legislated by the British; Congress won victories in the resulting elections. The next decade was beset with political turmoil: Indian participation in World War II, the Congress' final push for non-cooperation, and an upsurge of Muslim nationalism led by the All-India Muslim League. The escalating political tension was capped by Independence in 1947. The jubilation was tempered by the bloody partition of the subcontinent into India and Pakistan.

²Movie/Documentary: Gandhi (1982)

1948

44.1 January 30

44.1.1 Assassination of Mahatma Gandhi¹



Mahatma Gandhi was assassinated on 30 January 1948 in the compound of Birla House (now Gandhi Smriti), a large mansion. His assassin was Nathuram Vinayak Godse, a freedom fighter, advocate of Indian nationalism, a member of the political party the Hindu Mahasabha, and a past member of the Rashtriya Swayamsevak Sangh (RSS), which he left in 1940 to form an armed organization. Godse had planned the assassination.

Gandhi had just walked up the low steps to the raised lawn behind Birla House where he conducted his multi-faith prayer meetings every evening. Godse stepped out from the crowd flanking the path leading to the dais and into Gandhi's path, firing three bullets at point-blank range. Gandhi instantly fell to the ground. Gandhi was carried back to his room in Birla House from where a representative emerged some time later to announce that he had died.

¹Movie/Documentary: Gandhi (1982)

1949

45.1

45.1.1 LEGO formed

LEGO

The Lego Group began in the workshop of Ole Kirk Christiansen (1891–1958), a carpenter from Billund, Denmark, who began making wooden toys in 1932. In 1934, his company came to be called "Lego", derived from the Danish phrase *leg godt*, which means "play well". In 1947, Lego expanded to begin producing plastic toys. In 1949 Lego began producing, among other new products, an early version of the now familiar interlocking bricks, calling them "Automatic Binding Bricks". These bricks were based on the Kiddicraft Self-Locking Bricks, which had been patented in the United Kingdom in 1939 and released in 1947. Lego had received a sample of the Kiddicraft bricks from the supplier of an injection-molding machine that it purchased. The bricks, originally manufactured from cellulose acetate, were a development of the traditional stackable wooden blocks of the time.

The Lego Group's motto is *det bedste er ikke for godt* which means roughly "only the best is the best" (more literally "the best is never too good"). This motto, which is still used today, was created by Christiansen to encourage his employees never to skimp on quality, a value he believed in strongly. By 1951 plastic toys accounted for half of the Lego company's output, even though the Danish trade magazine *Legetøjs-Tidende* ("Toy-Times"), visiting the Lego factory in Billund in the early 1950s, felt that plastic would never be able to replace traditional wooden toys. Although a common sentiment, Lego toys seem to have become a significant exception to the dislike of plastic in children's toys, due in part to the high standards set by Ole Kirk.

1950

46.1 June 25

46.1.1 The Korean war



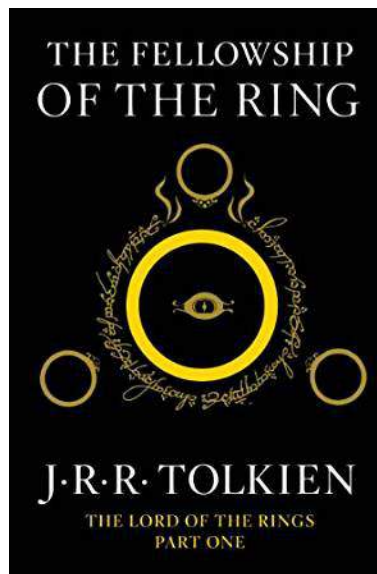
The Korean War (25 June 1950 – 27 July 1953) was a war between North Korea (with the support of China and the Soviet Union) and South Korea (with the principal support of the United States). The war began on 25 June 1950 when North Korea invaded South Korea following a series of clashes along the border.

As a product of the Cold War between the Soviet Union and the United States, Korea had been split into two sovereign states. Both governments claimed to be the sole legitimate government of all of Korea, and neither accepted the border as permanent. The conflict escalated into open warfare when North Korean forces—supported by the Soviet Union and China—moved into the south on 25 June 1950. The United Nations Security Council authorized the formation and dispatch of UN forces to Korea to repel what was recognized as a North Korean invasion. Twenty-one countries of the United Nations eventually contributed to the UN force, with the United States providing around 90% of the military personnel.

1954

47.1 July 29

47.1.1 "LOTR: The Fellowship of the Ring"¹ published



The Fellowship of the Ring is the first of three volumes of the epic novel The Lord of the Rings by the English author J. R. R. Tolkien. It is followed by The Two Towers and The Return of the King. It takes place in the fictional universe of Middle-earth. It was originally published on 29 July 1954 in the United Kingdom.

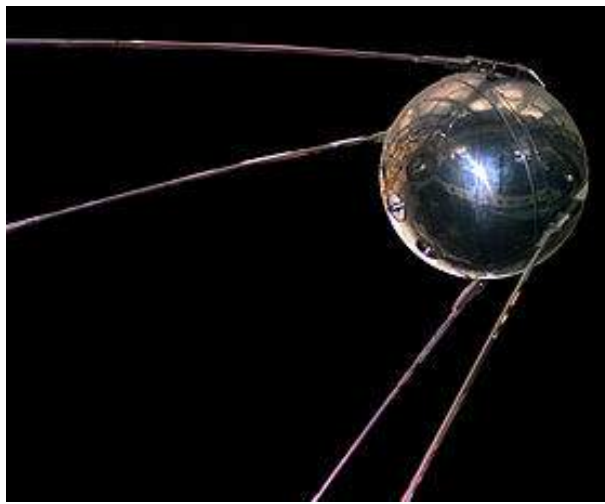
The volume consists of a foreword, in which the author discusses his writing of The Lord of the Rings, a prologue titled "Concerning Hobbits, and other matters", and the main narrative in Book I and Book II.

¹The Lord of the Rings: The Fellowship of the Ring (2001)

1957

48.1 October 04

48.1.1 Launch of Sputnik 1 (The beginning of space age)



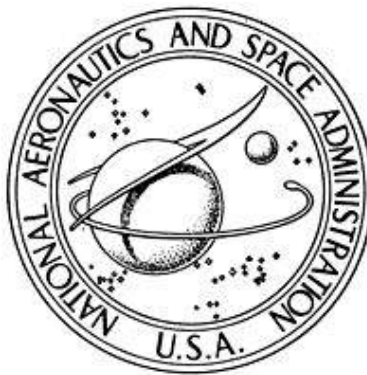
Sputnik 1 was the first artificial Earth satellite.[6] The Soviet Union launched it into an elliptical low Earth orbit on 4 October 1957, orbiting for three weeks before its batteries died, then silently for two more months before falling back into the atmosphere. It was a 58 cm (23 in) diameter polished metal sphere, with four external radio antennas to broadcast radio pulses. Its radio signal was easily detectable even by radio amateurs,[7] and the 65 degrees inclination and duration of its orbit made its flight path cover virtually the entire inhabited Earth. This surprise success precipitated the American Sputnik crisis and triggered the Space Race, a part of the Cold War. The launch ushered in new political, military, technological, and scientific developments.[8][9]

Tracking and studying Sputnik 1 from Earth provided scientists with valuable information. The density of the upper atmosphere could be deduced from its drag on the orbit, and the propagation of its radio signals gave data about the ionosphere.

1958

49.1 July 29

49.1.1 NASA is formed



NASA was established in 1958, succeeding the National Advisory Committee for Aeronautics (NACA). The new agency was to have a distinctly civilian orientation, encouraging peaceful applications in space science. Since its establishment, most US space exploration efforts have been led by NASA, including the Apollo Moon landing missions, the Skylab space station, and later the Space Shuttle. NASA is supporting the International Space Station and is overseeing the development of the Orion Multi-Purpose Crew Vehicle, the Space Launch System and Commercial Crew vehicles. The agency is also responsible for the Launch Services Program which provides oversight of launch operations and countdown management for unmanned NASA launches.

NASA science is focused on better understanding Earth through the Earth Observing System; advancing heliophysics through the efforts of the Science Mission Directorate's Heliophysics Research Program; exploring bodies throughout the Solar System with advanced robotic spacecraft missions such as New Horizons; and researching astrophysics topics, such as the Big Bang, through the Great Observatories and associated programs

1962

50.1 October 16-28

50.1.1 The Cuban Missile Crisis



The Cuban Missile Crisis, also known as the October Crisis of 1962, the Caribbean Crisis, or the Missile Scare, was a 13-day (October 16–28, 1962) confrontation between the United States and the Soviet Union initiated by American ballistic missile deployment in Italy and Turkey with consequent Soviet ballistic missile deployment in Cuba. The confrontation is often considered the closest the Cold War came to escalating into a full-scale nuclear war.

In response to the failed Bay of Pigs Invasion of 1961 and the presence of American Jupiter ballistic missiles in Italy and Turkey, Soviet leader Nikita Khrushchev agreed to Cuba's request to place nuclear missiles on the island to deter a future invasion. An agreement was reached during a secret meeting between Khrushchev and Fidel Castro in July 1962, and construction of a number of missile launch facilities started later that summer.

50.2 November 03

50.2.1 Birth of Gabe Newell



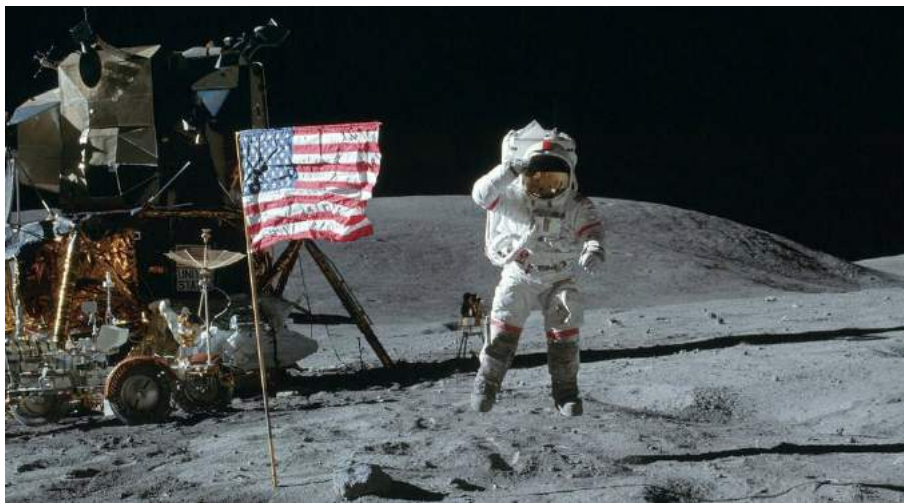
Gabe Logan Newell (born November 3, 1962), commonly known by his nickname Gabe, is an American computer programmer and businessman best known as the co-founder of the video game development and digital distribution company Valve Corporation. Born in Colorado, he attended Harvard University in the early 1980s, but dropped out and soon went to work for the American technology company Microsoft, where he spent the next decade working as a producer for some of their early Windows operating systems.

During his time at Microsoft, Newell, along with fellow co-worker Mike Harrington, were impressed by computer games that were being released in the mid-1990s, such as id Software's *Doom* and *Quake*. Fully convinced that video games were the future of entertainment, and intrigued by the prospect of having his own game development studio, Newell, along with Harrington, left Microsoft in 1996 to found Valve, of which he remains president.

1969

51.1 July 20

51.1.1 Landing on The Moon (Apollo 11)

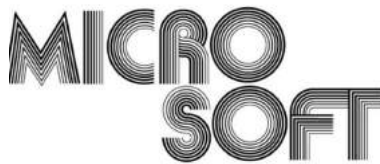


Apollo 11 was the spaceflight that landed the first two people on the Moon. Commander Neil Armstrong and Lunar Module Pilot Buzz Aldrin, both American, landed the lunar module Eagle on July 20, 1969, at 20:17 UTC. Armstrong became the first person to step onto the lunar surface six hours after landing on July 21 at 02:56:15 UTC; Aldrin joined him about 20 minutes later. They spent about two and a quarter hours together outside the spacecraft, and collected 47.5 pounds (21.5 kg) of lunar material to bring back to Earth. Command Module Pilot Michael Collins piloted the command module Columbia alone in lunar orbit while they were on the Moon's surface. Armstrong and Aldrin spent 21.5 hours on the lunar surface before rejoining Columbia in lunar orbit.

1975

52.1 April 04

52.1.1 Microsoft is founded



Childhood friends Bill Gates and Paul Allen sought to make a business utilizing their shared skills in computer programming. In 1972 they founded their first company, named Traf-O-Data, which sold a rudimentary computer to track and analyze automobile traffic data. While Gates enrolled at Harvard, Allen pursued a degree in computer science at Washington State University, though he later dropped out of school to work at Honeywell. The January 1975 issue of Popular Electronics featured Micro Instrumentation and Telemetry Systems's (MITS) Altair 8800 microcomputer, which inspired Allen to suggest that they could program a BASIC interpreter for the device. After a call from Gates claiming to have a working interpreter, MITS requested a demonstration. Since they didn't yet have one, Allen worked on a simulator for the Altair while Gates developed the interpreter. Although they developed the interpreter on a simulator and not the actual device, it worked flawlessly when they (in March 1975) demonstrated the interpreter to MITS in Albuquerque, New Mexico. MITS agreed to distribute it, marketing it as Altair BASIC. Gates and Allen officially established Microsoft on April 4, 1975, with Gates as the CEO. The original name of "Micro-Soft" was suggested by Allen. In August 1977 the company formed an agreement with ASCII Magazine in Japan, resulting in its first international office, "ASCII Microsoft". Microsoft moved to a new home in Bellevue, Washington in January 1979.

52.2 November

52.2.1 Moroccan Green March

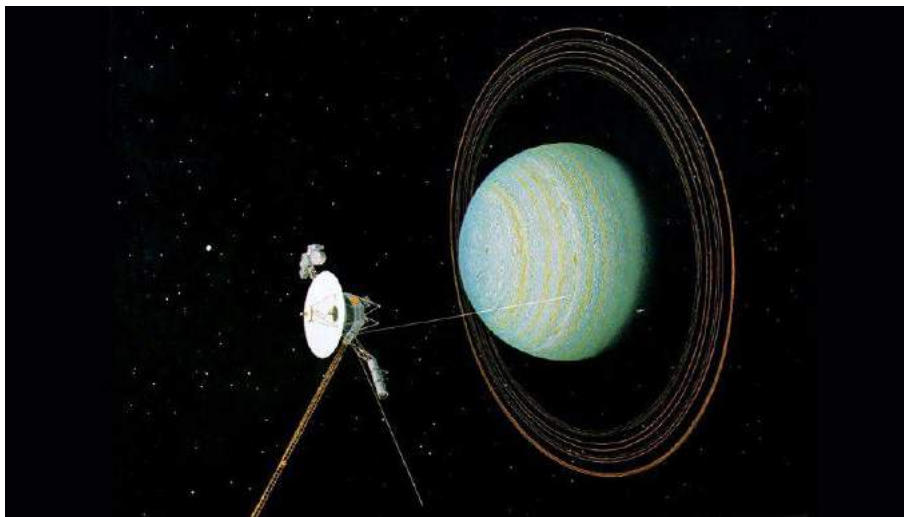


The Green March was a strategic mass demonstration in November 1975, coordinated by the Moroccan government, to force Spain to hand over the disputed, autonomous semi-metropolitan province of Spanish Sahara to Morocco. The demonstration of some 350,000 Moroccans advanced several kilometres into the Western Sahara territory, escorted by nearly 20,000 Moroccan troops, and meeting very little response by the Sahrawi Polisario Front. Nevertheless, the events quickly escalated into a fully waged war between Morocco and the militias of the Polisario, the Western Sahara War, which would last for 16 years. Morocco later gained control over most of the former Spanish Sahara, which it continues to hold.

1977

53.1 August 20 to September 05

53.1.1 Beginning of the Voyager program ¹



The Voyager program is an American scientific program that employs two robotic probes, Voyager 1 and Voyager 2, to study the outer Solar System. The probes were launched in 1977 to take advantage of a favorable alignment of Jupiter, Saturn, Uranus and Neptune. Although their original mission was to study only the planetary systems of Jupiter and Saturn, Voyager 2 continued on to Uranus and Neptune. The Voyagers now explore the outer boundary of the heliosphere in interstellar space; their mission has been extended three times and they continue to transmit useful scientific data. Neither Uranus nor Neptune has been visited by a probe other than Voyager 2.

¹Documentary: The Farthest (2017)

1979

54.1 December 25

54.1.1 Egypt begins major restoration of the Sphinx



The Great Sphinx of Giza, guardian of the Pyramids, is being shored up with limestone blocks in the most extensive repairs since the Romans worked on it more than 2,000 years ago. Chemical processes caused by wind, water and the sun have eroded the Sphinx since it was chiseled out of bedrock 4,600 years ago. Some Egyptologists say the erosion, if not stopped, could eventually cause the head to topple. But they are reluctant to predict when. Egyptian stonemasons arrived at the Sphinx recently, set up scaffolding along its right flank and crawled across the body to prepare for attaching a sort of stone corset.

1983

55.1 November 10

55.1.1 Windows announced



Microsoft Windows was announced by Bill Gates on November 10, 1983. Microsoft introduced Windows as a graphical user interface for MS-DOS, which had been introduced a couple of years earlier. In the 1990s, the product line evolved from an operating environment into a fully complete, modern operating system over two lines of development, each with their own separate codebase.

The first versions of Windows (1.0 through to 3.11) were graphical shells that run from MS-DOS; later on, Windows 95, though still being based on MS-DOS, was its own operating system, using a 16-bit DOS-based kernel and a 32-bit user space. Windows 95 introduced many features that have been part of the product ever since, including the Start menu, the taskbar, and Windows Explorer (renamed File Explorer in Windows 8). In 1997, Microsoft released Internet Explorer 4 which included the (at the time) controversial Windows Desktop Update. It aimed to integrate Internet Explorer and the web into the user interface and also brought many new features into Windows, such as the ability to display JPEG images as the desktop wallpaper and single window navigation in Windows Explorer.

1986

56.1 April 25-26

56.1.1 Chernobyl disaster



The Chernobyl disaster, also referred to as the Chernobyl accident, was a catastrophic nuclear accident. It occurred on 25–26 April 1986 in the No. 4 light water graphite moderated reactor at the Chernobyl Nuclear Power Plant near the now-abandoned town of Pripyat, in northern Ukrainian Soviet Socialist Republic, Soviet Union, approximately 104 km (65 mi) north of Kiev.

The event occurred during a late-night safety test which simulated a station blackout power-failure, in the course of which safety systems were intentionally turned off. A combination of inherent reactor design flaws and the reactor operators arranging the core in a manner contrary to the checklist for the test, eventually resulted in uncontrolled reaction conditions. Water flashed into steam generating a destructive steam explosion and a subsequent open-air graphite fire. This fire produced considerable updrafts for about nine days. These lofted plumes of fission products into the atmosphere. The estimated radioactive inventory that was released during this very hot fire phase approximately equaled in magnitude the airborne fission products released in the initial destructive explosion. This radioactive material precipitated onto parts of the western USSR and Europe.

1989

57.1 March

57.1.1 Tim Berners-Lee invents the World Wide Web ¹



Tim Berners-Lee's vision of a global hyperlinked information system became a possibility by the second half of the 1980s. By 1985, the global Internet began to proliferate in Europe and the Domain Name System (upon which the Uniform Resource Locator is built) came into being. In 1988 the first direct IP connection between Europe and North America was made and Berners-Lee began to openly discuss the possibility of a web-like system at CERN. In March 1989 Berners-Lee issued a proposal to the management at CERN for a system called "Mesh" that referenced ENQUIRE, a database and software project he had built in 1980, which used the term "web" and described a more elaborate information management system based on links embedded in readable text: "Imagine, then, the references in this document all being associated with the network address of the thing to which they referred, so that while reading this document you could skip to them with a click of the mouse." Such a system, he explained, could be referred to using one of the existing meanings of the word hypertext, a term that he says was coined in the 1950s. There is no reason, the proposal continues, why such hypertext links could not encompass multimedia documents including graphics, speech and video, so that Berners-Lee goes on to use the term hypermedia.

¹Lo and Behold: Reveries of the Connected World (2016)

57.2 April 15 - June 04

57.2.1 Tiananmen Square Massacre



The 1989 Tiananmen Square protests, commonly known in mainland China as the June Fourth Incident, were student-led demonstrations in Beijing (the capital of the People's Republic of China) in 1989. More broadly, it refers to the popular national movement inspired by the Beijing protests during that period, sometimes called the '89 Democracy Movement. The protests were forcibly suppressed after Chinese Premier Li Peng declared martial law. In what became known in the West as the Tiananmen Square Massacre, troops with assault rifles and tanks fired at the demonstrators trying to block the military's advance towards Tiananmen Square. The number of civilian deaths has been estimated variously from 180 to 10,454.

57.3 November 09

57.3.1 Fall of the Berlin Wall



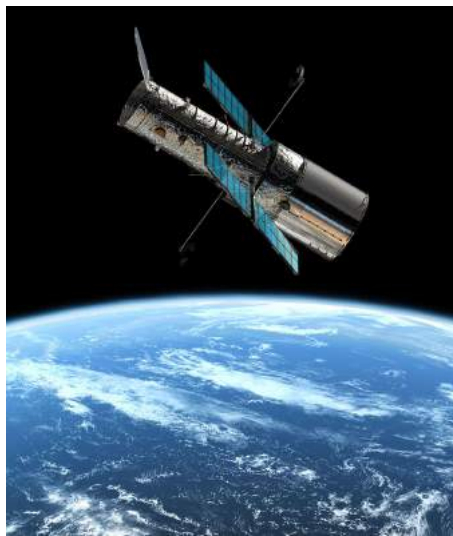
On November 9, 1989, as the Cold War began to thaw across Eastern Europe, the spokesman for East Berlin's Communist Party announced a change in his city's relations with the West. Starting at midnight that day, he said, citizens of the GDR were free to cross the country's borders. East and West Berliners flocked to the wall, drinking beer and champagne and chanting "Tor auf!" ("Open the gate!"). At midnight, they flooded through the checkpoints.

More than 2 million people from East Berlin visited West Berlin that weekend to participate in a celebration that was, one journalist wrote, "the greatest street party in the history of the world." People used hammers and picks to knock away chunks of the wall—they became known as "mauer-spechte," or "wall woodpeckers"—while cranes and bulldozers pulled down section after section. Soon the wall was gone and Berlin was united for the first time since 1945. "Only today," one Berliner spray-painted on a piece of the wall, "is the war really over."

1990

58.1 April 24

58.1.1 Launch of the Hubble Space Telescope



The Hubble Space Telescope (HST) is a space telescope that was launched into low Earth orbit in 1990 and remains in operation. Although not the first space telescope, Hubble is one of the largest and most versatile and is well known as both a vital research tool and a public relations boon for astronomy. The HST is named after the astronomer Edwin Hubble and is one of NASA's Great Observatories, along with the Compton Gamma Ray Observatory, the Chandra X-ray Observatory and the Spitzer Space Telescope.

58.2 August 02

58.2.1 Invasion of Kuwait



The Invasion of Kuwait on 2 August 1990 was a two-day operation conducted by Iraq against the neighboring state of Kuwait, which resulted in the seven-month-long Iraqi occupation of the country. This invasion and Iraq's subsequent refusal to withdraw from Kuwait by a deadline mandated by the United Nations[8] led to military intervention by a United Nations-authorized coalition of forces led by the United States. These events came to be known as the first Gulf War and resulted in the expulsion of Iraqi forces from Kuwait and the Iraqis setting 600 Kuwaiti oil wells on fire during their retreat.

1991

59.1 August 06

59.1.1 First Website is put online and available to the public

59.2 December 26

59.2.1 Dissolution of the Soviet Union



The dissolution of the Soviet Union occurred on 26 December 1991, officially granting self-governing independence to the Republics of the Union of Soviet Socialist Republics (USSR). It was a result of the declaration number 142-H of the Supreme Soviet of the Soviet Union.

1992

60.1 February 07

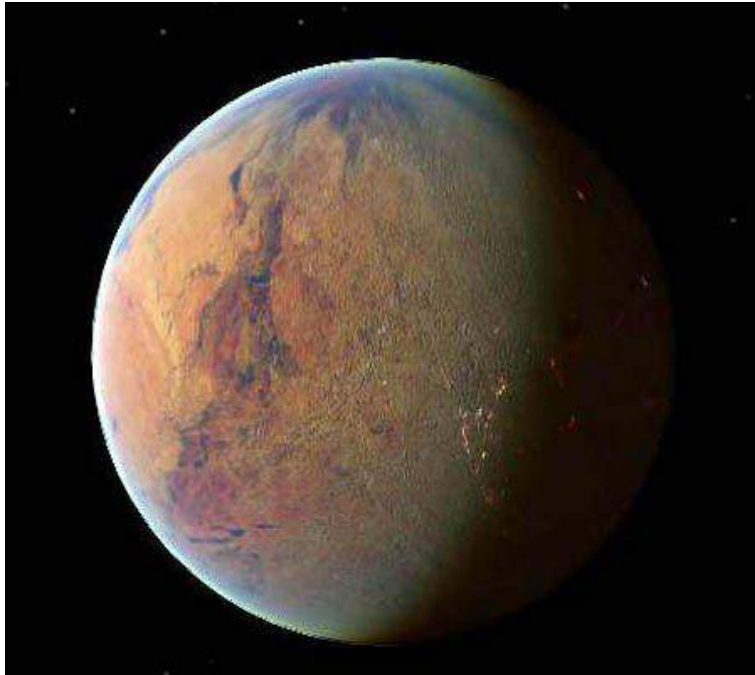
60.1.1 Maastricht Treaty creates the European Union



The Maastricht Treaty (officially the Treaty on European Union) was signed on 7 February 1992 by the members of the European Community in Maastricht, Netherlands to further European integration. On 9–10 December 1991, the same city hosted the European Council which drafted the treaty. The treaty founded the European Union and established its pillar structure which stayed in place until the Lisbon Treaty came into force in 2009. The treaty also greatly expanded the competences of the EEC/EU and led to the creation of the single European currency, the euro.

60.2 February 22

60.2.1 The first extra-solar planet is confirmed



The first suspected scientific detection of an exoplanet occurred in 1988. Shortly afterwards, the first confirmed detection came in 1992, with the discovery of several terrestrial-mass planets orbiting the pulsar PSR B1257+12

1994

61.1 April 26-29

61.1.1 Election of Nelson Mandela



General elections were held in South Africa between 26 and 29 April 1994. The elections were the first in which citizens of all races were allowed to take part, and were therefore also the first held with universal adult suffrage. The election was conducted under the direction of the Independent Electoral Commission (IEC), and marked the culmination of the four-year process that ended apartheid.

Millions queued in lines over a four-day voting period. Altogether 19,726,579 votes were counted and 193,081 were rejected as invalid. As widely expected, the African National Congress (ANC), whose slate incorporated the labour confederation COSATU and the South African Communist Party, won a sweeping victory, taking 62 percent of the vote, just short of the two-thirds majority required to unilaterally amend the Interim Constitution. As required by that document, the ANC formed a Government of National Unity with the National Party and the Inkatha Freedom Party, the two other parties that won more than 20 seats in the National Assembly. The new National Assembly's first act was to elect Nelson Mandela as President, making him the country's first black chief executive

61.2 July 05

61.2.1 Amazon is founded



Amazon.com, Inc., doing business as Amazon, is a multinational technology company focusing in e-commerce, cloud computing, and artificial intelligence in Seattle, Washington. It is one of the Big Four or "Four Horsemen" of technology along with Google, Apple and Facebook due to its market capitalization, disruptive innovation, brand equity and hyper-competitive application process.

Amazon is the most valuable public company in the world ahead of Apple and Alphabet. It is the largest e-commerce marketplace and cloud computing platform in the world as measured by revenue and market capitalization. Amazon.com was founded by Jeff Bezos on July 5, 1994, and started as an online bookstore but later diversified to sell video downloads/streaming, MP3 downloads/streaming, audiobook downloads/streaming, software, video games, electronics, apparel, furniture, food, toys, and jewelry. The company also owns a publishing arm, Amazon Publishing, a film and television studio, Amazon Studios, produces consumer electronics lines including Kindle e-readers, Fire tablets, Fire TV, and Echo devices, and is the world's largest provider of cloud infrastructure services (IaaS and PaaS) through its AWS subsidiary. Amazon has separate retail websites for some countries and also offers international shipping of some of its products to certain other countries. 100 million people subscribe to Amazon Prime.

1995

62.1 March 28 - April 07

62.1.1 First Conference of the Parties (COP 1)



The United Nations Climate Change Conferences are yearly conferences held in the framework of the United Nations Framework Convention on Climate Change (UNFCCC). They serve as the formal meeting of the UNFCCC Parties (Conference of the Parties, COP) to assess progress in dealing with climate change, and beginning in the mid-1990s, to negotiate the Kyoto Protocol to establish legally binding obligations for developed countries to reduce their greenhouse gas emissions. From 2005 the Conferences have also served as the "Conference of the Parties Serving as the Meeting of Parties to the Kyoto Protocol" (CMP); also parties to the Convention that are not parties to the Protocol can participate in Protocol-related meetings as observers. From 2011 the meetings have also been used to negotiate the Paris Agreement as part of the Durban platform activities until its conclusion in 2015, which created a general path towards climate action.

The first UNFCCC Conference of the Parties took place from 28 March to 7 April 1995 in Berlin, Germany. It voiced concerns about the adequacy of countries' abilities to meet commitments under the Body for Scientific and Technological Advice (BSTA) and the Subsidiary Body for Implementation (SBI). COP 1 agreed on "Activities Implemented Jointly", first joint measures in international climate action.

62.2 August 16

62.2.1 First release of Internet Explorer



Internet Explorer (formerly Microsoft Internet Explorer and Windows Internet Explorer, commonly referred to as Explorer and abbreviated IE or MSIE) is a series of graphical web browsers developed by Microsoft and included in the Microsoft Windows line of operating systems, starting in 1995. It was first released as part of the add-on package Plus! for Windows 95 that year. Later versions were available as free downloads, or in service packs, and included in the original equipment manufacturer (OEM) service releases of Windows 95 and later versions of Windows. The browser is discontinued, but still maintained.

The first version, dubbed Microsoft Internet Explorer, made its debut on August 16, 1995. It was installed as part of the Internet Jumpstart Kit in Microsoft Plus! for Windows 95 and Plus!. The Internet Explorer team began with about six people in early development. Internet Explorer 1.5 was released several months later for Windows NT and added support for basic table rendering. By including it free of charge on their operating system, they did not have to pay royalties to Spyglass Inc, resulting in a lawsuit and a US\$8 million settlement on January 22, 1997. Microsoft was sued by Syntex Inc. in 1996, over the trademark infringement

1996

63.1 July 05

63.1.1 The first successful cloned mammal: Dolly the sheep



Dolly was cloned by Keith Campbell, Ian Wilmut and colleagues at the Roslin Institute, part of the University of Edinburgh, Scotland, and the biotechnology company PPL Therapeutics, based near Edinburgh. The funding for Dolly's cloning was provided by PPL Therapeutics and the Ministry of Agriculture. She was born on 5 July 1996 and died from a progressive lung disease five months before her seventh birthday (the disease was not considered related to her being a clone). She has been called "the world's most famous sheep" by sources including BBC News and Scientific American.

The cell used as the donor for the cloning of Dolly was taken from a mammary gland, and the production of a healthy clone therefore proved that a cell taken from a specific part of the body could recreate a whole individual. On Dolly's name, Wilmut stated "Dolly is derived from a mammary gland cell and we couldn't think of a more impressive pair of glands than Dolly Parton's".

63.2 August 24

63.2.1 Valve Corp. is founded



Valve Corporation is an American video game developer, publisher and digital distribution company headquartered in Bellevue, Washington. It is the developer of the software distribution platform Steam and the Half-Life, Counter-Strike, Portal, Day of Defeat, Team Fortress, Left 4 Dead, and Dota 2 games.

Valve was founded in 1996 by former Microsoft employees Gabe Newell and Mike Harrington. Their debut product, the PC first-person shooter Half-Life, was released in 1998 to critical acclaim and commercial success, after which Harrington left the company. In 2003, Valve launched Steam, which accounted for around half of digital PC game sales by 2011. By 2012, Valve employed around 250 people and was reportedly worth over US\$3 billion, making it the most profitable company per employee in the United States. In 2015, Valve entered the game hardware market with the Steam Machine, a line of third-party built gaming PCs running Valve's SteamOS operating system.

1998

64.1 September 04

64.1.1 Google is founded



The Google company was officially launched in 1998 by Larry Page and Sergey Brin to market Google Search, which has become the most widely used web-based search engine. Page and Brin, students at Stanford University in California, developed a search algorithm – at first known as "BackRub" – in 1996. The search engine soon proved successful and the expanding company moved several times, finally settling at Mountain View in 2003. This marked a phase of rapid growth, with the company making its initial public offering in 2004 and quickly becoming one of the world's largest media companies. The company launched Google News in 2002, Gmail in 2004, Google Maps in 2005, Google Chrome in 2008, and the social network known as Google+ in 2011, in addition to many other products. In 2015, Google became the main subsidiary of the holding company Alphabet Inc.

64.2 November 20

64.2.1 Zarya launched (first ISS module)



Zarya, also known as the Functional Cargo Block or FGB, is the first module of the International Space Station to be launched. The FGB provided electrical power, storage, propulsion, and guidance to the ISS during the initial stage of assembly. With the launch and assembly in orbit of other modules with more specialized functionality, Zarya is now primarily used for storage, both inside the pressurized section and in the externally mounted fuel tanks. The Zarya is a descendant of the TKS spacecraft designed for the Russian Salyut program. The name Zarya, which means sunrise, was given to the FGB because it signified the dawn of a new era of international cooperation in space. Although it was built by a Russian company, it is owned by the United States.

Part XIII

21st century

2000

65.1 January 01

65.1.1 Year 2000 problem (Y2K)



The Year 2000 problem, also known as the Y2K problem, the Millennium bug, the Y2K bug, or Y2K, is a class of computer bugs related to the formatting and storage of calendar data for dates beginning in the year 2000. Problems were anticipated, and arose, because many programs represented four-digit years with only the final two digits — making the year 2000 indistinguishable from 1900. The assumption of a twentieth-century date in such programs could cause various errors, such as the incorrect display of dates and the inaccurate ordering of automated dated records or real-time events.

In 1997, the British Standards Institute (BSI) developed standard DISC PD2000-1 defining "Year 2000 Conformity requirements" as four rules: (1) No valid date will cause any interruption in operations; (2) Calculation of durations between, or the sequence of, pairs of dates will be correct whether any dates are in different centuries; (3) In all interfaces and in all storage, the century must be unambiguous, either specified, or calculable by algorithm; (4) Year 2000 must be recognised as a leap year.

2001

66.1 January 15

66.1.1 Wikipedia is launched



Other collaborative online encyclopedias were attempted before Wikipedia, but none were as successful. Wikipedia began as a complementary project for Nupedia, a free online English-language encyclopedia project whose articles were written by experts and reviewed under a formal process. It was founded on March 9, 2000, under the ownership of Bomis, a web portal company. Its main figures were Bomis CEO Jimmy Wales and Larry Sanger, editor-in-chief for Nupedia and later Wikipedia. Nupedia was initially licensed under its own Nupedia Open Content License, but even before Wikipedia was founded, Nupedia switched to the GNU Free Documentation License at the urging of Richard Stallman. Wales is credited with defining the goal of making a publicly editable encyclopedia, while Sanger is credited with the strategy of using a wiki to reach that goal. On January 10, 2001, Sanger proposed on the Nupedia mailing list to create a wiki as a "feeder" project for Nupedia.

The domains wikipedia.com and wikipedia.org were registered on January 12, 2001 and January 13, 2001 respectively, and Wikipedia was launched on January 15, 2001, as a single English-language edition at www.wikipedia.com, and announced by Sanger on the Nupedia mailing list. Wikipedia's policy of "neutral point-of-view" was codified in its first months. Otherwise, there were relatively few rules initially and Wikipedia operated independently of Nupedia. Originally, Bomis intended to make Wikipedia a business for profit.

66.2 September 11

66.2.1 9-11 Attacks



The September 11 attacks (also referred to as 9/11) were a series of four coordinated terrorist attacks by the Islamic terrorist group al-Qaeda against the United States on the morning of Tuesday, September 11, 2001. The attacks killed 2,996 people, injured over 6,000 others, and caused at least \$ 10 billion in infrastructure and property damage. Additional people died of 9/11-related cancer and respiratory diseases in the months and years following the attacks. Four passenger airliners operated by two major U.S. passenger air carriers (United Airlines and American Airlines)—all of which departed from airports in the northeastern United States bound for California—were hijacked by 19 al-Qaeda terrorists. Two of the planes, American Airlines Flight 11 and United Airlines Flight 175, were crashed into the North and South towers, respectively, of the World Trade Center complex in Lower Manhattan. Within an hour and 42 minutes, both 110-story towers collapsed. Debris and the resulting fires caused a partial or complete collapse of all other buildings in the World Trade Center complex, including the 47-story 7 World Trade Center tower, as well as significant damage to ten other large surrounding structures. A third plane, American Airlines Flight 77, was crashed into the Pentagon (the headquarters of the U.S. Department of Defense) in Arlington County, Virginia, which led to a partial collapse of the building's west side. The fourth plane, United Airlines Flight 93, was initially flown toward Washington, D.C., but crashed into a field in Stonycreek Township near Shanksville, Pennsylvania, after its passengers thwarted the hijackers. 9/11 is the single deadliest terrorist attack in human history and the single deadliest incident for firefighters and law enforcement officers in the history of the United States, with 343 and 72 killed, respectively.

66.3 November 15

66.3.1 Xbox Introduced



Xbox is a video gaming brand created and owned by Microsoft of the United States. It represents a series of video game consoles developed by Microsoft, with three consoles released in the sixth, seventh and eighth generations, respectively. The brand also represents applications (games), streaming services, and an online service by the name of Xbox Live. The brand was first introduced in the United States in November 2001, with the launch of the original Xbox console.

The original device was the first video game console offered by an American company after the Atari Jaguar stopped sales in 1996. It reached over 24 million units sold as of May 2006. Microsoft's second console, the Xbox 360, was released in 2005 and has sold over 77.2 million consoles worldwide as of April 2013. The Xbox One has been released in 21 markets in total, with a Chinese release in September 2014. The head of Xbox is Phil Spencer, who succeeded former head Marc Whitten in late March 2014.

2002

67.1 January 01

67.1.1 The Euro is introduced within the EU



The euro was established by the provisions in the 1992 Maastricht Treaty. To participate in the currency, member states are meant to meet strict criteria, such as a budget deficit of less than 3% of their GDP, a debt ratio of less than 60% of GDP (both of which were ultimately widely flouted after introduction), low inflation, and interest rates close to the EU average. In the Maastricht Treaty, the United Kingdom and Denmark were granted exemptions per their request from moving to the stage of monetary union which resulted in the introduction of the euro.

2003

68.1 April 14

68.1.1 Completion of the Human Genome Project



The Human Genome Project (HGP) was an international scientific research project with the goal of determining the sequence of nucleotide base pairs that make up human DNA, and of identifying and mapping all of the genes of the human genome from both a physical and a functional standpoint. It remains the world's largest collaborative biological project. After the idea was picked up in 1984 by the US government when the planning started, the project formally launched in 1990 and was declared complete on April 14, 2003. Funding came from the US government through the National Institutes of Health (NIH) as well as numerous other groups from around the world. A parallel project was conducted outside government by the Celera Corporation, or Celera Genomics, which was formally launched in 1998. Most of the government-sponsored sequencing was performed in twenty universities and research centers in the United States, the United Kingdom, Japan, France, Germany and China.

The Human Genome Project originally aimed to map the nucleotides contained in a human haploid reference genome (more than three billion). The "genome" of any given individual is unique; mapping the "human genome" involved sequencing a small number of individuals and then assembling these together to get a complete sequence for each chromosome. Therefore, the finished human genome is a mosaic, not representing any one individual.

68.2 March 20

68.2.1 Beginning of the Iraq war



The Iraq War was a protracted armed conflict that began in 2003 with the invasion of Iraq by a United States-led coalition that overthrew the government of Saddam Hussein. The conflict continued for much of the next decade as an insurgency emerged to oppose the occupying forces and the post-invasion Iraqi government. An estimated 151,000 to 600,000 or more Iraqis were killed in the first 3–4 years of conflict. The U.S. became re-involved in 2014 at the head of a new coalition; the insurgency and many dimensions of the civil armed conflict continue. The invasion occurred as part of a declared war against international terrorism and its sponsors under the administration of U.S. President George W. Bush following the September 11 terrorist attacks.

68.3 September 11

68.3.1 Steam released



Steam is a digital distribution platform developed by Valve Corporation for purchasing and playing video games. Steam offers digital rights management (DRM), matchmaking servers, video streaming, and social networking services. Steam provides the user with installation and automatic updating of games, and community features such as friends lists and groups, cloud saving, and in-game voice and chat functionality.

The software provides a freely available application programming interface (API) called Steamworks, which developers can use to integrate many of Steam's functions into their products, including networking, matchmaking, in-game achievements, microtransactions, and support for user-created content through Steam Workshop. Though initially developed for use on Microsoft Windows operating systems, versions for macOS and Linux were later released. Mobile apps with connected functionality with the main software were later released for iOS, Android, and Windows Phone in the 2010s. The platform also offers a small selection of non-video game content, such as design software, anime, and films.

2004

69.1 February 04

69.1.1 Facebook is founded



Zuckerberg wrote a program called "Facemash" in 2003 while attending Harvard University as a sophomore (second-year student). According to The Harvard Crimson, the site was comparable to Hot or Not and used "photos compiled from the online facebook of nine Houses, placing two next to each other at a time and asking users to choose the "hotter" person". Facemash attracted 450 visitors and 22,000 photo-views in its first four hours online. The Facemash site was quickly forwarded to several campus group list-servers, but was shut down a few days later by the Harvard administration. Zuckerberg faced expulsion and was charged by the administration with breach of security, violating copyrights, and violating individual privacy. Ultimately, the charges were dropped. Zuckerberg expanded on this initial project that semester by creating a social study tool ahead of an art history final exam. He uploaded all art images to a website, each of which was featured with a corresponding comments section, then shared the site with his classmates, and people started sharing notes.

A "face book" is a student directory featuring photos and basic information. In 2003, there were no universal online facebook at Harvard, with only paper sheets distributed and private online directories. Zuckerberg told the Crimson that "Everyone's been talking a lot about a universal face book within Harvard. ... I think it's kind of silly that it would take the University a couple of years to get around to it. I can do it better than they can, and I can do it in a week." In January 2004, Zuckerberg began writing code for a new website, known as "TheFacebook", with the inspiration coming from an editorial in the Crimson about Facemash, stating that "It is clear that the technology needed to create a centralized Website is readily available ... the benefits are many." On February 4, 2004, Zuckerberg launched "TheFacebook", originally located at thefacebook.com.

69.2 December 26

69.2.1 Indian Ocean earthquake and tsunami



The 2004 Indian Ocean earthquake occurred at 00:58:53 UTC on 26 December, with an epicentre off the west coast of northern Sumatra. It was an undersea megathrust earthquake that registered a magnitude of 9.1–9.3 Mw, reaching a Mercalli intensity up to IX in certain areas. The earthquake was caused by a rupture along the fault between the Burma Plate and the Indian Plate.

A series of large tsunamis up to 30 metres (100 ft) high were created by the underwater seismic activity that became known collectively as the Boxing Day tsunamis. Communities along the surrounding coasts of the Indian Ocean were seriously affected, and the tsunamis killed an estimated 227,898 people in 14 countries. The Indonesian city of Banda Aceh reported the largest number of victims. The earthquake was one of the deadliest natural disasters in recorded history. The direct results caused major disruptions to living conditions and commerce particularly in Indonesia, Sri Lanka, India, and Thailand.

2005

70.1 February

70.1.1 YouTube is founded



YouTube was founded by Chad Hurley, Steve Chen, and Jawed Karim, who were all early employees of PayPal. Hurley had studied design at Indiana University of Pennsylvania, and Chen and Karim studied computer science together at the University of Illinois at Urbana-Champaign. According to a story that has often been repeated in the media, Hurley and Chen developed the idea for YouTube during the early months of 2005, after they had experienced difficulty sharing videos that had been shot at a dinner party at Chen's apartment in San Francisco. Karim did not attend the party and denied that it had occurred, but Chen commented that the idea that YouTube was founded after a dinner party "was probably very strengthened by marketing ideas around creating a story that was very digestible".

Karim said the inspiration for YouTube first came from Janet Jackson's role in the 2004 Super Bowl incident, when her breast was exposed during her performance, and later from the 2004 Indian Ocean tsunami. Karim could not easily find video clips of either event online, which led to the idea of a video sharing site. Hurley and Chen said that the original idea for YouTube was a video version of an online dating service, and had been influenced by the website Hot or Not.

70.2 August

70.2.1 Hurricane Katrina



Hurricane Katrina was an extremely destructive and deadly Category 5 hurricane that made landfall on Florida and Louisiana particularly the city of New Orleans and surrounding areas in August 2005, causing catastrophic damage from central Florida to eastern Texas. Subsequent flooding, caused largely as a result of fatal engineering flaws in the flood protection system also known as levees around the city of New Orleans, precipitated most of the loss of lives. The storm was the third major hurricane of the record-breaking 2005 Atlantic hurricane season, as well as the fourth-most intense tropical cyclone on record to make landfall in the United States, behind only the 1935 Labor Day hurricane, Hurricane Camille in 1969, and Hurricane Michael in 2018.

2006

71.1 March 21

71.1.1 Twitter is founded



Twitter's origins lie in a "daylong brainstorming session" held by board members of the podcasting company Odeo. Jack Dorsey, then an undergraduate student at New York University, introduced the idea of an individual using an SMS service to communicate with a small group. The original project code name for the service was *twtr*, an idea that Williams later ascribed to Noah Glass, inspired by Flickr and the five-character length of American SMS short codes. The decision was also partly due to the fact that the domain *twitter.com* was already in use, and it was six months after the launch of *twtr* that the crew purchased the domain and changed the name of the service to Twitter. The developers initially considered "10958" as a short code, but later changed it to "40404" for "ease of use and memorability". Work on the project started on March 21, 2006, when Dorsey published the first Twitter message at 9:50 p.m. Pacific Standard Time (PST): "just setting up my *twtr*". Dorsey has explained the origin of the "Twitter" title:

...we came across the word 'twitter', and it was just perfect. The definition was 'a short burst of inconsequential information,' and 'chirps from birds'. And that's exactly what the product was.

71.2 December 30

71.2.1 Execution of Saddam Hussein



The execution of Saddam Hussein took place on Saturday, 30 December 2006. Saddam was sentenced to death by hanging, after being convicted of crimes against humanity by the Iraqi Special Tribunal for the murder of 148 Iraqi Shi'ites in the town of Dujail in 1982, in retaliation for an assassination attempt against him.

The Iraqi government released an official videotape of his execution, showing him being led to the gallows, and ending after his head was in the hangman's noose. International public controversy arose when a mobile phone recording of the hanging showed him surrounded by a contingent of his countrymen who jeered him in Arabic and praised the Shia cleric Muqtada al-Sadr, and his subsequent fall through the trap door of the gallows. The atmosphere of the execution drew criticism around the world from nations that oppose as well as support capital punishment. On Sunday 31 December 2006, Saddam Hussein's body was returned to his birthplace of Al-Awja, near Tikrit, and was buried near the graves of other family members.

2007

72.1 June 29

72.1.1 iPhone is released



On January 9, 2007, Steve Jobs announced iPhone at the Macworld convention, receiving substantial media attention. Jobs announced that the first iPhone would be released later that year. On June 29, 2007, the first iPhone was released.

On June 11, 2007, Apple announced at the Apple's Worldwide Developers Conference that the iPhone would support third-party applications using the Safari engine. Third parties would be able to create Web 2.0 applications, which users could access via the internet. Such applications appeared even before the release of the iPhone; the first of these, called OneTrip, was a program meant to keep track of users' shopping lists. On June 29, 2007, Apple released version 7.3 of iTunes to coincide with the release of iPhone. This release contains support for iPhone service activation and syncing.

2008

73.1 September 15

73.1.1 2008 Financial Crisis



The financial crisis of 2007–2008, also known as the global financial crisis and the 2008 financial crisis, is considered by many economists to have been the worst financial crisis since the Great Depression of the 1930s.

It began in 2007 with a crisis in the subprime mortgage market in the United States, and developed into a full-blown international banking crisis with the collapse of the investment bank Lehman Brothers on September 15, 2008. Excessive risk-taking by banks such as Lehman Brothers helped to magnify the financial impact globally. Massive bail-outs of financial institutions and other palliative monetary and fiscal policies were employed to prevent a possible collapse of the world financial system. The crisis was nonetheless followed by a global economic downturn, the Great Recession. The European debt crisis, a crisis in the banking system of the European countries using the euro, followed later.

2009

74.1 January 20

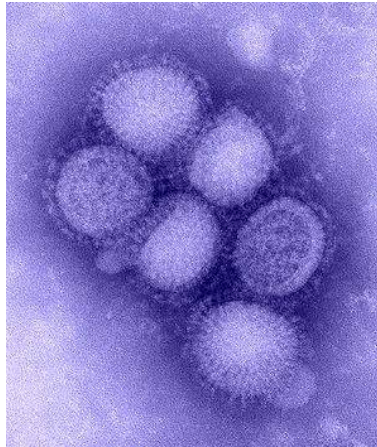
74.1.1 Inauguration of Barack Obama



The first inauguration of Barack Obama as the 44th President of the United States took place on Tuesday, January 20, 2009. The inauguration, which set a record attendance for any event held in Washington, D.C., marked the commencement of the first four-year term of Barack Obama as President and Joe Biden as Vice President. Based on the combined attendance numbers, television viewership, and Internet traffic, it was among the most-observed events ever by the global audience.

74.2 April

74.2.1 Swine Influenza



Swine influenza (swine flu or pig flu) is a respiratory disease that occurs in pigs that is caused by the Influenza A virus. Influenza viruses that are normally found in swine are known as swine influenza viruses (SIVs). The known SIV strains include influenza C and the subtypes of influenza A known as H1N1, H1N2, H3N1, H3N2 and H2N3. Pigs can also become infected with the H4N6 and H9N2 subtypes.

Swine influenza virus is common throughout pig populations worldwide. Transmission of the virus from pigs to humans is not common and does not always lead to human influenza, often resulting only in the production of antibodies in the blood. If transmission does cause human influenza, it is called zoonotic swine flu or a variant virus. People with regular exposure to pigs are at increased risk of swine flu infection. The meat of an infected animal poses no risk of infection when properly cooked.

74.3 October 01

74.3.1 Burj Khalifa completed



Construction began on 6 January 2004, with the exterior of the structure completed on 1 October 2009. The building officially opened on 4 January 2010, and is part of the 2 km² (490-acre) Downtown Dubai development at the 'First Interchange' along Sheikh Zayed Road, near Dubai's main business district. The tower's architecture and engineering were performed by Skidmore, Owings & Merrill of Chicago, with Adrian Smith as chief architect, and Bill Baker as chief structural engineer. The primary contractor was Samsung C&T of South Korea.

2011

75.1 June

75.1.1 Twitch is founded



When Justin.tv was launched in 2007 by Justin Kan and Emmett Shear, the site was divided into several content categories. The gaming category grew especially fast, and became the most popular content on the site. In June 2011, the company decided to spin off the gaming content as Twitch.tv, inspired by the term twitch gameplay. It launched officially in public beta on June 6, 2011. Since then, Twitch has attracted more than 35 million unique visitors a month. Twitch had about 80 employees in June 2013, which increased to 100 by December 2013. The company was headquartered in San Francisco's Financial District.

Twitch has been supported by significant investments of venture capital, with US\$15 million in 2012 (on top of US\$7 million originally raised for Justin.tv), and US\$20 million in 2013. Investors during three rounds of fund raising leading up to the end of 2013 included Draper Associates, Bessemer Venture Partners and Thrive Capital. In addition to the influx of venture funding, it was believed in 2013 that the company had become profitable.

Especially since the shutdown of its direct competitor Own3d.tv in early 2013, Twitch has become the most popular e-sports streaming service by a large margin, leading some to conclude that the website has a "near monopoly on the market". Competing video services, such as YouTube and Dailymotion, began to increase the prominence of their gaming content to compete, but have had a much smaller impact so far. As of mid-2013, there were over 43 million viewers on Twitch monthly, with the average viewer watching an hour and a half a day. As of February 2014, Twitch is the fourth largest source of Internet traffic during peak times in the United States, behind Netflix, Google, and Apple. Twitch makes up 1.8% of total US Internet traffic during peak periods.

2012

76.1 August 06

76.1.1 Curiosity Rover lands on Mars



Curiosity is a car-sized rover designed to explore Gale Crater on Mars as part of NASA's Mars Science Laboratory mission (MSL). Curiosity was launched from Cape Canaveral on November 26, 2011, at 15:02 UTC aboard the MSL spacecraft and landed on Aeolis Palus in Gale Crater on Mars on August 6, 2012, 05:17 UTC.

In December 2012, Curiosity's two-year mission was extended indefinitely. On August 5, 2017, NASA celebrated the fifth anniversary of the Curiosity rover landing and related exploratory accomplishments on the planet Mars. The rover is still operational, and as of January 11, 2019, Curiosity has been on Mars for 2286 sols (2349 total days) since landing on August 6, 2012.

Curiosity's design will serve as the basis for the planned Mars 2020 rover.

2013

77.1 May 20

77.1.1 Edward Snowden leaks NSA data¹



On May 20, 2013, Snowden flew to Hong Kong, where he was staying when the initial articles based on the leaked documents were published, beginning with *The Guardian* on June 5. Greenwald later said Snowden disclosed 9,000 to 10,000 documents.

Within months, documents had been obtained and published by media outlets worldwide, most notably *The Guardian* (Britain), *Der Spiegel* (Germany), *The Washington Post* and *The New York Times* (U.S.), *O Globo* (Brazil), *Le Monde* (France), and similar outlets in Sweden, Canada, Italy, Netherlands, Norway, Spain, and Australia. In 2014, NBC broke its first story based on the leaked documents. In February 2014, for reporting based on Snowden's leaks, journalists Glenn Greenwald, Laura Poitras, Barton Gellman and *The Guardian*'s Ewen MacAskill were honored as co-recipients of the 2013 George Polk Award, which they dedicated to Snowden. The NSA reporting by these journalists also earned *The Guardian* and *The Washington Post* the 2014 Pulitzer Prize for Public Service for exposing the "widespread surveillance" and for helping to spark a "huge public debate about the extent of the government's spying". *The Guardian*'s chief editor, Alan Rusbridger, credited Snowden for having performed a public service.

¹Movie/Biography: *Snowden* (2016)

2015

78.1 July 11

78.1.1 Death of Satoru Iwata (4th CEO of Nintendo)

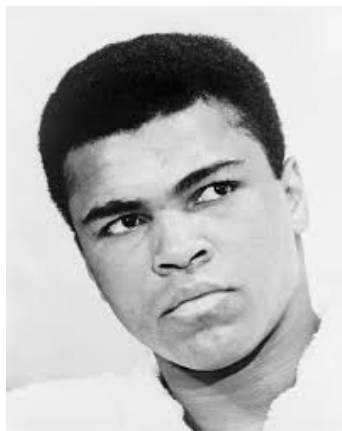


In June 5, 2014, Nintendo announced that Iwata would not attend E3 2014 due to medical problems. Iwata issued a public message to shareholders on June 24 that he had undergone surgery the previous week to remove a tumor in his bile duct discovered during a routine physical examination. After roughly four months of recovery from a successful surgery, he returned to work in October. During this time he lost a notable amount of weight, but stated he was feeling healthier as a result. Iwata made his first public appearance on a Nintendo Direct announcement on November 5, but looked "gaunt and pale". He appeared to take this in stride and updated his own Mii, avatars used in Nintendo hardware, in June 2015 to reflect his slimmer self. On January 28, 2015, Iwata came down with a high fever and was suspected to have influenza; a meeting with shareholders was postponed accordingly. Some time after attending a different shareholder meeting on June 26, Iwata became ill again and was hospitalized. Despite his hospitalization, Iwata continued to work via his laptop in his bed and provided feedback on Pokémon Go to Tsunekazu Ishihara. He died due to complications from the tumor on July 11 at the age of 55. Nintendo announced his death the following day.

2016

79.1 June 03

79.1.1 Death of Muhammad Ali



In February 2013, Ali's brother Rahman Ali said Muhammad could no longer speak and could be dead within days. Ali's daughter May May Ali responded to the rumors, stating that she had talked to him on the phone the morning of February 3 and he was fine.

On December 20, 2014, Ali was hospitalized for a mild case of pneumonia. Ali was once again hospitalized on January 15, 2015, for a urinary tract infection after being found unresponsive at a guest house in Scottsdale, Arizona. He was released the next day.

Ali was hospitalized in Scottsdale on June 2, 2016, with a respiratory illness. Though his condition was initially described as "fair", it worsened, and he died the following day at age 74 from septic shock. Following Ali's death, he was the number one trending topic on Twitter for over 12 hours and on Facebook for several days. BET played their documentary Muhammad Ali: Made In Miami. ESPN played four hours of non-stop commercial-free coverage of Ali. News networks, such as ABC News, BBC, CNN, and Fox News, also covered him extensively.

2017

80.1 January 20

80.1.1 Inauguration of Donald Trump



The inauguration of Donald Trump as the 45th president of the United States marked commencement of the four-year term of Donald Trump as President and Mike Pence as Vice President. An estimated 150,000 people attended the public ceremony held on Friday, January 20, 2017 on the West Front of the United States Capitol Building in Washington, D.C.

The event was the 58th presidential inauguration. Held in Washington, D.C. from January 17 to 21, 2017, inaugural events included concerts, the swearing-in ceremony, a Congressional luncheon, parade, inaugural balls, and the interfaith inaugural prayer service.

2018

81.1 March 14

81.1.1 Death of Stephen Hawking



Hawking died at his home in Cambridge, England, on 14 March 2018, at the age of 76. His family stated that he "died peacefully". He was eulogised by figures in science, entertainment, politics, and other areas. The Gonville and Caius College flag flew at half-mast and a book of condolences was signed by students and visitors. A tribute was made to Hawking in the closing speech by IPC President Andrew Parsons at the closing ceremony of the 2018 Paralympic Winter Games in Pyeongchang, South Korea.

Hawking's final broadcast interview, about the detection of gravitational waves resulting from the collision of two neutron stars, occurred in October 2017. His final words to the world appeared posthumously, in April 2018, in the form of a Smithsonian TV Channel documentary entitled, *Leaving Earth: Or How to Colonize a Planet*. One of his final research studies, entitled *A smooth exit from eternal inflation?*, about the origin of the universe, was published in the *Journal of High Energy Physics* in May 2018. Later, in October 2018, another of his final research studies, entitled *Black Hole Entropy and Soft Hair*, was published, and dealt with the "mystery of what happens to the information held by objects once they disappear into a black hole". Also in October 2018, Hawking's last book, *Brief Answers to the Big Questions*, a popular science book presenting his final comments on the most important questions facing humankind, was published.

Contribution:

- Y. elhissi
- Jacquet
- Best Lox