Nov. 23rd

Encrypted Cable

Nov. 23, 1866

US Secretary of State William Henry Seward employed the recently reconnected transatlantic telegraph line [Aug 16] to send a 780-word encrypted message to John Bigelow, the US consul in France. The message was encoded using the venerable Monroe cipher (first used by James Monroe when he was sent to France in 1803).

The cipher converted text into groups of numbers, and one of the Anglo-American Telegraph Company's rules was that numbers had to be spelt out as words — so 387 was sent as THREE EIGHT SEVEN. Consequently Seward's message was expanded into 3,772 words. Even worse, the company charged double, or $5 per word, for coded messages.

Seward's telegram ended up costing $19,540.40, more than three times his yearly salary. He refused to pay, but lost the ensuing court case. The editor of the *New York Herald* noted, "It is a shame for the US government not to be able to pay its telegraph bills as promptly as a New York newspaper."

Valdemar Poulsen

Born: Nov. 23, 1869;

Copenhagen, Denmark
Died: July 23, 1942

Poulsen made significant contributions to early radio technology, and developed the first functioning magnetic recorder, the telegraphone. He became interested in the topic while working at the Copenhagen Telephone Company and was looking for a way for someone to leave a message when there was nobody to answer their call.

Poulsen obtained a patent for the Telegraphone in 1898, and with his assistant, Peder Oluf Pedersen, later developed magnetic recorders that wrote onto steel wire, tape, and disks [April 15].

At the 1900 World's Fair in Paris, Poulsen captured the voice of Emperor Franz Josef of Austria, which is now the oldest surviving magnetic audio recording. However, the first ever audio recording was made by Thomas Edison on [Dec 6], 1877, by cutting tracks onto a cylinder wrapped with tinfoil.

First Character Recognition Patent

Nov. 23, 1910

Hyman Eli Goldberg (or Golber) filed a patent for his 'Controller', a device that could convert handwritten numerical characters into electrical data. It worked by the user writing a digit in electrically conductive ink onto a grid of terminals, therby connecting them in various ways to form different circuits. Four years later the patent was granted as US 1117184.

Figure 9 from Goldberg's Patent.

An earlier attempt at handwriting recognition was Elisha Gray's [Aug 2] telautograph, which generated current based on the amount of resistance detected on paper by pressing down a stylus. A significant drawback was that the paper was moving, making it difficult to produce certain letters accurately.

Peter Elias

Born: Nov. 23, 1923;

New Brunswick, New Jersey
Died: Dec. 7, 2001

Elias worked in the field of information and coding theory, and was responsible for convolutional codes which apply a function to a data stream, such as digital video. Since most data tends to be generated as 'streams', the majority of practical coding systems use convolutional. (One alternative are block codes which work on fixed chunks of data at a time, such as Hamming codes [April 00].

Elias' also invented the binary erasure channel (BEC), a simple communications model which lends itself to analysis. When a 1 or 0 is sent in a BEC, it will either arrive unchanged, or disappear.

He's also remembered for an amusing, and influential editorial in the "IRE Transactions on Information Theory" which described two types of poorly thought out technical paper commonly seen in his area.

Abhay Bhushan

Born: Nov. 23, 1944;

Allahabad, Uttar Pradesh, India

In 1971 Bhushan proposed the File Transfer Protocol (FTP) in RFC [April 7] 114, which has since become one of the standard way of sending and receiving files between computers. He also co-authored several of the early email protocols.

In the early 1960's, he was among the first undergraduates trained at IIT Kanpur when it being funded by a consortium of US universities, including MIT, Princeton, Caltech, Berkeley, and CMU. As a consequence, IIT Kanpur set up the first computer center in any educational institute in India, and a popular story is that the center's mainframe was delivered on bullock-carts. However, Bhushan is able to debunk this,

having been present at the actual delivery using trucks.

In 1978, he took a year-long sabbatical from Xerox to work on grassroots programs in India, and has since become the President of the IIT Kanpur Foundation.

Doctor Who

Nov. 23, 1963

At 5:16pm the sci-fi series "Doctor Who" premiered on the BBC with a 25 minute episode called “An Unearthly Child.” The programme would eventually enter the Guinness Book of World Records as the longest-running SF TV show, although there was an unfortunate broadcasting hiatus between 1996 and 2005.

The first time the Doctor met a computer was probably in June 1966, in the form of WOTAN (Will Operating Thought Analogue device), or you might mistakenly prefer the Daleks from Dec. 1963, but there was no mention of computers in that story. In any case, a Dalek is technically a cyborg.

The first computer scientist appeared in Nov. 1968, but only briefly before mysteriously disappearing from his post at International Electromatics, a company controlling all the world’s computers.

Sadly it must be said that the Doctor mostly makes a habit of destroying computers, albeit evil ones. However, he was accompanied by the faithful computer-dog, K9, for a few years at the end of the 1970's.

In 1979 the fourth Doctor (Tom Baker) and Romana (Lalla Ward) appeared in a series of four TV adverts for Prime Computers. In the second one, Romana installed a Prime in the TARDIS, and the Doctor mentions having seen one back home on Gallifrey. The ads are unclear about the make of Prime made it into the TARDIS, but it was probably the Prime 750. It ran at 1.0 MIPS, had 2–8 MB of RAM, 1200 MB of disc storage, and a 9-track tape unit.

Atari Jaguar

Nov. 23, 1993

Atari [June 27] marketed the Jaguar as the first 64-bit game console, with the slogan “Do the Math.” This differentiated it from 16-bit consoles like Sega Genesis [Oct 29] and SNES [Nov 21], and the 32-bit 3DO [Oct 4].

The system featured three chips: two, dubbed Tom and Jerry, were proprietary GPUs, and the third was a 68000 [Sept 26]. Detractors pointed out that these chips were only 32-bit, but Atari helpfully explained that since Tom and Jerry worked 'in tandem' that they should count, collectively, as a 64-bit system. Many reviewers questioned the validity of Atari’s claims, and jokes started appearing about how the console user had to do the math because the system couldn’t.

The multi-chip architecture made game development difficult, and the Jaguar was eventually deemed a commercial failure, and prompted Atari to leave the home video game console market.

After Hasbro Interactive bought Atari in the late 1990's, the Jaguar patents were released into the public domain, with the console being declared an open platform.

World News Now

Nov. 23, 1995

ABC’s “World News Now” (WNN) became the first TV show broadcast live over the Internet (using CU-SeeMe [April 26])after Victor Dorff, a WNN producer, arranged to have the show simulcast daily for a six-month trial period.

However, WNN may not have been the first since "Channel One Television" in London employed CU-SeeMe to simulcast its programme "Digital World" in July 1993. However, the programme only broadcast every second frame of the transmission, so wasn’t quite as “live” as WWN’s effort.

Tamagotchi

Nov. 23, 1996

Bandai released the keychain-sized Tamagotchi virtual pet, which quickly became one of the biggest toy fads of the late 1990's, leading to its inventor, Aki Maita, winning the 1997 Ig Nobel Prize for economics ([April 12], [Oct 3], and [Oct 5]). As of 2010, over 76 million Tamagotchi had been sold world-wide.

A Bandai Tamagotchi. Photo by Tomasz Sienicki. CC BY-SA 3.0.

Upon activating the toy, an egg appears on the screen. After setting the Tamagotchi unit’s clock, the egg will wiggle for several minutes, and then hatch into a small pet. Each one has a "Hunger meter", "Happy meter", "Bracelet meter", and "Discipline meter" to determine their health and behavior.

Since a Tamagotchi pet can “die” in less than a day if left unattended, many children took them to school, which set off the usual media firestorm about educational distractions.

A pet cemetery in Pontsmill, Cornwall became the first to fence off a dedicated section for the burial of Tamagotchi pets. The owner, Terry Squires, revealed that many international burials had been carried out in his field. Tamagotchis from Switzerland, Germany, France, Canada and America had all been laid to rest.

The Tamagotchi name combines the Japanese word “tamago,” meaning “egg,” and "uotchi," meaning “watch.”

World of Warcraft

Nov. 23, 2004

Blizzard Entertainment launched the massively multiplayer online role-playing game "World of Warcraft" (WoW) at 12:01am. A highly publicized launch event was held at "Fry’s Electronics" in Fountain Valley, California that drew almost 5,000 people. Anticipation was high since Blizzard had announced the game in Sept. 2001, after it had already been in development for two years.

There had been three earlier single-player games set in the Warcraft universe; the first, “Warcraft: Orcs & Humans”, had been released exactly ten years before.

A WoW player had to choose an avatar from nine classes: Warlock, Hunter, Mage, Rogue, Priest, Warrior, and Druid, and a major attraction of the game was that players could then join guilds and form raiding parties. By 2014, WoW had over a 100 million registered users, and had grossed over $9.23 billion by 2017.

A "South Park" [Jan 14] episode set inside WoW aired in Oct. 2006, and a Warcraft movie was released on June 10, 2016.

Desert Bus for Hope

Nov. 23, 2007

Famed magicians, Penn & Teller, [Nov 10] designed a video game in early 1995 called 'Desert Bus'. The player had to drive an 8-hour bus route **in real time** between Tucson and Las Vegas at a maximum speed of 45 mph. The rocky , barren scenery would never change , and once the player reached the destination, they'd have to immediately turn around and drive back. The bus would constantly veer to the right, so a player couldn't take their hands off the wheel; swerving off the road would cause the engine to stall, forcing the player back to the start of the game. The scintillating gameplay could not be paused.

Penn, Teller, and Eddie Gorodetsky, an Emmy Award–winning television writer, came up with the concept in response to the anti-video-game lobby, the point being that fantasy is essential to entertainment.

"Desert Bus" was to form part of a larger game collection, called "Penn & Teller’s Smoke and Mirrors", for the Sega CD, a short-lived add-on for the Sega Genesis [Oct 29]. The game’s publisher, Absolute Entertainment, planned a lavish reward for any player that scored a hundred points, a feat that would require 800 continuous hours of play – a real-life trip from Tucson to Vegas on a bus carrying showgirls and a live band. Sadly the game developers went out of business, and nothing was released.

On this day, the game became part of the "Desert Bus for Hope" marathon, an annual fundraiser created by sketch comedy group LoadingReadyRun, in which players play "Desert Bus" to raise money for charity.

On Nov. 27, 2017, a free VR version of "Desert Bus" was released on Steam [Sept 12].

Fibonacci Day

Nov. 23, every year

The first four digits of the Fibonacci sequence , which begins 1, 1, 2, 3, 5, 8, … , can be read as Nov. 23, hence today’s celebration.

The nth value of the sequence, F_n, can be defined by the recurrence relation:

$F_n = F_{n-1} + F_{n-2}$, where n >= 3

with seed values:

$F_1 = 1$, $F_2 = 1$

This makes it particularly easy to code up, although the shortest program is the not at all obvious 10-character Perl 6 script [Sept 27]:

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^2,*+*...*
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The sequence is named after Italian mathematician Leonardo of Pisa, better known as Fibonacci. His 1202 book "Liber Abaci" introduced the sequence to Western European mathematics, although it had been described before in India.

Related computer applications include the Fibonacci search technique, the Fibonacci heap data structure, and graphs called Fibonacci cubes which are used for interconnecting parallel and distributed systems.