

Oct. 24th

## Transcontinental Telegraph

Oct. 24, 1861

Western Union completed the first US transcontinental telegraph [Oct 19] line when it installed the final link in Salt Lake City. Among the changes this new line wrought was the abrupt end of the Pony Express [April 3], which had been established just 19 months before. Previously it had taken ten days for a letter to travel from Sacramento, California to St. Joseph, Missouri.

The connection was inaugurated with a message sent by Justice Stephen J. Field of California to President Abraham Lincoln, assuring him of California's allegiance to the Union. Civil War fighting was taking place to the southeast at the time.

Naturally, the telegraph suffered from network outages, including the effects of weather which are still with us, but some other problems are less common, such as toppled poles caused by bison rubbing against them.

## Werner Buchholz

Born: Oct. 24, 1922;

Detmold, Germany

Buchholz was a member of the teams that designed the IBM 701 [April 7] and the IBM 7030 STRETCH [April 26], IBM's first transistorized supercomputer. His work involved setting standards for the character encoding on the systems.

Buchholz is credited with coining the term "byte" in June 1956, although at the time he was using it to describe the STRETCH's memory, which meant that one of his bytes equaled six bits. However, the possibility of moving to 8-bit bytes was considered in August 1956 and added to the design

soon after. "Byte" was a deliberate respelling of "bite" to avoid any accidental confusion with "Bit".

Buchholz and Fred Brooks [April 19] were coauthors of the first published use of "byte" in an article in the June 1959 issue of the *IRE Transactions on Electronic Computers*.

## John Gregory Markoff

Born: Oct. 24, 1949;

Oakland, California

Markoff is known for his business and technology journalism at *The New York Times*, in particular his report on Robert Morris' worm ([Nov 2] 1988), and his vivid description of the Web as a "map to the buried treasures of the Information Age" (1993).



John Markoff (2008).  
Photo by Robert Scoble.  
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His 2005 book, "What the Dormouse Said", looks at how the PC industry was affected by the Swinging Sixties. He also co-wrote "Take-down" with Tsutomu Shimomura which details the pursuit and capture of hacker, Kevin Mitnick [Dec 25].

## NSA Formed

Oct. 24, 1952

The National Security Agency (NSA), an intelligence branch of

the US Department of Defense, was established by President Harry S. Truman in a classified memo on this day.

However, its origins date back to April 28, 1917, three weeks after Congress declared war on Germany during World War I. At that time, a code and cipher decryption unit, the Cipher Bureau, was established. After the war, in a spurt of fancifulness, it was renamed the Black Chamber, but this didn't prevent it from being shut down in 1929 by US Secretary of State Henry L. Stimson. He explained the reason as, "Gentlemen do not read each other's mail." The bureau was restarted during WWII, obviously now manned by non-Gentlemen.

The NSA was made very public on [June 5] 2013, when secret details of many of its surveillance programs were released by Edward Snowden, a former NSA contractor. For example, it appears that each day the NSA gathers data on around 3 billion phone calls, and more than 200 million text messages.

The NSA's affiliate, the National Cryptologic Museum (NCM [Dec 16]) is well worth a visit.

## Casio FX-7000G

Oct. 24, 1985

The first hand-held graphing calculator, the Casio [June 1] FX-7000G, was released. It could draw a range of bar and line graphs, regression lines, and statistical data using normal distribution curves.

It employed an LCD 96 × 64 dot matrix window, which could display up to sixteen characters on eight lines in "character mode".

It was programmable but only had 422 bytes of memory. Nevertheless, that was still enough to hold around ten programs.

## “Internet” Defined

Oct. 24, 1995

The Federal Networking Council (FNC), an organization representing numerous federal agencies, including NASA, the National Science Foundation, and the Department of Defense, met to officially define the term “Internet,”

Of course, the term “Internet” had existed long before this date. Vint Cerf [June 23] and Robert Kahn [Dec 23] invented it around 1973 as an abbreviation for “inter-networking of networks,” when they were working out the details of TCP on napkins [Sept 9].

Its important job completed, the FNC was disbanded on Oct. 1, 1997.

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## Smart Ship struck Dumb

Oct. 24, 1997

The US Atlantic Fleet’s Naval Surface Force issued a memorandum that suggested that its “Smart Ship” technology was not as smart as originally hoped.

In Sept., the USS Yorktown had been on maneuvers off the coast of Virginia when it suddenly went dead in the water. The ship drifted for over two hours before the sailors restored control.

The Yorktown’s “Smart Ship” setup consisted of 27 networked Pentium Pro PCs running Windows NT [July 27]. This had allowed the navy to reduce the crew size by about 10% , saving some \$2.8 million a year.

The failure was later traced to a crew member entering the number 0 into a database field. This led to an attempt to divide by 0 that crashed the system. The failure then spread throughout the network.

A civilian engineer familiar with the system said “Using Windows NT, which is known to have

some failure modes, on a warship is similar to hoping that luck will be in our favor.”

For more numerical errors, see [Feb 10], [Feb 25], [June 4], [Aug 1], [Sept 23].

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## ATi Radeon 9700

Oct. 24, 2002

ATi Technologies released the Radeon 9700 graphics card, the first to use their R300 GPU, the first fully Direct3D 9 capable [Sept 30] consumer graphics chip.

The R300, and its derivatives, went on to form the basis of ATi’s product line for the next few years, and established the company as a serious contender in the high-end 3D graphics market. An epic rivalry was born between ATi and Nvidia [Feb 17], which fought back with its GeForce series [Oct 11].

Advertising for the Radeon featured a cartoon character called “Ruby”, a female “mercenary for hire”. Computer-animated videos had Ruby employed as a sniper, saboteur, and hacker, and proved to be very popular at technology shows such as CeBIT [March 12] and CES [June 24].

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## Sober Discovered

Oct. 24, 2003

The Sober worm distributed itself as an e-mail attachment using its own SMTP engine written in Visual Basic. It used a variety of subject lines, message bodies and file attachment names.

Multiple (150+) variants of the worm have appeared over the years, and at one point, an estimated one in 14 e-mails carried a copy.

On a host machine, Sober copies itself to several files in the Windows system, but its main purpose seems to be to post spam [May 3], and occasionally hate mail. Mac and Linux boxes are immune.

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## Windows

### Defender

Oct. 24, 2006

Microsoft released Windows Defender, a free anti-spyware application. Rather ominously, it reported spyware outbreaks to “Microsoft SpyNet”.

Defender included the much-appreciated ability to remove ActiveX [Oct 1] from the OS. ActiveX had been introduced in more carefree days as a framework for building web pages, and numerous security issues soon came to light.

In Windows 8 [Oct 26], antivirus protection was added to Defender, replacing Microsoft Security Essentials (which was obviously now no longer considered essential).

Defender was based on software developed by GIANT Company Software Inc., which Microsoft bought on Dec. 16, 2004.