Dec. 24th

Andrew Chi-Chih Yao

Born: Dec. 24, 1946;

Shanghai, China

Yao's research areas include pseudo-random number generation, cryptography, and communication complexity.

Yao's Principle (1977) is a technique for reasoning about randomized algorithms. It uses von Neumann's [Dec 28] minimax theorem to relate the average-case complexity of deterministic algorithms to the worst-case complexity of randomized versions.

The Dolev-Yao model (1981) is the starting point for most current work on computer security because it can be used to prove properties about interactive cryptographic protocols.

Yao's Millionaires' problem (1982) turns the famous cryptographic couple, Alice and Bob [Feb 00], into millionaires. The problem posits that they're interested in knowing which of them is richer but want to find out without revealing their actual wealth.

Yao's wife, Frances, is a leading researcher in computational geometry. She suggested that he should switch from physics to computer science in the 1970's.

NORAD Santa

Dec. 24, 1955

The Sears department store chain ran an advertizing campaign in local newspapers in Colorado Springs that encouraged children to phone Santa. The given number, ME 2-6681, contained a typo that turned it into the number for the operations hotline at the Continental Air Defense Command (CONAD, NORAD's [Aug 1] predecessor).

The 1955 Sears and Roebuck ad.

Colonel Harry Shoup answered the first call from a little girl wishing to speak to Santa. Shoup decided to play along saying he was one of Santa's elves (or perhaps Santa himself according to some versions of the story). When the calls kept coming, Shoup recruited other CONAD staff to man the phones.

The first press release about the new service stated: "CONAD, Army, Navy and Marine Air Forces will continue to track and guard Santa and his sleigh on his trip to and from the U.S. against possible attack from those who do not believe in Christmas."

Sadly, there's some debate over the accuracy of the story. For example, the actual CONAD hotline employed a dedicated phone system that no one could dial into from outside.

In any case, NORAD staff and volunteers currently answer more than 12,000 emails and 100,000 calls from 200 countries. Nowadays, Santa can also be tracked on the "NORAD Tracks Santa" website, and through Twitter (@NoradSanta) [March 21]. The toll-free hotline is 1-877-Hi-NORAD (1-877-446-6723) which goes live at 6am ET on Dec. 24.

In 2007 Google joined the project, plotting Santa's progress on Google Maps and Google Earth based on top-secret NORAD telemetry data.

The Green Machine

Dec. 24, 1964

In 1962, while still a student at Berkeley, Thomas E. Osborne began building an electronic calculator that he nicknamed the "Green Machine" (it resided inside a balsa wood box painted Cadillac metallic green). After extending the design several times, the device became operational on this day. It used 2264 diodes, 208 transistors, and could multiply more rapidly, over a larger range of numbers, than any desktop calculator then available.

Osborne later joined Hewlett-Packard [May 17] as a consultant, and his "Green Machine" was refined to become the HP9100A desktop calculator, released on [Oct 4] 1968.

GIF Licensing

Dec. 24, 1994

CompuServe [Sept 24] introduced the Graphics Interchange Format (GIF) on [June 15] 1987, and it quickly became a de facto image standard. However, GIFs were compressed using the patented Lempel–Ziv–Welch (LZW [Feb 10; Nov 27]) technique, which sparked controversy on this day when Unisys (the patent holder) and CompuServe announced that they were going to start charging licensing fees for using GIF compression.

The "League for Programming Freedom" was formed to protest the change, and soon became known for its "Burn All GIFs" campaign. Another outcome was the development of an alternative, patent-free, image format – Portable Network Graphics (PNG), which debuted on [Oct 1], 1996.

The LZW patent expired on [June 20] 2003, so GIF is once again free.

The Xenu Revelation

Dec. 24, 1994

The first of many anonymous messages was posted to the USENET newsgroup alt.religion.scientology, containing the "secret" writings of Scientology, including L. Ron Hubbard's "Xenu story".

On Jan. 11, 1995, Scientology lawyers attempted to shut the newsgroup down by sending a request to USENET servers instructed them to delete the group. Its main effect was to increase the public criticism of Scientology.

L. Ron Hubbard (1950). Photo by Los Angeles Daily News.

Shortly afterwards a series of lawsuits were unleashed against various participants on the newsgroup, which turned out to be a more effective strategy. For example, the popular anonymous remailer, anon.penet.fi, closed down. Johan Helsingius, its operator, explained that the legal protections afforded him in his home country (Finland) were too weak to protect the anonymity of his users.

For more Scientology, see [Jan 21].

CoffeeScript Released

Dec. 24, 2009

Although CoffeeScript eventually compiles into JavaScript [July 4], it hides this disreputable outcome by employing copious syntactic sugar inspired by features in Ruby [Feb 24], Python [Jan 31], and Haskell [April 8]. Useful new features include list comprehensions and pattern matching.

On Dec. 13, 2009, Jeremy Ashkenas uploaded CoffeeScript to GitHub [Feb 8] with the comment: "initial commit of the mystery language." On this day, the first documented release, version 0.1.0, was announced.

Two other languages that give JavaScript a facelift are Google's Dart [Oct 10] and Microsoft's TypeScript [Dec 2].