Oct. 26th

Christopher Stewart Wallace

Born: Oct. 26, 1933;

Bowraville, New South Wales, Australia
Died: Aug. 7, 2004

Wallace is probably best known for the eponymous Wallace tree, a fast multiplication algorithm used in most microchips. He also invented the minimum message length (MML) principle, a Bayesian method for statistical model comparison that's very popular in machine learning. MML emerged from Wallace's earlier work with Max Brennan on the Bayesian analysis of cosmic ray events. The raw data was logged using a system developed by Wallace, Brennan, and John Malos which ran on the SILLIAC [July 4].

Wallace also worked on the design of the SILLIAC resource sharing network in the late 1960s, one of the first Local Area Networks. It was during this time that he met his future wife, Judy Ogilvie, who was the first secretary and program librarian for the SILLIAC.

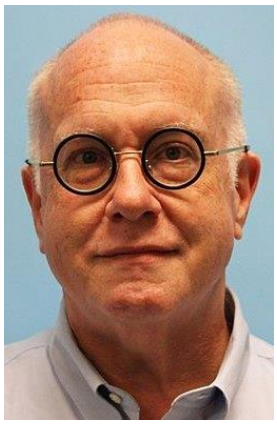
Michael Wayne Godwin

Born: Oct. 26, 1956;

Houston, Texas

Godwin was the first on-staff legal counsel at the Electronic Frontier Foundation (EFF [July 6]), and supervised EFF's involvement in the Steve Jackson Games case [March 1]. Subsequently, he was general counsel for the Wikimedia Foundation [June 20].

However, Godwin may be most renowned for two other achievements: Godwin's Law (1990) and the Internet meme [Nov 15] (1993). Godwin's law (more fully known as "Godwin's rule of Hitler analogies") asserts that "as an online discussion grows longer, the probability of a comparison involving Hitler approaches one" In 2012, Godwin's law was added to the Oxford English Dictionary.



Mike Godwin (2017). Photo by Voice of America/Cambodia.

Although the word 'meme' was coined by Richard Dawkins in his 1976 book "The Selfish Gene" [Nov 15], 'Internet meme' was first proposed by Godwin in the June 1993 issue of *Wired*.

Saga Aired

Oct. 26, 1960

To celebrate MIT's 100th anniversary, CBS aired the documentary, "Tomorrow—The Thinking Machine", which described the college's current computing and robotics projects, especially its most impressive creation to date – the TX-0 [Nov 20].

Doug Ross [Dec 21] and Harrison "Dit" Morse decided to show off the TX-0's prowess by having it generate its very own movie screenplay. The resulting 13,000 line script-writing program, which took nearly two months to code, was called SAGA ll. It managed a set of rules describing plot elements and possible actions, and could modify those rules using other meta-rules. It took SAGA II, running on the TX-0, two minutes to produce a Western called "Saga".

In the documentary, the TX-0 is shown printing the script for a particular scene which is then acted out on set. The script is admittedly lacking in great psychological depth, but makes up for it with plenty of action. A sample: "The Robber is at the window. Go to door. Open door. Go thru door. Close door. Go to corner. Put money down at corner."

After the robber returns home with his ill-gotten gains, the sheriff arrives and kills him in a shootout. However, SAGA II's second version of the scene had the robber win. The third scenario has the sheriff put his gun in the robber's holster, preferring to drink whiskey, while the robber repeatedly spins the cylinder of his own revolver.

A more detailed write-up can be found in Volume 2 of Donald Knuth's [Jan 10] seminal "The Art of Computer Programming", as an exercise at end of the chapter on random numbers. Knuth also mentions the love letters of Christopher Strachey [Nov 16]. Another early effort was Eric Mendoza's "Little Grey Rabbit" stories [Aug 1].

For more literary shenanigans with computers, see [Feb 1; Aug 22; Sept 9; Sept 11; Dec 25].

Stonehenge Decoded

Oct. 26, 1963

Gerald Hawkins' work on Stonehenge was published in *Nature*. Following analyses he had carried out using the Harvard-Smithsonian IBM 7090 [Nov 30], he proposed that Stonehenge was an ancient astronomical observatory.

He used the computer to check how 165 significant features at the monument aligned with the rising and setting points for the sun, moon, planets, and bright stars as they would have appeared in the night sky in 1500 BCE.

Stonehenge exhibited thirteen solar and eleven lunar

correlations, but the precision of those matches was less pronounced for later parts of the site.

Hawkins and J.B. White published “Stonehenge Decoded” in 1965, which at one point termed the place a ‘Neolithic computer’. The book received wide publicity, in part because of the authors' novel use of a computer to perform their calculations.

However, other archeologists, including Richard J. C. Atkinson, were less convinced by this ‘Stone Age calculator’ interpretation. Atkinson’s article “Moonshine on Stonehenge” pointed out that some of the pits that Hawkins had used for his sight lines were likely to have been nothing more than natural depressions in the ground, and that he had allowed a margin of error of up to 2 degrees in his alignments.

Later studies have failed to find more than a few solar and lunar alignments.

US Pac-Man

Oct. 26, 1980

Midway released the game "Pac-Man" to arcades in the US. A player must guide Pac-Man through a maze to eat dots while avoiding contact with four ghosts (who are called Inky, Blinky, Pinky, and Clyde in the US, but Fickle, Chaser, Ambusher, and Stupid in Japan). The game had been released in Japan on [May 22], but with the moniker “Puck-Man”, and was developed by Toru Iwatani.

Namco sold more than 100,000 arcade units in just 15 months, and it was estimated that fans fed them more than $1 billion in quarters. Pac-Mac "fever” became so widespread, that the game got its own pop single in 1982, written by Jerry Buckner and Gary Garcia. In the US, at least, it was a hit, selling over 500,000 copies, going gold, and reaching number nine on the Billboard Hot 100 charts.

Pac-Man represents several firsts in gaming: the first use of a mascot, the first to purposely target a female audience, the first maze chase game, the first licensing success , the first use of a power-up, the first cut scene, and the first instance of stealth gaming (because Pac-Man avoids his enemies, rather than attacks them).

The North American Pac-Man cabinet. Photo by Gerardvschip. CC BY-SA 2.5.

On June 3, 2010, Guinness World Records cited Pac-Man as having the most “coin-operated arcade machines” installed worldwide: 293,822.

In 2004, Pac-man's skull was carefully reconstructed by artist Le Gentil Garçon after studying the skulls of human and predatory animals. He collaborated with paleontologist François Escuilié to make it as accurate as possible.The skull is 65cm in diameter and made of resin.

The Terminator is Released

Oct. 26, 1984

"The Terminator" is a sci-fi action movie directed by James Cameron, and starring Arnold Schwarzenegger as the Terminator, a T-800 Model 101 cyborg assassin. It has been sent back in time from 2029 by Skynet, an evil AI network, to kill Sarah Connor (played by Linda Hamilton). Her son will one day become a freedom-fighter who threatens Skynet's existence.

Despite a nuclear holocaust [Aug 29], Skynet still relies on proven technology. For example, the T-800 employs a MOS 6502 [Sept 16] chip, running mostly assembly code, which is visible when we see a scene through the Terminator’s eyes. Furthermore, almost all the code comes from the August and September 1984 issues of *Nibble Magazine*, a popular periodical for Apple II [June 5] users. One of the programs is HIRESEX (Hi-Res-Ex) which can swap up to five images on screen at once. There’s even a brief glimpse of COBOL [Jan 10]:

```
IDENTIFICATION DIVISION.
PROGRAM ID. ADD.
ENVIRONMENT DIVISION.
DATA DIVISION.
WORKING STORAGE SECTION.
77 IDX PICTURE 9999.
77 SUM PICTURE 999999.
77 X PICTURE X.
PROCEDURE DIVISION.
BEGIN.
  ACCEPT X.
  MOVE ZERO TO IDX.
  MOVE ZERO TO SUM.
  PERFORM ADD PAR UNTIL
                IDX = 1441
```

Also see [July 3]

Ambulance Dispatch Fails

Oct. 26-27, 1992

The aim of the London Ambulance Service Computer Aided Dispatch (LASCAD) project was to automate the old-fashioned manual dispatch system, and thereby reduce the average emergency-response time to just three minutes. This was a daunting requirement, since the service fielded between 2,000 and 2,500 calls per day, with 60% of those requiring an ambulance to be sent out.

The system went live without undergoing proper load-testing, with at least 80 uncorrected software issues, and with no backup system in place. Also, personnel had been trained on

the system more than ten months before the rollout.

LASCAD had been in operation for just a few hours when problems began to multiply, and a later enquiry eventually blamed the system for between 30 and 45 deaths. In one incident, a person who had died while waiting to be taken to hospital, had already been taken away by a mortician before the ambulance arrived.

CPAN Introduced

Oct. 26, 1995

The Comprehensive Perl Archive Network (CPAN) is the main website for Perl [Dec 18] libraries, offering over 250,000 modules and documentation. It has been called Perl's killer app [Sept 8].

The idea for CPAN emerged on the Perl-packrats mailing list in Dec. 1993, modeled after the Comprehensive TeX [March 30] Archive Network (CTAN).

CPAN's "self-appointed master librarian", Jarkko Hietaniemi, often takes part in Perl April Fool's Day jokes, and CPAN's entire `Acme::` hierarchy is reserved for joke modules. For instance, `Acme::Don't` adds a `don't` function that doesn't run the code given to it (to complement the `do` built-in, which does). Alternatively, the `Lingua::Romana::Perligata` module lets Perl programs be written in a subset of Latin.

Diary of a Camper

Oct. 26, 1996

"Diary of a Camper" is a short film (just 1 minute and 36 seconds) made using the game Quake [June 22]. It's considered the first machinima (Machine Cinema): a movie with an actual plot and dialogue produced using a 3D gaming environment.

Admittedly, the storyline is rather basic, centered on a lone camper who must face five opponents in a deathmatch, but there is a humorous punch line.

Screenshot from "Diary of a Camper" (1996). United Ranger Films.

"Diary" was created by United Ranger Films, a group of gamers collectively known as the Rangers. (The faces of some Rangers are used as the grisly visages of the movie's five assailants.)

Brainy Computer

Oct. 26, 1998

A paralyzed 53-year old Georgia man became the first person to control a computer using only his thoughts. A millimeter-long electrode had been implanted in his brain near the area that controlled hand movement. When the patient thought about moving their hands, electrical activity near the electrode increased, and these signals were transmitted to a computer which used them to drive a cursor across a screen.

Philip Kennedy, a neurologist from near Atlanta, had been working on this implant technology for 12 years, and he and his partner Roy Bakay, a neurosurgeon at Emory University, had already tested the implant hardware in two patients without much success.

"This is right on the cutting edge, it's Star Wars stuff," [May 4] Bakay told an audience of neurosurgeons on this day. Sadly, later implants produced disappointing results. Also, invasive surgery of this kind has gone out of style (e.g. see [Dec 7]).

Klez Worm Identified

Oct. 26, 2001

F-Secure identified the Klez worm which propagating via e-mail sent by Microsoft Windows In particular, it exploited a vulnerability in the Trident HTML layout engine, used by Internet Explorer [Aug 16], Microsoft Outlook, and Outlook Express.

It was notable for being able to spoof email addresses in the sender line, as well as its ability to infect the receiver's computer without having to open or execute an attachment.

Klez spawned a significant number of variants, and is considered one of the most destructive worms in history.

For more virus nasties, see [Jan 26; March 26; April 30; May 5; July 13; July 15; July 17; Sept 5; Nov 21].

Windows 8 Released

Oct. 26, 2012

Prev: [Oct 22]; Next: [July 29]

Windows 8 introduced some radical changes to the OSes user interface to improve its functionality on tablets, a market where Windows was suffering from stiff competition by Android [Nov 5] and iOS [June 29].

It ditched the Start button and menu in favor of a more touch-friendly Start screen. A new tiled interface replaced the familiar lists of programs and icons. A Windows 7-like desktop was still available, but hidden well away.

The new user interface was inevitably criticized for being confusing and difficult to learn, especially when employed with a keyboard and mouse instead of a touchscreen. Windows 8.1 [Oct 17] addressed a number of these issues. It re-introduced the Start

button, and users could choose to boot directly into the desktop.