Jan. 11th

Popular Mechanics

Jan. 11, 1902

Henry Haven Windsor began *Popular Mechanics* magazine as a weekly review of emerging technologies; its motto was "Written so you can understand it."

It started as a 16-page weekly priced at a nickel, and Windsor amassed 10,000 subscribers by the end of the first year, and 32,000 by the second.

The magazine soon became a 100-page monthly, which covered all the developments you'd expect, such as the rise of the automobile, TV and space travel. A few embarrassing articles did manage to creep in, such as a June 1908 one about a Philadelphia physician who could supposedly use X-rays to turn black people white.

Sir Charles Antony Richard Hoare

Born: Jan. 11, 1934;

Colombo, Sri Lanka

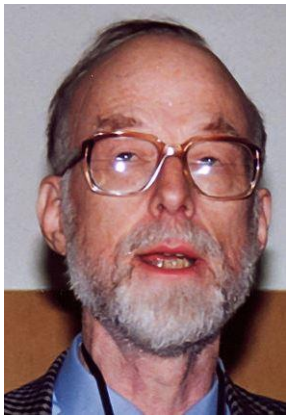
(His British father was a colonial civil servant and his mother the daughter of a tea planter based in Sri Lanka.)

Hoare is probably best known for inventing the quicksort algorithm in 1959/1960, but has been responsible for many advances – the monitor concept used in OSes, Hoare logic for verifying program correctness, and the CSP formal language for specifying concurrent processes. CSP was the inspiration for the Occam language [Nov 17].

During his UK National Service (1956-1958) in the Royal Navy, he studied Russian, and began programming the Ferranti Mercury in 1958, after being taught Autocode [Dec 14] by Leslie Fox. His Russian skills took him to Moscow State University as a graduate student where he studied machine translation.

Back in the UK, Hoare began working at Elliott Brothers [Oct 00] in 1960, a small computer manufacturer, where he implemented an early, influential, compiler for ALGOL 60 [next entry].

In 1972, Hoare, Ole-Johan Dahl [Oct 12] and Edsger Dijkstra [May 11] co-authored 'Structured Programming', perhaps the best book on programming of that decade.



Tony Hoare (1994). Photo by Andreas F. Borchert. CC BY-SA 4.0.

Hoare should not be mistaken for the former UK bank robber, Tony Hoare (1938 - 2008), who went on to become one of TV's most successful scriptwriters, penning episodes of many popular UK shows, such as "The Sweeney" and "Minder".

Some quotes:

"There are two ways of constructing a software design: One way is to make it so simple that there are obviously no deficiencies, and the other way is to make it so complicated that there are no obvious deficiencies."

"I call it my billion-dollar mistake. It was the invention of the null reference [Sept 7] in 1965." (As part of his work on ALGOL-W [Feb 15].)

"Premature optimization is the root of all evil in programming."

ALGOL 60 Meeting

Jan. 11-16, 1960

ALGOL 60 (short for ALGOrithmic Language 1960) succeeded ALGOL 58 [May 27]. The language committee included Friedrich L. Bauer [June 10], Peter Naur [Oct 25], Adriaan van Wijngaarden [Nov 2] (all from Europe), and John W. Backus [Dec 3], John McCarthy [Sept 4], Alan J. Perlis [April 1] (from the US).

Perlis remembered: "The meetings were exhausting, interminable, and exhilarating. One became aggravated when one's good ideas were discarded along with the bad ones of others. Nevertheless, diligence persisted during the entire period. The chemistry of the 13 was excellent."

ALGOL 60 was the first language to implement nested function definitions with lexical scope. It didn't include recursion originally, but that was added at the last minute, against the wishes of some of the committee. Call-by-name parameter passing was supported rather than the more familiar call-by-reference used today.

Its success can be seen in the way it influenced many later languages, including Simula [Feb 10], BCPL [July 21], Pascal [Feb 15], and C [Sept 9]. Its two immediate successors were Niklaus Wirth's [Feb 15] ALGOL-W and the ill-fated ALGOL 68 [Dec 20].

Tony Hoare [previous entry] remarked: "Here is a language so far ahead of its time that it was not only an improvement on its predecessors but also on nearly all of its successors."

The reasons for ALGOL 60's failure to become more widely used were the subject of much discussion during the 1960's. Many believed that IBM's support for FORTRAN [Dec 00] doomed it, but a serious technical weakness was its lack of standardized I/O facilities. One member of the committee also noted that the ALGOL was

the name of a star whose English translation was “The Ghoul.”

Silicon Valley

Jan. 11, 1971

The journalist, Donald Hoefler [Oct 3], used the term “Silicon Valley” in print for the first time in a three-part series entitled “Silicon Valley, USA”. It appeared in the weekly trade newspaper, *Electronic News*.

One of Silicon Valley's best known streets. Photo by Alison Cassidy. CC BY-SA 4.0.

He later said that he first heard the name while he was sitting in a hotel lobby; two out-of-town salesmen were talking about their experience visiting local firms. The first said, “Boy, there sure are a lot of semiconductor companies around here these days.” “Yeah,” replied the other, “this place is turning into a regular Silicon Valley.”

Another origin story is that entrepreneur Ralph Vaerst, founder of Ion Equipment Corp., suggested the name to Hoefler because he had heard people on the East Coast referring to the place that way.

An earlier name for the area that might have been utilized was “The Valley of Heart's Delight”, dating from when it was a fruit growing center at the start of the 20th Century.

The success of "Silicon Valley" can be measured by its numerous other uses around the world, including: Sili-corn Valley in Fairfield, Iowa; Silicon Prairie in Lincoln, Nebraska; Silicon Beltway in Washington D.C.; Silicon Alley in NYC; Silicon Forest from Portland to Eugene; Silicon Mountain in Colorado Springs; Silicon Glen in Scotland; Silicon Roundabout in London; and Silicon Wadi in Israel.

Ironically, the original name is becoming increasingly obsolete. Since 2000, a growing share of startups haven't been founded in places like Mountain View or Palo Alto but in San Francisco (e.g. Twitter [March 21], Dropbox [June 1], and Airbnb [Sept 22]). They're all located within a couple of miles of one another in a neighborhood known as Soma (South of Market).

Domain Name's Birth

Jan. 11, 1982

A meeting was held at the Information Sciences Institute (ISI) to discuss issues concerning e-mail addresses [Dec 00]. The ARPANET [Oct 29] was scheduled to switch from its NCP protocol to TCP/IP [Jan 1] by the end of the year, and a multitude of disparate networks, with names like CHAOSNET, UCLNET, and INTELPOSTNET would need to be able to communicate.This increase in numbers required a more hierarchical domain system.

Mostly as a stopgap, the meeting decided that the current `user@host` mailbox identifier would be extended to `user@host.domain`. Nevertheless, this marked the beginning of the domain name idea, which eventually led to the Domain Name System (DNS [Nov 18]).

The Computer Programme

Jan. 11, 1982

“The Computer Programme” TV series was produced by Paul Kriwaczek, and started being broadcast on the BBC on this day as part of its Computer Literacy Project. The project was set up after the success of a ground-breaking book and TV series, “The Mighty Micro” [May 29].

There were 10 programmes, each about 25 minutes long, and one aim was to have viewers follow along on their own computers at home. This led the BBC to commission Acorn Computers [Dec 5] to build the BBC Micro [Dec 1], which went on to become a very popular PC in the UK.

The show's format involved two presenters – Ian McNaught-Davis (known as ‘Mac’) and Chris Serle. Mac (the boffin) explained computers and BASIC programming to Searle (the newbie), often centered around a real-life situation (e.g. computers in a car factory).

The show’s theme music was taken from Kraftwerk’s 1981 “Computer World” album [May 10].

No Time For Goodbyes

Jan. 11, 1994

Eric Gordon Corley published “No Time For Goodbyes – Phiber Optik’s Journey to Prison” in the “Computer Underground Digest” [March 28] and later in PHRACK [Nov 17] magazine.

The article described how Corley had accompanied Mark Abene (aka “Phiber Optik”) as he entered prison on Jan. 7, to start a one year sentence for computer trespass.

Abene was a founding member of the “Masters of Deception” (MOD), along with Elias Ladopoulos (aka Acid Phreak), and Paul Stira (aka Scorpion). Abene had earlier been a member of the "Legion of Doom" (LOD), but its decline [July 22] persuaded him to form the MOD.

A huge celebration was held upon Abene 's release, called “Phiberphest ’95”. In TIME magazine, Joshua Quittner called Abene “the first underground hero of the Information Age, the Robin Hood of cyberspace.”

Later that year, the book "Masters of Deception: The Gang That Ruled Cyberspace", by Quittner's wife, Michele Slatalla, was released.

Telstar 401

Jan. 11, 1997

AT&T's Telstar 401 satellite, positioned in geostationary orbit, suddenly failed. AT&T tried to reestablish contact for over a week, but without success.

The craft had only been in service since Dec. 1993 and had been expected to remain operational until 2006.

While AT&T never officially acknowledged the possibility, scientists at the Goddard Space Flight Center, believed that a solar storm on Jan. 6 had created enough geomagnetic activity to knock out the satellite.

For more solar flares, see [Aug 16], [Sept 1].

AI Beats Humans at Poker

Jan. 11 - 31, 2017

The "Libratus" Poker playing program was developed at Carnegie Mellon by Noam Brown and Tuomas Sandholm. On this day, it was pitted in a tournament against four top-class human players: Jason Les, Dong Kim, Daniel McAulay, and Jimmy Chou. Libratus won.

Libratus had trained by playing itself, followed by periods of introspection when it examined its decisions to improve its strategy. This technique has the wonderful name: counterfactual regret minimization. The result was that the more Libratus played, the better it became.

Doug Kim remarked that he started to feel like Libratus could see his cards. "I'm not accusing it of cheating," he said. "It was just that good."

The prize money of $200,000 was shared between the human players even though Libratus won.

For more gaming defeats of humans by computers, see [Feb 10], [April 29], [Oct 5].