Daniel Leonid Slotnick

Born: Nov. 12, 1931;

NYC
Died: Oct. 25, 1985

Slotnick designed the SOLOMON (Simultaneous Operation Linked Ordinal Modular Network) computer, a system with 1,024 ALUs, capable of working in parallel under the supervision of a central control unit. The machine was named after King Solomon, who was reputed to have had 1,000 wives.

He later became the chief architect of the ILLIAC IV [Sept 7], the first large-scale array computer to use semiconductor RAM memory. When it first operated at NASA's Ames Research Center in 1972, it could execute 200 million instructions per second, and was the world's fastest computer until 1981. The speed was achieved using ideas borrowed from SOLOMON – the architecture linked together multiple Burroughs mainframes to form 64 processing elements. Indeed, Slotnick had originally wanted to use 256 mainframe processors.
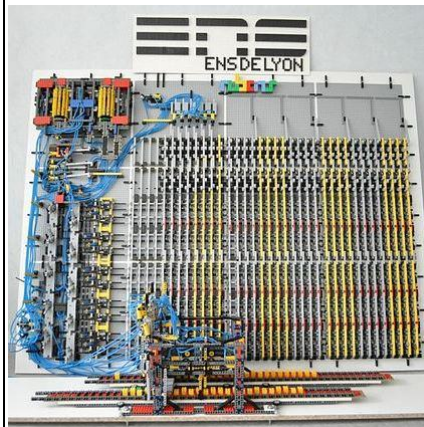
Turing's Machine
Nov. 12, 1936

Alan Turing's [June 23] paper, "On Computable Numbers with an Application to the Entscheidungsproblem," was published in the *Proceedings of the London Mathematical Society*. The journal had received the manuscript on May 28, 1936.

The Entscheidungsproblem, the German for "decision problem," is concerned with devising a mechanical process that can be applied to any first-order logic statement to decide whether it is true or not. Turing showed that no such process existed, and so answered the last part of Hilbert's Second Problem [Sept 3].

Turing was heavily influenced by Kurt Gödel's [April 28] incompleteness theorem, especially by his method of assigning numbers to logical formulas (now called a Gödel numbering) in order to reduce the logic to arithmetic.

Turing tackled the decision problem by defining an abstract mechanical engine (which would later be called the "Turing Machine"). The engine's only purpose was to read and write symbols on a movable paper tape according to a table of rules.

A Turing machine built using Lego bricks. Projet Rubens, ENS Lyon. CC BY 3.0.

Nevertheless, it allowed Turing to rephrase the decision problem as whether there was a specific algorithm for the engine that could decide whether other algorithms were guaranteed to terminate. Turing proved that no such halting-decision algorithm existed.

Alonzo Church's [June 14] approach for the Entscheidungsproblem, based around his lambda calculus, had been presented to the American Mathematical Society on April 19, 1935 (a year before) and published on April 15, 1936. However, it was unknown to Turing while he was writing his paper, but after he found out, he added an appendix where he sketched a proof that the lambda calculus and the Turing machine were functionally the same.

Eventually these two approaches were merged into the Church-Turing thesis.

Project Cybersyn
Nov. 12, 1971

Project Cybersyn was aimed at constructing a distributed decision support system for the Chilean national economy. The name was a portmanteau of "cybernetics" and "synergy".

Its principal architect was British operations research scientist, Stafford Beer. Norbert Wiener [Nov 26] once called Beer the "father of management cybernetics."

Cybersyn consisted of four related modules: an economic simulator, custom software to check factory performance, an operations (ops) room, and a national network of 500 telex machines linked to the system's mainframe.

The hexagonal ops room (some thirty-three feet in diameter) featured seven stylish Tulip chairs, similar to those used in TV's Star Trek [Sept 8], arranged in a circle. Each chair included an ashtray, a stand for a whiskey glass, and a set of buttons that controlled the display screens on the walls.

One wall was reserved for Project Cyberfolk, an ambitious effort to track the real-time happiness of the Chilean nation. A prominently displayed 'algedonic' meter indicated national moods ranging from extreme unhappiness to complete bliss.

The project ran on Chile's governmental IBM System/360 [April 7] Model 50, but later transferred to a less heavily used Burroughs B3500 since processing delays on the Model 50 could exceed 48 hours.

In June, 1972, Ángel Parra, Chile's leading folksinger, wrote "Litany for a Computer and a Baby About to Be Born." The song notes that computers are like children, and Chilean bureaucrats must not abandon

them. Parra was prompted to write the song after Beer visited Santiago.

After the military coup on Sept. 11, 1973, Cybersyn was abandoned and the ops room destroyed.

Dazzler
Nov. 12, 1975

Cromemco's [Dec 11] Dazzler was the first commercial color bitmapped graphics card for a microcomputer; in this case, for the Altair 8800 [Dec 19] and other machines using a S-100 bus [Aug 28]. It offered 128-by-128 pixel resolution, required 512 bytes of memory, and cost $215.

Roger Melen and Harry Garland demoed a prototype Dazzler at the Homebrew Computer Club [March 5] on this day, attached to the Altair serial number 0002. They'd also shown it off at the WESCON convention in San Francisco back in September.
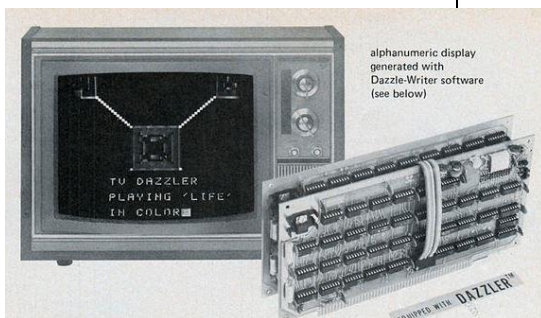
Part of a Cromemco Dazzler advertisement. Scanned by Michael Holley.

The Dazzler magazine advert promoted three programs capable of using its features: John Conway's [Dec 26] Game of Life, Dazzle-Writer, and a pattern-generating program called Kaleidoscope, written by Li-Chen Wang, creator of Tiny BASIC [Oct 10]. The cover of the June 1976 issue of BYTE magazine featured a Dazzler's rendering of Conway's life.

Stan Veit [Dec 25], owner of NYC's "Computer Mart" shop, set up Kaleidoscope to run on a color TV in his store window. He later recalled, "people driving by

began to stop and look - they had never seen anything like it before. In a short time the Dazzler had caused a traffic jam on 5th Avenue!"

Cromemco later included a version of Spacewar! [May 17] with the board, either in the form of a hexadecimal source code listing or punched onto paper tape. This may make it the first commercial microcomputer game, but other contenders include Encounter [Dec 21] and MicroChess [Dec 18].

Super Dazzler cards (a later iteration) were used in ColorGraphics Weather Systems machines. If you watched US TV in the early 1980's, then you'd have seen weather imagery generated using them.

The Night of the Hackers
Nov. 12, 1984

Newsweek magazine published the article "The Night of the Hackers" by Richard Sandza which vividly described the BBS hacking culture of the time. On his chosen BBS, DragonFire, Sandza was known as "Montana Wildhack".

Some people didn't like what he'd written, and Sandza became the target of hacker attacks. For example, someone obtained his credit card account numbers and posted them along with his name and address to Pirate 80, a BBS in Charleston.

Sandza, a consummate journalist, wrote a follow-up article about this turn of events in the Dec. 10 issue, called "The Revenge of the Hackers".

Jazz isn't Popular
Nov. 12, 1984

Lotus announced its Jazz office suite for the Mac, which it went

on to release in 1985. It included a word processor, spreadsheet, database, graphics, and communication software.

Expectations were high since Lotus had produced Symphony [Feb 14], an excellent integrated package for the IBM PC. Before Symphony, the even better Lotus 1-2-3 [Jan 26] had originally been billed as an integrated product with spreadsheet, database, and graphing functions (hence the name "1-2-3"). Unfortunately, Jazz would not be joining its illustrious predecessors in software Valhalla.

Critics criticized the high price, and lack of features. Indeed, for the same amount of money, Mac owners could actually buy a new hard disk. Also, Lotus copy-protected the software, which meant that an important and expensive business program could not be backed-up. Another problem were the silly ads featuring dancing executives "jazzing it up."

In Guy Kawasaki's [Aug 30] book "The Macintosh Way", Jazz was described as being so bad, that "even the people who pirated it returned it."

Second Web Proposal
Nov. 12, 1990

Tim Berners-Lee [June 8] and Robert Cailliau [Jan 26] submitted a proposal to CERN entitled "WorldWideWeb: Proposal for a HyperText Project," based on Berners-Lee's earlier funding pitch, "Information Management: A Proposal," from [March 12] 1989.

Eleven people from CERN considered the application, the most senior being David Owen Williams, head of the Computing and Networks Division. The result was a 'green light' to begin development; the first Web browser and server went online on [Dec 25].

Microsoft Tablets
Nov. 12, 2000

At COMDEX [Dec 3], Bill Gates [Oct 28] demonstrated Microsoft's Tablet PC initiative, modestly claiming that it "will represent the next major evolution in PC design and functionality." Indeed, the somewhat less partisan Alan Kay [May 17] said in March 2001: "Microsoft's Tablet PC is the first Dynabook-like computer good enough to criticize." The surprising outcome, at least from today's perspective, was that the initiative fizzled and died.

The problem was that the technology didn't quite yet match the hype. One of the best tablets of the time, the HP Compaq TC1100 weighed 4 lbs. and was 0.8" thick, so didn't really match Gates' description of "a thin, lightweight device that slips easily into a briefcase or portfolio and can be held in one hand."

Also, Microsoft wanted to have the tablet run a version of Windows XP [Oct 25] augmented with a touchscreen and pen interface. This required bulky, heavy-duty batteries, and the stylus-enabled screen also added to the weight.

It wasn't really until the iPad [April 3], a decade later, that tablet computing started to be widely adopted.

Biggest Military Hack
Nov. 12, 2002

A Scottish sysadmin known by the handle "Solo" was indicted for what US authorities described as the "biggest hack of military computers ever detected."

"Solo" allegedly exploited MS Windows systems to attack 92 networks run by NASA, the Pentagon, and twelve military installations during 2001.

Prosecutors said that the hacker "stole passwords, deleted files, monitored traffic and shut down computer networks on military bases from Pearl Harbor to Connecticut."

In his defense, the hacker explained that he was only looking for evidence of "free energy", antigravity technology, and a cover-up of UFO activity.