Sept. 14th

Edson D. de Castro
Born: Sept. 14, 1938;

Plainfield, New Jersey

De Castro joined DEC [Aug 23] in 1961 where he worked on the design of the PDP-5. Its success led to him becoming the chief engineer in charge of developing the 12-bit PDP-8 [March 22].

In 1967, de Castro, Henry Burkhardt III, and Richard Sogge designed a 16-bit machine, the PDP-X, that would compete with the IBM System/360 family [April 7]. Their ideas weren't seen as a good fit for the DEC product line and the project was cancelled. This caused the three men, along with Herbert Richman of Fairchild Semiconductor [Oct 1], to form Data General in April 1968. The company's first release was the 16-bit Nova [April 15].

Ten years later, DEC's CEO, Ken Olsen [Feb 20], said, "What they did was so bad we're still upset about it." At the time, DEC responded by producing its own 16-bit mini, which became the PDP-11 [Jan 5].

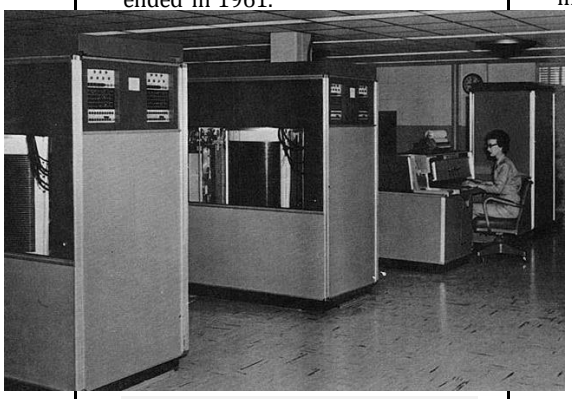
The Ratio Club
Sept. 14, 1949

The Ratio Club was founded on this day by neurosurgeon, John Bates, and went on to become the most influential cybernetics group in the UK. The twenty members were a mixed group of neurobiologists, engineers, mathematicians, and physicists, including: Donald MacKay [Feb 6], W. Grey Walter [Feb 19],, I. J. Good [Dec 9], and Alan Turing [June 23] (who gave a guest talk on "Educating a Digital Computer"). Several of the participants had been involved in intelligence work at Bletchley Park [Aug 15].

The group met several times a year until 1955, usually in a basement room below the nurses' accommodation at the National Hospital for Nervous Diseases. The name Ratio was suggested by Albert Uttley since its Latin root meant "computation or the faculty of mind which calculates, plans and reasons".

IBM 305 RAMAC
Sept. 14, 1956

The 305 RAMAC ("Random Access Method of Accounting and Control") was the first computer with a hard disk drive, the IBM 350 Disk Storage Unit [Next Entry], capable of storing a massive 5MB of data. It was also one of the company's last vacuum tube systems. Nevertheless, more than 1,000 were built before production ended in 1961.



An IBM 305 RAMAC, with two 350 disk drives in the foreground. Photo by US Army Red River Arsenal.

In the spring of 1958, IBM installed a 305 in the US Pavilion at the Brussels World's Fair, where visitors could query "Professor RAMAC" via a keyboard. Answers were printed in any of ten languages, including Interlingua, an artificial language akin to Esperanto.

First Commercial Hard Drive
Sept. 14, 1956

The IBM 350 disk storage unit Model 1 was developed by a team led by Reynold B. Johnson [July 16] as an integral part of the 305 RAMAC [Prev Entry]. Each one was about the size of two refrigerators, and weighed around a ton.

It stored 5 MB on fifty 24-inch diameter disks spinning at 1200 RPM. The average time to locate a record was 600 ms, and data could be transferred at speeds of around 8,800 characters per second. One megabyte cost roughly $10,000, but IBM also leased the system for a very reasonable $3,200 per month.

The first popular hard drive for PCs, the Shugart ST-506 [May 20], was released in 1980, and incidentally also offered 5 MB but on a single 5.25-inch disk. It was also somewhat lighter and cheaper.

Accepting ERMA
Sept. 14, 1959

The noted actor and future US President, Ronald Reagan, hosted a transcontinental videoconference to announce the debut of the Electronic Recording Method of Accounting (ERMA [Jan 28]) system at the Bank of America.

ERMA could process checks with account numbers printed in a computer-readable font using magnetic ink. Alfred Zipf [Oct 13] headed the research at Bank of America, working with the Stanford Research Institute (SRI) to develop the system. The hardware was built and sold by General Electric (GE).

Each ERMA contained 8,200 vacuum tubes, 34,000 diodes, over a million feet of wiring, and weighed 25 tons. Each machine occupied four rooms, required a staff of five operators, and consumed 80 kW of electricity. However, they could process up

to 33,000 accounts per hour and were used around the clock to update 5.5 million accounts per week -- replacing 500 clerks in the process.

GE's focus on ERMA was typical of its 1950's policy of avoiding computer hardware. One reason may have been that IBM was GE's largest customer for vacuum tubes, and perhaps GE didn't want to appear to be in direct competition with such a valued client.

GE's emphasis changed in the early 1960's with the introduction of its GE-200 business computer series, starting with the GE-225 [May 00].

Domain Registration Costs

Sept. 14, 1995

The National Science Foundation (NSF) and Network Solutions, (NSI) announced that Internet domain registration would no longer be free. Henceforward, NSI would levy hefty charges: new members paid a $100 fee for a two-year registration, and $50 per year thereafter.

NSI was founded in 1979 by Emmit McHenry, and in 1990 had taken over the administration of the Network Information Center (NIC) as a government subcontractor. Previously it had been run single-handedly by Elizabeth J. Feinler [March 2] based at Stanford.

In May 1993, the NSF privatized the NIC, and also gave it a brand new name: InterNIC. NSF paid NSI $5.9 million to run InterNIC after a bidding process in which NSI was the sole bidder.

However, NSI's monopoly in the domain name registration business was broken on [Sept 18] 1998, when the US Department of Commerce and NSF formed the Internet Corporation for Assigned Names and Numbers (ICANN) to oversee the registration of domain names and their accreditation [June 20].

GameCube

Sept. 14, 2001

Nintendo launched the GameCube, a successor to the Nintendo 64 [June 23], to compete with Sony's PlayStation 2 (PS2) [March 4] and Microsoft's Xbox [Nov 15].

Nintendo GameCube console. Evan-amos derivative work: Alphathon (talk). CC BY-SA 3.0.

The console was praised for its controller, extensive software library and high-quality games, but was criticized for its exterior design.

Unlike the PS2 and the Xbox, the GameCube didn't use DVDs [Dec 8], preferring its own smaller proprietary disc. Some naysayers speculated that this was Nintendo's attempt to make their content difficult to duplicate illegally.

Nintendo had developed stereoscopic 3D technology for the device, and one title, "Luigi's Mansion", supported it, but the feature was never enabled in the hardware. The company had also developed prototype motion controls, but that technology only became available in its successor, the Wii [Nov 19].