July 8th

Moore School Lectures Begin

July 8 - August 31, 1946

The *Moore School Lectures* was a 8-week course on the construction of electronic digital computers held at the University of Pennsylvania's Moore School of Electrical Engineering. It was the first time that computer topics had been taught in a formal academic setting.

The Moore School, University of Pennsylvania. Photo by Swordsman1.

The course title was "The Theory and Techniques for Design of Digital Computers", and the overall aim was to disseminate the ideas behind the EDVAC [June 30], then being built as the successor to the ENIAC [Feb 15].

J. Presper Eckert [April 9] gave 11 of the lectures [July 15], and John Mauchly [Aug 30] and Herman Goldstine [Sept 13] each delivered six. Other lecturers included John von Neumann [Dec 28], Howard Aiken [March 8], Derrick Lehmer [Feb 23], George Stibitz [April 30], and Douglas Hartree [March 27].

Lectures were given five days a week, and were up to three hours long each; the afternoons were typically reserved for informal seminars.

Students included future pioneers such as Maurice Wilkes [June 26], Claude Shannon [April 30], and Jay Forrester [July 14].

CDC

July 8, 1957

Control Data Corporation (CDC), a pioneer in the building of supercomputers, was incorporated on this day.

William Norris [July 14] and several of his colleagues at Sperry Rand [Jan 25] had grown increasingly frustrated with the company's lack of emphasis on computer systems, and decided to found CDC. They set up shop in an old warehouse across the river from Sperry's St. Paul lab, in Minneapolis.

CDC's most notable employee was Seymour Cray [Sept 28], who during the 1960's developed some of the world's fastest computers (e.g. the CDC 1604 [Oct 16], CDC 6600 [Sept 00], CDC 7600 [Dec 3]). In 1972, Cray emulated Norris by forming his own company, Cray Research, which soon took over the title of builder of the world's fastest machines.

After several years of losses in the early 1980s, CDC gradually retreated from the computer manufacturing business.

CICS

July 8, 1969

CICS (Customer Information Control System) is an IBM transaction processing system.

The first product using CICS technology was actually released in 1968, the catchily named "Public Utility Customer Information Control System", or PU-CICS for short. The Public Utility prefix was dropped with the introduction of CICS on this day.

There is some debate over how to pronounce "CICS". Americans seem to prefer referring to it by its letters, "C-I-C-S". The Europeans (primarily the British) seem to favor its phonetic name, "KICKS". As far as I know, no one says "SICKS".

Canadian Iron Man

July 8, 1985

At Johnny Zee's *Family Fun Center* in Victoria, British Columbia, James Vollandt, aged 18, won the 1985 Canada Iron Man contest by playing the arcade game Joust for 67 hours and 30 minutes after inserting a single quarter. This valiant endeavor set a new Guinness world record.

Joust, a two-player game, was released in 1982 by Williams Electronics, with John Newcomer as its lead designer. One player uses a button and joystick to control a knight riding a flying ostrich, while the optional second player controls a knight riding a stork.

According to Twin Galaxies [May 14], Vollandt also held the highest score for the game, 107,216,700 points, a record that stood for 25 years until broken by John McAllister on Oct 21 2010, who reached 107,301,150. McAllister also holds the high score record for Asteroids [Nov 13]. For more video game playing records, see [July 3].

Joust features prominently in Ernest Cline's bestseller "Ready Player One"(2011), but is relegated to Easter egg status in its film adaption (2018), where is appears briefly as a poster, t-shirt, a sticker, and a cabinet behind kissing teens.

Lua Released

8 July 1994

Lua (Portuguese for *moon*) is a lightweight multi-paradigm language designed primarily for embedded systems.

Lua was created in 1993 by Roberto Ierusalimschy, Luiz Henrique de Figueiredo, and Waldemar Celes, all members of the Computer Graphics Technology Group (Tecgraf) at the Pontifical Catholic University of Rio de Janeiro.

One motivation for their work was Brazil's strong trade barriers at the time, which meant that purchasing overseas software was very expensive.

They have said that LISP [April 15] and Scheme's emphasis on using the list data structure was a major influence on their decision to promote the table (i.e. the associative array) as the primary data structure in Lua.

Lua's name is a callback to one of its domain-specific predecessors, SOL, (*sun* in Portuguese), and was suggested by Carlos Henrique Levy.

DNS is Flawed

July 8, 2007

In 2007, Dan Kaminsky [Feb 7] unearthed a severe problem in the Domain Name System (DNS), the Internet's phone book. It allowed attackers to poison caches (aka DNS spoofing), so that DNS would return incorrect addresses. This could be used to divert traffic to the attacker's computer (or to any other machine for that matter).

On March 31, Kaminsky – along with 16 other plucky team members – gathered at Microsoft to work on a patch, which was released on July 8, 2008. Unfortunately, it only made the attack up to 65,536 times harder; someone willing to send billions of packets could still corrupt caches.

Snapchat

July 8, 2011

Snapchat is an image messaging app created by Evan Spiegel, Bobby Murphy, and Reggie Brown. They launched Snapchat as "Picaboo" on iOS, but renamed it in September.

Snapchat's innovation is that its pictures and messages are only available for a short time before being deleted. Spiegel described it like so: "Snapchat isn't about capturing the traditional Kodak moment. It's about communicating with the full range of human emotion — not just what appears to be pretty or perfect."

The prototype by Brown and Spiegel began as a project in one of Spiegel's classes at Stanford. Murphy joined later to help write the code.

A venture capital firm provided $485,000 of funding in 2012 after one of the firm's partners discovered that the three most popular apps in his daughter's high school class were Angry Birds [Dec 11], Instagram [Oct 6], and Snapchat.

The Snapchat mascot, "Ghostface Chillah," is named after Ghostface Killah of the hip-hop group Wu-Tang Clan.

Project Jupyter

July 8, 2014

At the SciPy conference, Fernando Pérez announced the formation of Project Jupyter, to "develop open-source software, open-standards, and services for interactive computing across dozens of programming languages".

Jupyter's name is a reference to its three core languages: Julia, Python [Jan 31], and R, and also a homage to Galileo's notebooks recording the discovery of the moons of Jupiter.

Jupyter was spun off from Pérez's IPython (the "I" stands for "Interactive") to reflect a move away from a focus on Python.

Both Jupyter and IPython are based around the notion of a web-based "computational notebook", a document encorporating an interactive computational environment, especially suited for data visualizations and multimedia. Each document offers a REPL (read-evaluate-print loop) built upon a number of popular open-source libraries including the Tornado web server, jQuery [Aug 26], MathJax, and Python's excellent NumPy and SciPy libraries.

When IPython was unveiled by Pérez in Dec. 2001, it was a fairly simple REPL extension to Python, consisting of a few hundred lines of code. A decade later, Pérez, working with physicist Brian Granger and mathematician Evan Patterson, migrated that tool to the Web, launching the IPython Notebook and kick-started a data-science revolution.

However, the computational notebook idea originated with Mathematica [June 23] in the 1980's, but IPython, and more recently Jupyter, are more explicitly open-source, and community based.

In 2020, there were nearly 10 million Jupyter notebooks on GitHub [Feb 8], including a document that explained the 2016 discovery of gravitational waves, and one about the 2019 imaging of a black hole.

In 2012, Pérez received the Free Software Foundation Award for the Advancement of Free Software for his work on IPython, and Project Jupyter was awarded the 2017 ACM Software System Award.