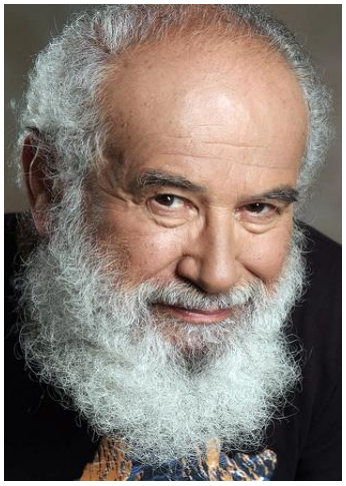
March 28th

Dov Frohman (Frohman-Bentchkowsky)

Born: March 28, 1939; Amsterdam, the Netherlands (although he was raised in Israel)

In 1970 Frohman developed EPROM, the first non-volatile semiconductor memory that was both erasable and easily reprogrammable. Previously, ROM chips were programmed by having the data 'burnt' into them, a one-time only process. Frohman added a little quartz window on top of the chip, so that ultraviolet (UV) light could be used to erase the chip's memory.



Dov Frohman (2008). Photo by Itzik Canetti. CC BY-SA 3.0.

In later life, Frohman would tell the story of how he almost never developed his idea. Fortunately, he ran into Bob Noyce [Dec 12] one day at Intel, who asked him, "Dov, you look preoccupied this morning, what's the problem?" Frohman told him about using UV to erase memory. Noyce looked at him and said, "Why not?" He said it so loud that almost the whole building heard it.

Gordon Moore [Jan 3] later called EPROM "as important in the development of the microcomputer industry as the microprocessor itself."

The Intel 1702 [June 15] was the company's first EPROM chip, and EPROMs remained Intel's most profitable product well into the 1980's.

After joining Intel in 1969, Frohman was studying faulty integrated circuits when he noticed that the charge stored on the broken gates had changed. This was the first step in his development of EPROM.

CUC Founded

March 28, 1955

Computer Usage Co. (CUC) was the first business to sell software to other businesses. Until then software had typically been included with the hardware sold by vendors, such as IBM, or was developed in-house. CUC was set up by two former IBM salesmen, Elmer C. Kubie and John W. Sheldon, who realized that companies needed help writing their own code.

CUC's first product simulated the radial flow of fluids in an oil well, which was written for the California Research Corporation on an IBM 701 [April 7]. However, CUC didn't have its own computer; instead it sent its programmers to work on the customer's machine, or bought computer time from a service bureau.

By the end of the 1950's, Kubie estimated that "about 50-60 percent of our development work is in the business application area, 20-30 percent in [systems] software, and the remainder in scientific applications."

CUC's major competitors were Computer Sciences Corporation (CSC) [April 16] and SDC [Oct 00], an off-shoot of RAND [Oct 1].

In 1964, CUC wrote the software used by CBS TV to track election results. Another important contract was to implement part of IBM's first time-sharing system, TSS/360 [Aug 16].

Bibi-Binary

March 28, 1968

The popular 1960's French singer Boby Lapointe introduced his Bibi-binary system (in French, système Bibi-binaire) – hexadecimals but with new symbols combining four consonants (HBKD) and four vowels (OAEI). The result:

HO, HA, HE, HI, BO, BA, BE, BI, KO, KA, KE, KI, DO, DA, DE, DI.

For example, 2021 in hexadecimal is 07E5, which becomes the word "HOBIDEBA" in Bibi-binary.

The system's name comes from Lapointe's observation that 16 is 2^{2^2} so he could say "bi-binary" for base four, and thus "bibi-binary" for base 16. Its name may also be a pun as the word bibi in French is slang for "me" or "myself".

Lapointe rose to fame when he appeared in the 1960 movie "Tirez sur le Pianiste" ("Shoot the Piano Player") directed by François Truffaut. He sang the bawdy song "Framboise" about his wife's breast enlargements, with sing-along lyrics, such as "Her measurements were meager, no wonder she was eager", displayed at the bottom of the screen. He was accompanied by Charles Aznavour on piano.

Computer Underground Digest Begins

March 28, 1990

The "Computer Underground Digest" was a weekly online newsletter concerned with Internet-related cultural, social, and legal issues. It was edited by Gordon Meyer and Jim Thomas who were both criminal justice professors.

The newsletter came to prominence when it started publishing legal commentary on hacker crackdowns (e.g. Operation Sundevil [May 7]) and the indictment of Craig Neidorf [July 23], one of PHRACK's editors [Nov 17].

Pippin

March 28, 1995

Apple and Bandai released the ill-fated Pippin, a console capable of playing CD-based games and other multimedia. It featured a PowerPC 603e processor [Oct 2], 128K of RAM, and ran a simplified version of Mac System 7 [May 13].

The Apple Pippin and a wireless Applejack controller. Photo by Evan-Amos.

Players had the pick of exciting-sounding games including "Mr. Potato Head Saves Veggie Valley" and "Gus Goes to the Kooky Carnival".

The system floundered before the combined might of the Sony PlayStation [Dec 3] and Sega Saturn [Nov 22], which offered a wider (and better) range of games, and were much less expensive. In retrospect, the flop wasn't that surprising – Bandai was a massively successful Japanese toymaker, but had limited console experience, which was also true of Apple.

The Pippin was part of Apple CEO's Michael Spindler's 'Clone Initiative' [Dec 16] which licensed out Apple's software to third-party devices.

Spindler was replaced the next year (1996) by Gil Amelio [Feb 2] and production of the console stopped, and Bandai ended up having to ship thousands of unsold units back to Japan. When Steve Jobs returned as CEO [Sept 16] in 1997, one of his first orders was to end the clone initiative.

Oculus Rift Released

March 28, 2016

The Oculus Rift is a virtual reality (VR) headset, initially funded through a Kickstarter [April 28] campaign organized by Palmer Luckey in April 2012. It raised $2.5 million, ten times the original goal.

Luckey had previously built a collection of over fifty head-mounted displays, beginning with the PR1, which he constructed in his parents' garage when he was only 17 (in 2009) .

Interest in the Rift took off after John Carmack [Aug 20] showcased a prototype running a version of Doom 3 [Dec 10] at the Electronic Entertainment Expo in June 2012. In March 2014, Facebook acquired the Oculus company for $2.3 billion.

The 2019 "Oculus Rift S" has a single LCD displays offering 1080×1440 resolution per eye, and a 115° field of view. It has integrated rotational and positional tracking, and utilizes "Oculus Touch" motion tracking controllers.

The device's main competitors as of 2021 are the "HTC Vive Cosmos" [April 5], and the aging, but still playable, "PlayStation VR" [Oct 13]. Oculus also sells a standalone VR headset, the "Oculus Quest 2", which has many fans.

The very first VR devices were probably Morton Heilig's [Dec 22] Telesphere mask (1958) and Sensorama (1961).