History of Storage Devices

Does anyone remember loading software from paper tape or punch cards? This is surely a throw-back to the early days of personal computers! Back when DYNACOMP first started business (early 1978), this was one of the few media used to distribute software.

The first PCs used paper tape and Data cassette recorder the same kind that you listen to music with, using a data cassette for storage was very slow. Removable floppy disks as storage devices did not become popular before 1978 when Apple introduced the disk II. The term "floppy" accurately fit the earliest 8-inch PC diskettes and the 5.25-inch diskettes that succeeded them. The inner disk that holds the data usually is made of mylar and coated with a magnetic oxide, and the outer, plastic cover, bends easily. The inner disk of today's smaller, 3.5-inch floppies are similarly constructed, but they are housed in a rigid plastic case, which is much more durable than the flexible covering on the larger diskettes. Following is a timeline for storage devices.

The mid-1800's, punch cards are used to provide input to early calculators and other machines.

1940 is the decade when vacuum tubes were used for storage.

1950 finally, tape drives started to replace punch cards. Only a couple of years later, magnetic drums appeared on the scene.

1956 - the first hard drive the IBM 305 RAMAC is the first magnetic hard disk for data storage, and the RAMAC (Random Access Method of Accounting and Control) technology soon becomes the industry standard. It required 50 24-inch disks to store five megabytes (million bytes, abbreviated MB) of data and cost roughly $35,000 a year to lease - or $7,000 per megabyte per year. For years, hard disk drives were confined to mainframe and minicomputer installations. Vast "disk farms" of giant 14- and 8-inch drives costing tens of thousands of dollars each whirred away in the air conditioned isolation of corporate data centers.

1971 - IBM introduces the "floppy disk", an 8-inch floppy plastic disk coated with iron oxide.

1976 - Shugart announces its 5.25 inch "minifloppy" disk drive for US$390.

1980 - Sony Electronics introduces the 3.5 inch floppy disk drive, double-sided, double-density, holding up to 875KB unformatted.

1983 - Sony Electronics announces the 3.5 inch floppy disk and drive, double-sided, double-density, holding up to 1MB.

1983 -With the introduction of the IBM PC/XT, hard disk drives also became a standard component of most personal computers. The descriptor "hard" is used because the inner disks that hold data in a hard drive are made of a rigid aluminum alloy. These disks, called platters, are coated with a much improved magnetic material and last much longer than a plastic, floppy diskette. The longer life of a hard drive is also a function of the disk drive's read/write head: in a hard disk drive, the heads do not contact the storage media, whereas in a floppy drive, the read/write head does contact the media, causing wear.
1983 - Philips and Sony develop the **CD-ROM**, read only, audio CD technology.

By 1987, 3.5-inch form factor **hard drives** began to appear. These compact units weigh as little as a pound and are about the size of a paperback book. They were first integrated into desktop computers and later incorporated into the first truly portable computers - laptops weighing under 12 pounds. The 3.5-inch form factor **hard drives** quickly became the standard for desktop and portable systems requiring less than 500 MB capacity. Height also kept shrinking with the introduction of one-inch high, 'low-profile' drives.

1993 - NEC Technologies unveils the first **triple-speed (450KBps) CD-ROM drive**.


1994 - Iomega Corp. introduces its **Zip drive** and **Zip disks**, floppy disk sized removable storage in sizes of 25MB or 100MB, and soon after up to 200MB.

1995 - **CD-RW**, recordable/rewritable compact disk, holds up to 700MB.

1998 - IBM announced a 25GB hard drive. That first hard disk drive in 1956 had a capacity of 5 megabytes. IBM's Deskstar 25GP 25-gigabyte (GB) drive has 5,000 times the capacity of that first drive. It holds either the double-spaced typed text on a stack of paper more than 4,000 feet high, more than six full-length feature films or 20,000 digital images.

1998 – **DVD**, digital video disk, read only, some hold up to 17GB!

1999 - October 18, IBM raised the bar in hard drive technology with a new family of record-breaking hard drives and a new technology that protects drives against temperature variation and vibration. The 10,000 RPM Ultrastar 72ZX – the world's highest capacity drive at 73 gigabytes (GB).

2000 – **DVD-RW**, recordable/rewritable DVD, holds up to 4.7GB.

2003 – **Plug-n-Play flash memory stick**, very small, size of small cigarette lighter, plugs into USB port. Holds from 256MB to 1GB!