



### A Historical Perspective on Magnetic Disk Storage

The Fermilab Distributed Computing Department originally created this display for the *1996 Super Computing International Conference* for High Performance Computing, Networking, Storage and Analysis, held in Pittsburgh, PA.

The picture, at the top of the left column, shows the 39 inch diameter Bryant Fixed Disk (c.1965) reconfigured for the 1996 Super Computing Conference as a circular table.

The picture, at the bottom of the left column, shows ten of the Bryant Fixed Disks in actual operation in the Computing Center somewhere on the seventh or eighth floor on the West side of Wilson Hall, in 1973.

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On the left, is the Bryant disk, which contains a selection, in chronological order, of removable and non-removable disks in use during the years indicated. Shown in an arc on the "table", to the right, are the following removable disks:

Removable Floppy Disk, 8- inch (256 KB), 1976

Removable Floppy Disk, 5.25- inch (1.2 MB), 1984

Removable Floppy Disk, 3.5- inch (1.44 MB), 1989

Removable Zip Disk, 3.5- inch (100 MB), 1995

Removable Secure Digital High Capacity Memory Card (SDHC), 0.79- inch (4 GB), 2007

Note: In 2011, a Secure Digital Extended Capacity (SDXC) memory card (same form factor) could store up to 128 GB and a micro Secure Digital High Capacity memory card (microSDHC), which is ¼ the size of a SD memory card, could store up to 32 GB.

Removable USB Flash Drive, 0.2- inch, (8 GB), 2007

Note: In 2011, a USB Flash Drive (same form factor) could store up to 256 GB.




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Shown in an arc on the "table" to the left are the following non-removable disks:

Bryant Fixed Disk (1 of 10 in array), 39- inch diameter (5 MB), 1965

Fixed Disk, 3.5- inch diameter (48 MB), 1986

Note: In 2011, a 3.5- inch Fixed Disk (same form factor) could store 3 TB.

Fixed Disk, 8- inch diameter (850 MB), 1988

Fixed Disk, 5.25- inch (630 MB), 1989

Note: In 1998, a 5.25- inch Fixed Disk made by Seagate (same form factor) could store 47 GB.

Fixed Disk, 2.5- inch (3.2 GB), 1998

Note: In 2011, a 2.5- inch Fixed Disk (same form factor) could store up to 1 TB.

Fixed Disk, 1.8- inch (160 GB), 2007