

CS100: CPADS

Storage

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Magnetic Storage: Floppy Disks

- **Came in a variety of physical sizes**
- **Data capacity had a wide range depending on the disk size and how it was formatted**
- **The last of the floppy disk generation was the 3 1/2" floppy disk**
 - Data capacity of 1.44 MBytes
 - Data transfer rates were very slow
- **Floppy disk drive were connected via the Floppy disk header on the motherboard or even USB**



Pro Tip: If your computer has a floppy drive, it might be time for a new computer

Magnetic Storage: Hard Disk Drives

- **Come in several different physical sizes**
 - 3.5" drives for desktop computer
 - 2.5" drives for laptop computers
 - 1.8" drives for small electronics (iPod classic)
- **Magnetic platters spin at different rates**
 - Higher performance drives spin faster
 - 5400 RPM, 7200 RPM, 10,000+ RPM
- **Currently have drives up to 3.5" drives up to 8 TB**
- **Several different connectors for HDDs**
 - IDE for older drives
 - SATA (150 MB/s), SATA-II (300 MB/s), SATA-III (600 MB/s)
 - Other options: eSATA, Firewire, USB



Solid State Disk Drives (SSDs)

- **Another option for mass storage on current computers**
- **Eschews the physically spinning platter of mechanical disk drives**
 - No moving parts, so less susceptible to damage
 - Flash memory on SSD is MUCH faster than a spinning platter
- **Same form factor as 2.5" hard disk drives (mostly)**
- **Capacities range from 16 GB all the way up to 1 TB (\$\$\$)**
- **Data can be read/written from SSDs at ~500 MB/s**
 - Connect via SATA-II (300 MB/s) or SATA-III (600 MB/s)



Optical Media

- **CD / CD-R / CD-RW**

- Capacity of 650/700 MB
- Connect via IDE / SATA / USB

- **DVD / DVD-R / DVD-RW / DVD+R / DVD+RW**

- Capacity of 4.7 / 8.5 GB
- Connect via IDE / SATA / USB

- **Blu-ray (BD) / BD-R / BD-RE**

- Capacity of 25 / 50 GB
- Connect via SATA / USB



Connection Speed Comparison

