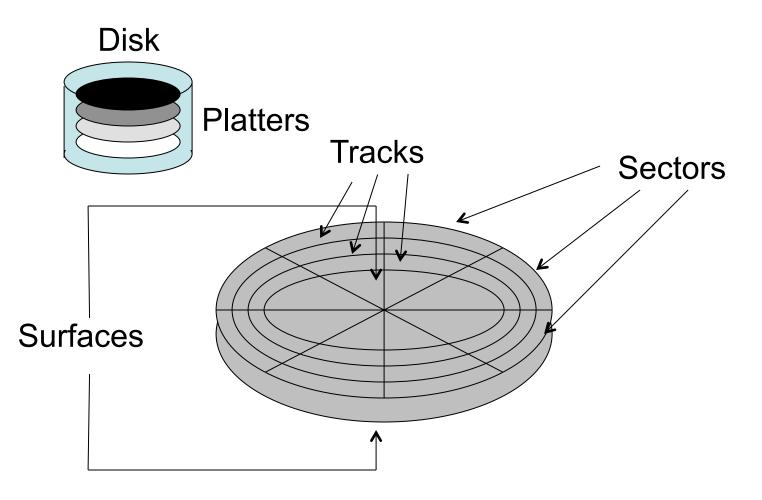


# How Disks Work

 Much of file systems work for the past forty years has been based on spinning disk. If you want to understand why file systems work as they do, then you also have to understand how disks work.

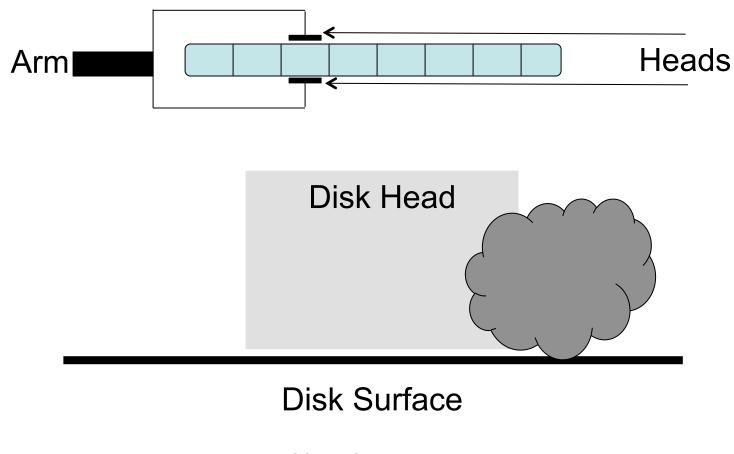


### Modern Disk Drives



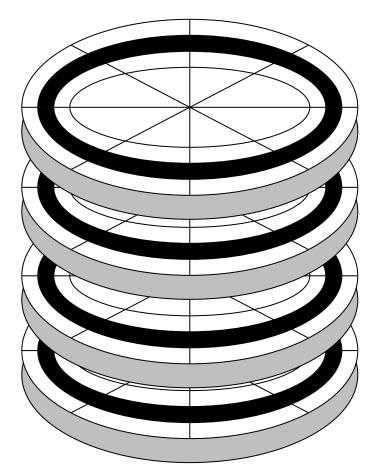


#### **Disk Heads**





# **Disk Sector Numbering**





### Disk Drive Performance

- Speed of a disk drive is a function of:
  - RPM (7200 10,000)
  - Size of the device (1.8" 3.5")
  - Density (bits per track; tracks per inch) 500-600Gbit/in<sup>2</sup>

