

# Glossary

## File systems

- Disks:
  - Cylinders: Collection of tracks
  - Tracks: Concentric circle on single side
  - Sectors: Segment of a track
- Cylinder Skew: an offset added to sector 0
- Access time = seek time + rotational delay + transfer time
- Seek time =  $T_s = n \times m + s$ 
  - $n$  = number of Tracks
  - $m$  = crossing time per track
  - $s$  start-up delay
- Average rotational latency = half of disk rotation time
- Transfer time:  $tt = b/N \times ms$  per minute/rpm (data transferred per rotation)
- Disk scheduling:
  - FCFS
  - Shortest seek time first
  - (SCAN) Lift algorithm: Zig zags up and down
  - C-Scan; Up(reading) and straight down.
  - Look scan:
- User views: define abstractions
- Implementation view: define low level Implementation
- In UNIX
  - Character special files: used for IO devices such as keyboards and printers
  - Block special files: Hard drives
- File control blocks: only accessible on Kernel mode
- Directed acyclic graph (DAG): Allow file sharing cycles are forbidden
  - Dag allows for file sharing(aliases)
  - Cycles can generate infinite loops
  - Removing files is complicated(links must be removed as well) :  
Garbage collection is required
- Generic graph structure: Cycles are allowed here
- Fat(file allocation table)
- Log structured file systems(Inodes are next to their data this means that it is contiguous and faster to be read by a spinning hard drive)
  - Require a cleaner thread