HDD Interface
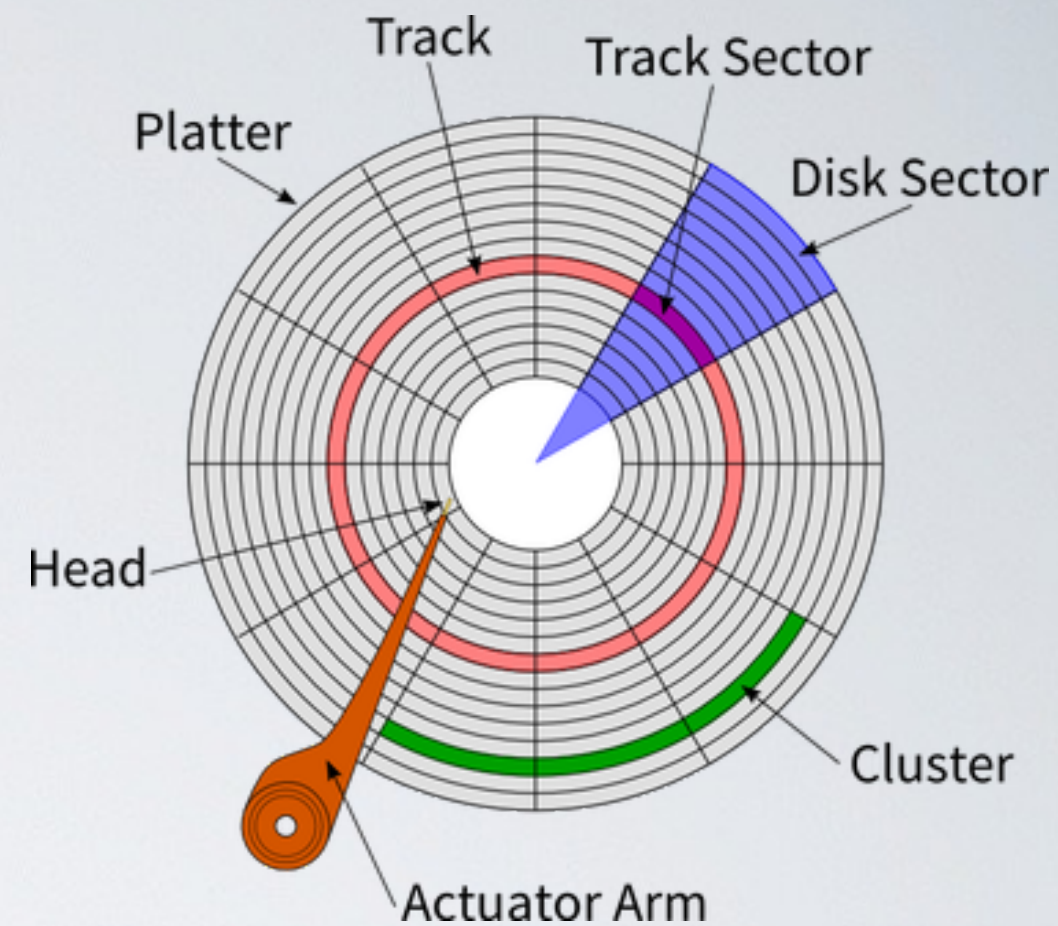

➡ Disk interface presents linear array of sectors

- Historically 512 Bytes but 4 KiB in "advanced format" disks

- Written atomically (even if there is a power failure)

✓ Disk maps logical sector #s to physical sectors

✓ OS doesn't know logical to physical sector mapping

Seek, Rotate, Transfer

Seek - move head to above specific track

1. speedup – accelerate arm to max speed

2. coast – at max speed (for long seeks)

3. slowdown – stops arm near destination

4. settle – adjusts head to actual desired track

◉ Seeks is slow

- settling alone can take 0.5 to 2ms

- entire seek often takes 4 - 10 ms