

Capacity - Factors

- Recording density \nearrow in
- Track density \nearrow in
- Areal density \nearrow in²

hard disk Drives

1. surface
2. cylinder
3. sector

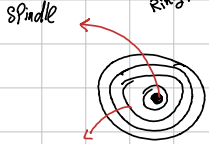
at what level OS

Soft ware

Coated! with magnet recording

Ring!

Spindle



Track



gap

Size

Shape

how works!

made in manufacturing

Platter

Hard Disk

How locate things

Component

due to electrical switching (head mostly)

give mechanical tolerance (tiny head (w/R) misreading-).

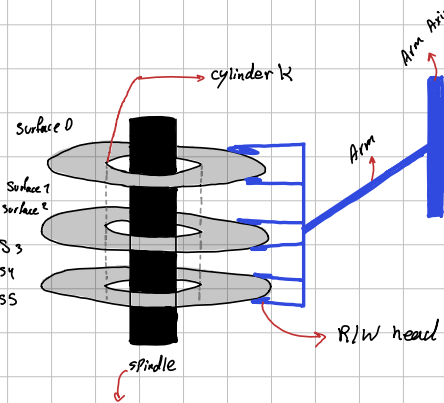
Reduce potential signal noise and cross-talk between adjacent.

Allows timing and synchronization, Plus ECC (error correction code)

OS can't see it.

They're actually encoded with some data (magnetic, low intensity).

how head and arm could read or w on a sector without damaging adjacent ones? or other disks?



electromotor with high precision
in long term operation, rotate at
fixed rate.

what controls
this?
where is the
CPU of HD?

Limitation

Read/Write Size

Can't be over sector size