



R/W head: An R/W head is an electronic sensor that reads or writes magnetic data to/from the disk surface. R/W heads are assembled in two of the following ways:

- 1.** Fixed head assembly
- 2.** Movable head assembly

Here fixed head assembly means that there is an array of R/W heads one for each track whereas movable head assembly refers to the case when one single head manages to move to and fro to read/write contents on different tracks.

Cabling and Interface: HDD connects to the motherboard using a special data cable called IDE (Integrated Drive Electronics) bus. However IDE bus is of following two types:

1. PATA (Parallel Advanced Technology Attachment)
 - 40 or 80 pin – HDD
 - 34 pin – FDD
2. SATA (Serial Advanced Technology Attachment)
 - 4 or 6 pin – HDD

PATA was used in older computers since it required a wide ribbon like cable. SATA is comparatively thin and convenient.

Formatting: Formatting HDD is an activity to make the HDD ready for use. During formatting New tracks and sectors are drawn on the disk thereby enabling the user to feel that he/she is using a very new HDD. Formatting an HDD that is being used may cause serious loss of data since all data is first erased and then tracks and sectors are drawn.

Steps to format an HDD:

- 1.** Open My computer.
- 2.** Right click on any of the partitions.
- 3.** Click on Format from the context menu.
- 4.** A formatting wizard appears.
 - a. Provide Volume Label
 - b. Check Quick Formatting
- 5.** Click on Format.

Assignments:

- 1.** Differentiate between Fixed head assembly and Movable head assembly.
- 2.** Briefly discuss about SATA and PATA IDE.