range of tracks containing the sector numbers of the sectors where the pieces of sector data are to be written or read. The recording/reproducing unit writes or reads, in accordance with a present sector number of a sector where the write/read head is located, a corresponding piece of sector data onto or from the DTM magnetic disk, independently of the order of the sector numbers.

[0010] The invention also relates to an information processing device having such a hard disk drive as described above.

[0011] According to the invention, data can be stably recorded and reproduced onto and from a recording medium that requires precise tracking by using a simple head tracking mechanism, and data can be stably recorded and reproduced onto and from a recording medium even under an environment where dynamic disturbance may continuously act on a write/read head.

BRIEF DESCRIPTION OF THE DRAWINGS

[0012] FIGURE 1 shows a hard disk drive (HDD), which includes a DTM magnetic disk and a write and read control device for the magnetic disk, in accordance with an embodiment of the present invention;

CWC 2/17/9

[0013] FIGURE ~~2~~ 2A shows an example of a particular closed-loop shaped trajectory of the magnetic head on the side A of the DTM magnetic disk, and FIGURE 2B is an enlarged partial view of the trajectories of the magnetic head;

[0014] FIGURE 3 shows an example of an innermost trajectory and an outermost trajectory, for performing a data write or read operation on the successive sectors of the track on the side A of the DTM magnetic disk;

[0015] FIGURE 4 shows an example of a spiral trajectory of the magnetic head on the side A of the DTM magnetic disk;

[0016] FIGURES 5A, 5B and 5C each show a schematic vertical sectional view of the DTM magnetic disk of FIGURE 2A taken along a line 4A-4A, and the magnetic head located at a respective different position;

[0017] FIGURE 6 is a flow chart for recording data onto the DTM magnetic disk, which is executed by the hard disk drive of