

ADAPTIVE OFF-TRACK RECOVERY

ABSTRACT

A method and system for adaptively limiting an off-track recovery displacement of a recording head during an off-track data recovery operation. A head disk assembly (H.D.A) 102 includes an actuator that positions the recording head 121 in accordance with an actuator control signal. First, an off-track recover displacement threshold is determined utilizing an off-track data field which overlays an on-track data field. The recording head is displaced with respect to the track centre until the on-track data field is read. The relative displacement required to retrieve the on-track data is utilized as the threshold. In response to a failed read attempt, the recording head is incrementally displaced from the track centre while attempting to recover the data. During the DRP, the predetermined off-track recovery threshold 131 is utilized to limit the head displacement such that the input/output (I/O) data integrity of the off-track recovery is ensured.

Fig. 1