DETECTOR AND METHOD FOR DETECTING DEFECTS IN THE MAGNETIC MEDIA OF A MASS STORAGE SYSTEM

ABSTRACT OF THE DISCLOSURE

A detector and method for detecting defects in the magnetic media of a disk drive mass storage system (30) are provided. The detector may include a viterbi detector (54), having a metric circuit (53) and a trellis circuit (55), for use in a read channel (18) during read operations. Known data is originally written to a sector of the magnetic media of a disk/head assembly (12). The known data includes all binary "ones." The sector of known data is later read during a read operation. During this read operation, the read channel (18) receives an analog signal corresponding to the sector of known data. The metric circuit (53) receives a discrete, equalized signal from a finite impulse response filter (48) and provides a transition signal (56). The transition signal (56) is provided to a control circuitry (11) through a data/parameter path (13) after being placed in parallel format by a deserializer (60). A microprocessor (28) of the control circuitry (11) may process the transition signal (56) and determine which of the bits of the transition signal (56) are different from the original known data. Discrepancies indicate the existence and location of a defect in the magnetic media.

Figure 2