

METHOD AND APPARATUS FOR DATA DETECTION FOR
PRML DATA CHANNELS

ABSTRACT

A method and apparatus are provided for data detection in a direct access storage device. A partial response signal is applied to a Viterbi detector (60) to provide a Viterbi output and is applied to a first matching delay circuit (64) to provide a delayed signal. The Viterbi output is subtracted (65) from the delayed signal and a resulting signal is applied to a first filter (74). The filtered output signal is applied to a second filter (76). The Viterbi output is applied to a second matching delay circuit (86) to provide a delayed Viterbi output signal. The delayed Viterbi output is corrected responsive to the second filtered output signal. The first filter (74) is an infinite impulse response (IIR) filter and the filtered output signal represents whitened noise and modified PRML error events. The second filter (76) is a matched filter used to identify dominant error events.

Fig. 3

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