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AN IMPROVED DATA STORAGE DEVICE AND METHOD OF OPERATION

ABSTRACT

An improved storage device, such as a disk drive, is disclosed for use in an array of drives. Each drive has logic and Exclusive Or calculation means. Data to be written is sent to the target disk drive from the host computer under a new command that instructs the target drive to generate part of the new parity, and may also identify the parity drive. The target device reads the old data from it's media, generates a parity syndrome, stores the new data and then initiates communication with the identified parity drive, instructing the parity drive to read the old parity and generate the new parity information from the parity syndrome and the old parity. The parity drive, after generating the new parity, writes the new parity onto it's media, all without further host or host I/O action.

Figure : 2

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