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(54) RAID METHOD AND DEVICE WITH NETWORK PROTOCOL BETWEEN CONTROLLER AND STORAGE DEVICES

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- (22) Filed: Mar. 17, 2000

Related U.S. Application Data

- (60) Provisional application No. 60/180,574, filed on Feb. 4,

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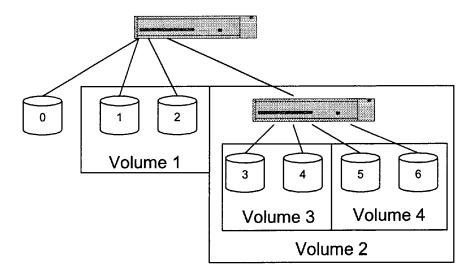
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(57) ABSTRACT

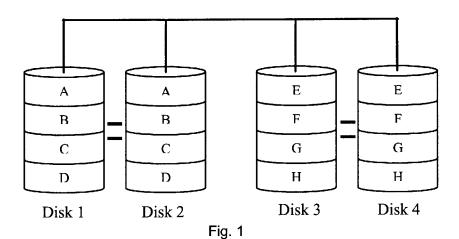
The present invention relates to transparent access to a redundant array of inexpensive devices. In particular, it provides a method and device for connecting redundant disk drives to a controller, preferably an intelligent switch, via a network. The disks are controlled by commands transported across the network. Commands may be SCSI, IDE/ATA or other commands. The network may comprise ethernet, fiber channel or other physical layer protocol. Commands can be encapsulated in IP packets and transmitted using either a reliable or unreliable transport protocol. Multicasting of packets from the controller to the multiple disk drives is part of the present invention.

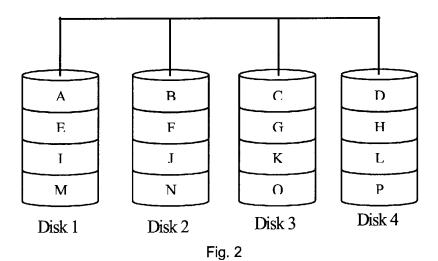
74 Claims, 10 Drawing Sheets





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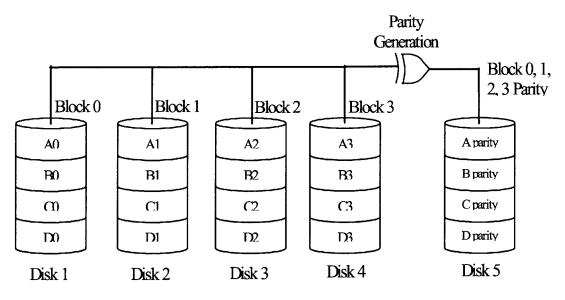
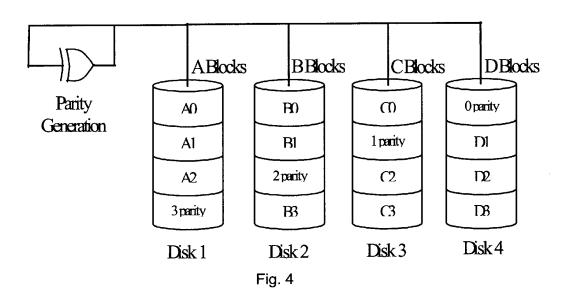
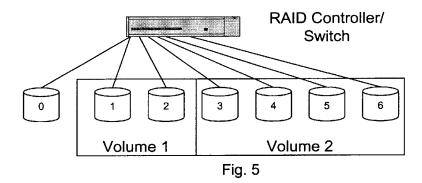


Fig. 3



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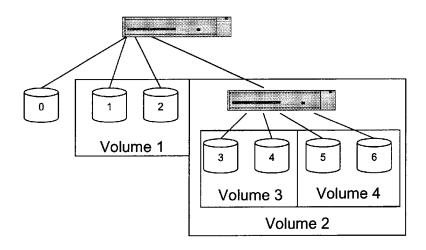


Fig. 6



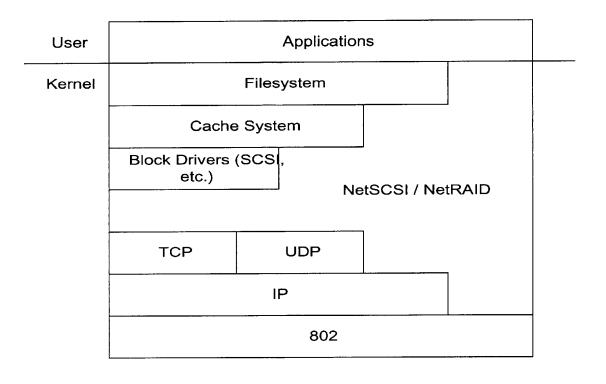


Fig. 7

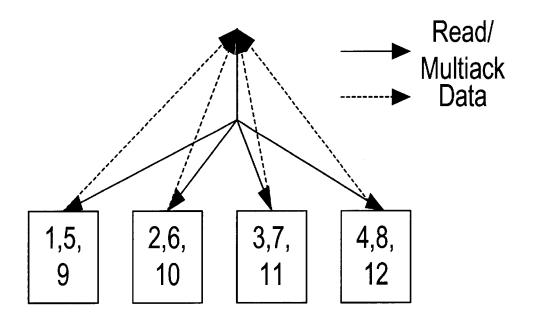


Fig. 8a



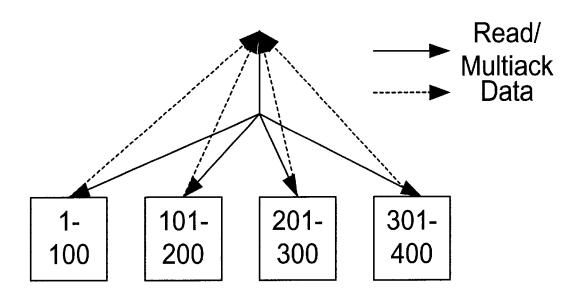


Fig. 8b

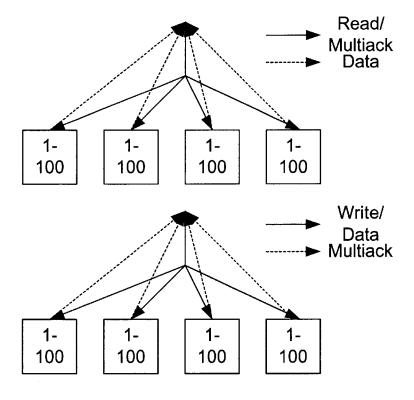


Fig. 8c



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