

[54] **RECONFIGURABLE DATA STORAGE SYSTEM**

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[51] Int. Cl.⁶ **G06F 12/00**

[52] U.S. Cl. **395/180; 711/173**

[58] **Field of Search** 395/180, 181, 395/182.03, 182.06, 410, 412, 413, 419, 183.05, 182.07, 651; 711/100, 153, 147, 170, 171, 172, 173, 202, 203

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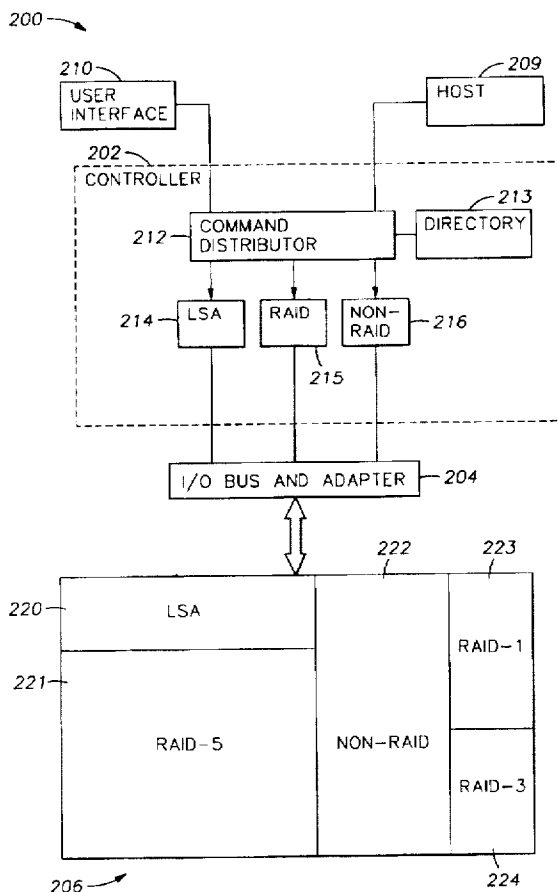
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[57] **ABSTRACT**

A system for managing data storage devices of a data storage subsystem. A data storage system includes a controller coupled to multiple data storage devices. In response to a request, the controller allocates the devices' storage space into a number of storage partitions or "virtual devices." The request specifies the size and function mode for each storage partition. Each storage partition, having the requested size, is operated according to its requested function mode. This involves mapping access commands, which specify virtual addresses, to the proper physical addresses of the appropriate data storage devices.

61 Claims, 7 Drawing Sheets



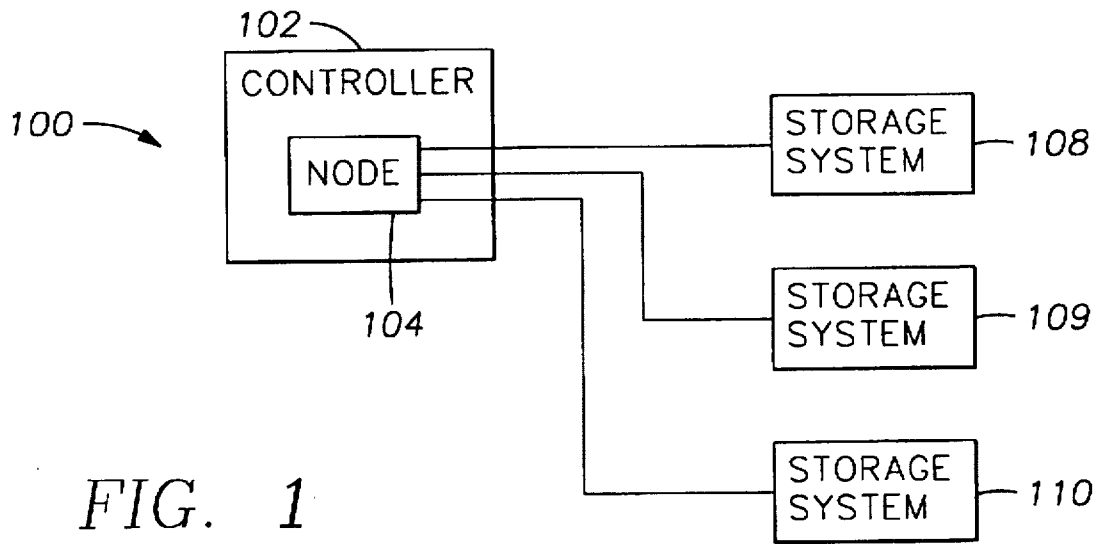


FIG. 1
(PRIOR ART)

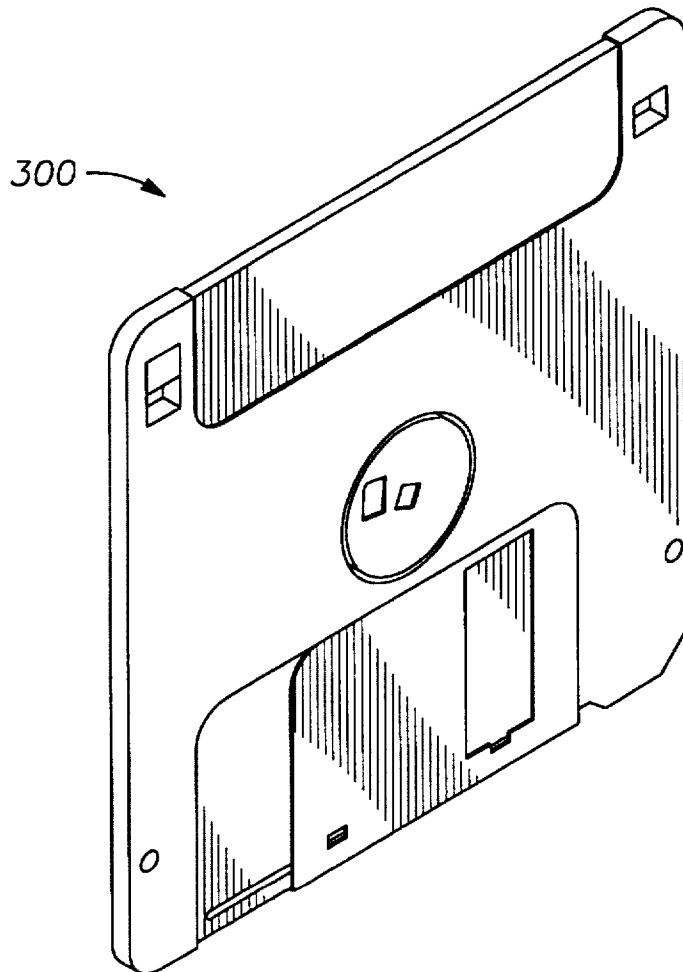


FIG. 3

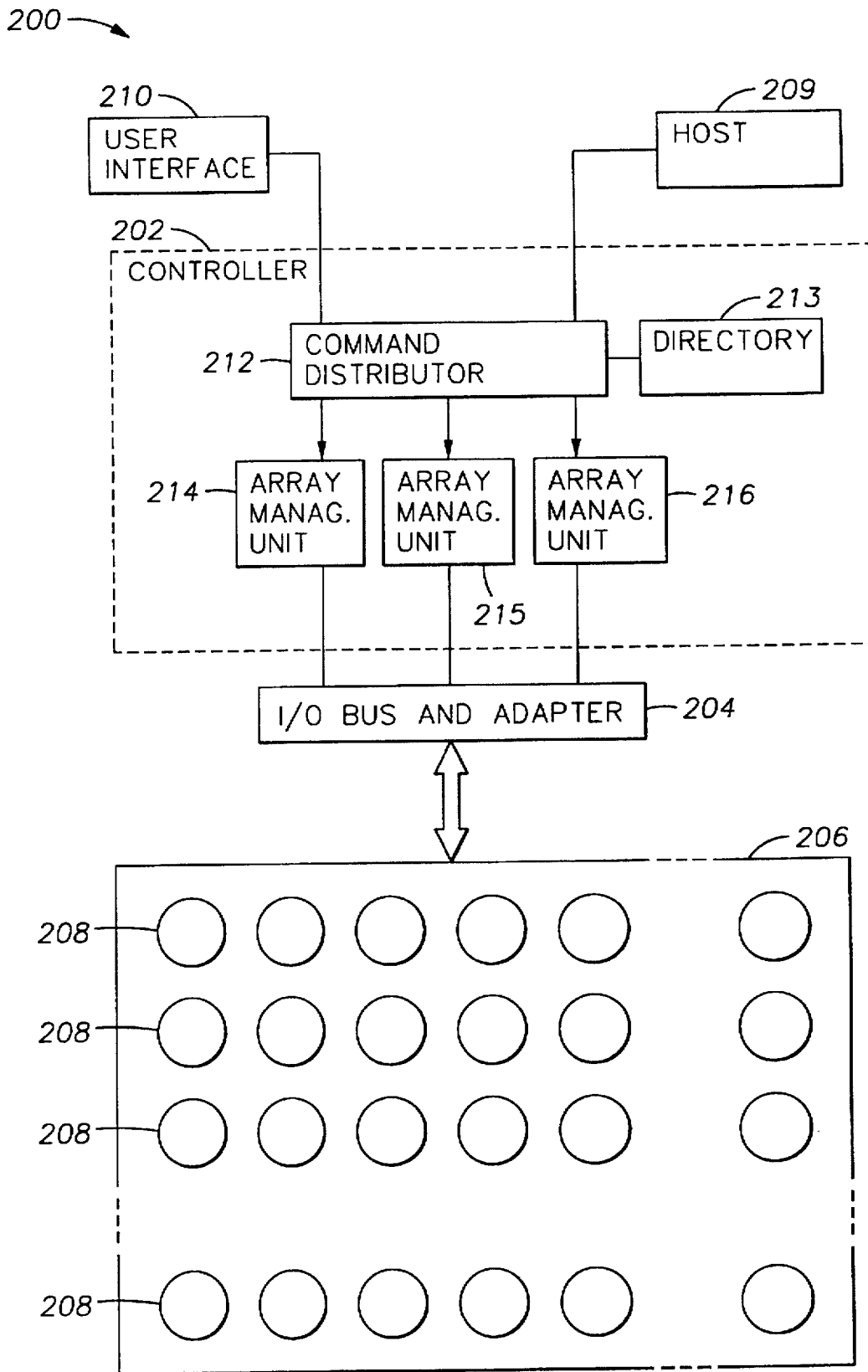


FIG. 2A

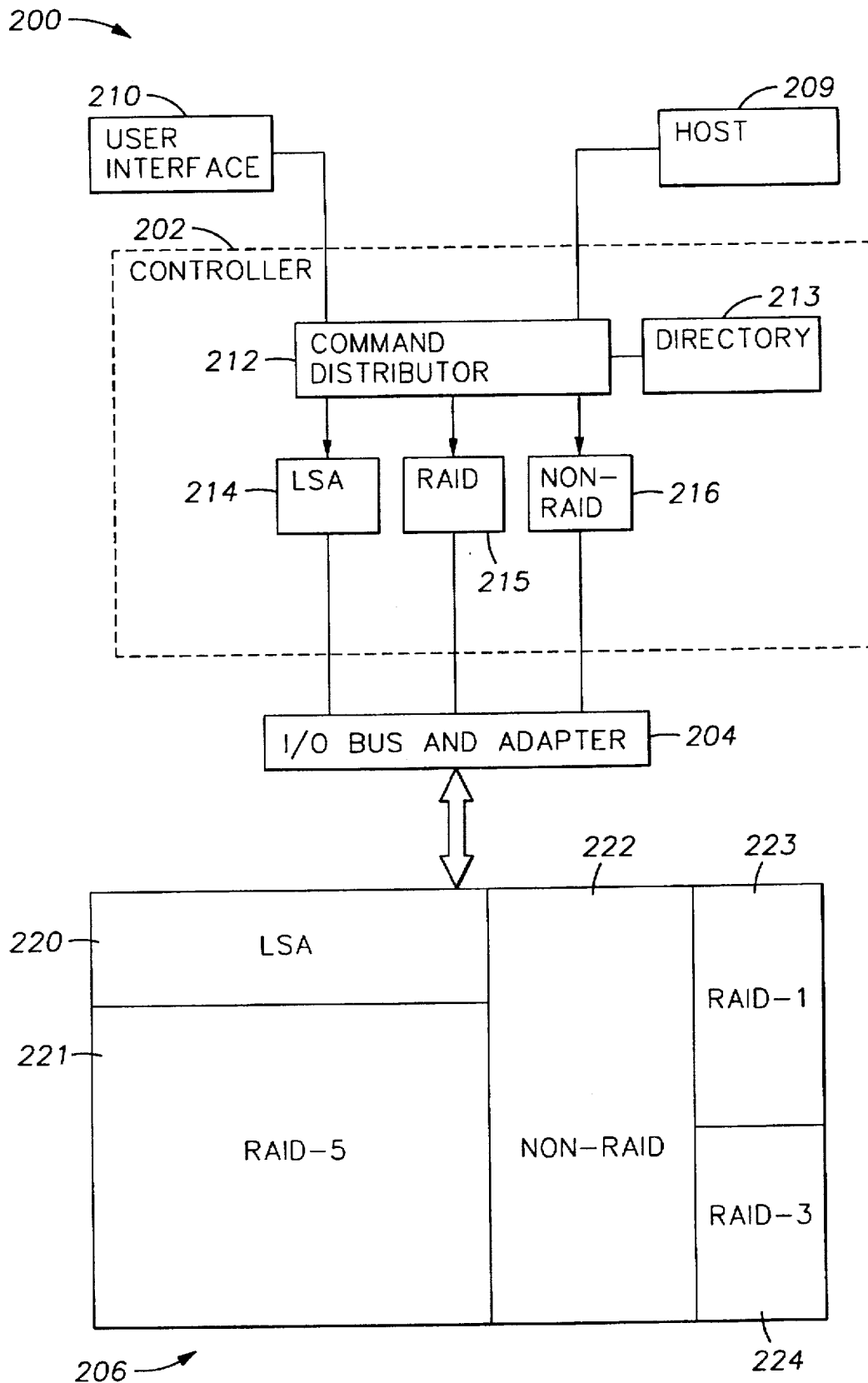


FIG. 2B

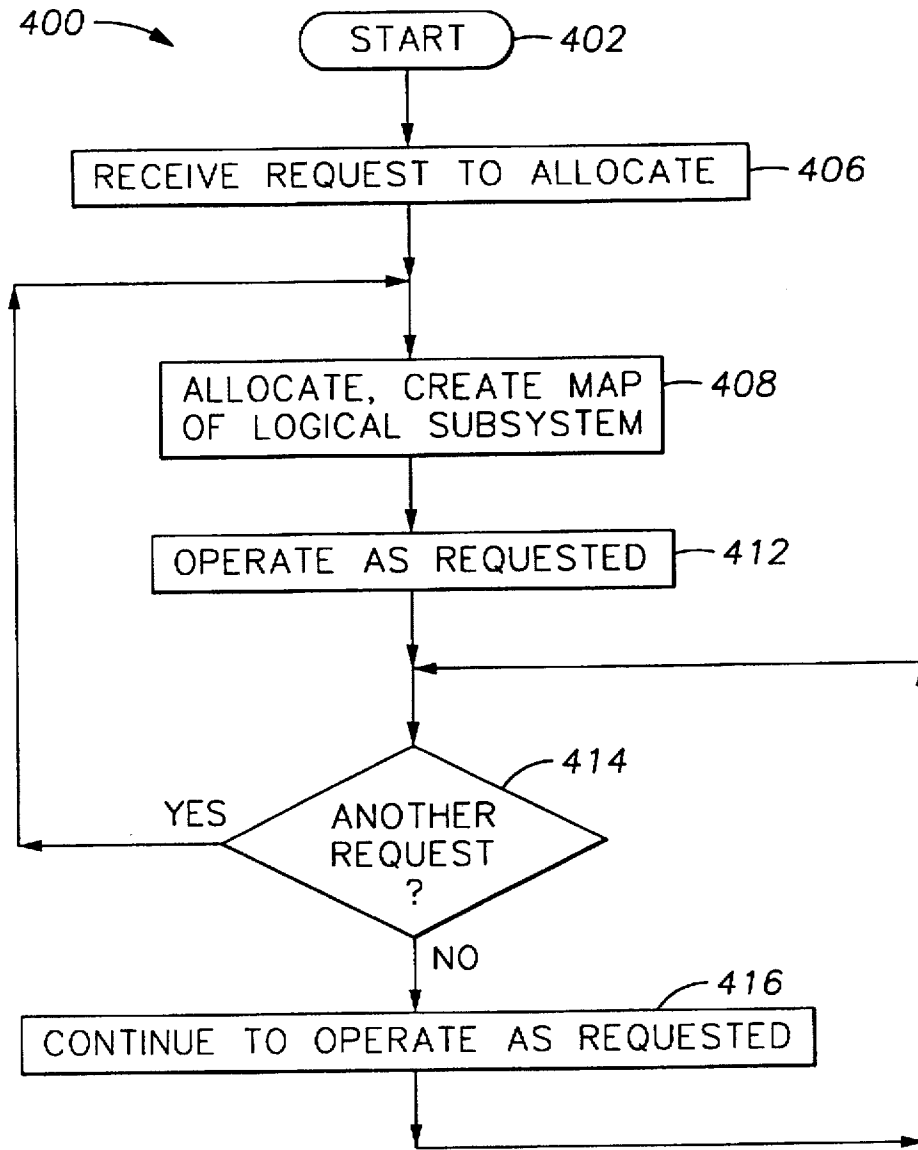


FIG. 4

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