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(54) **HYBRID MEMORY MANAGEMENT**

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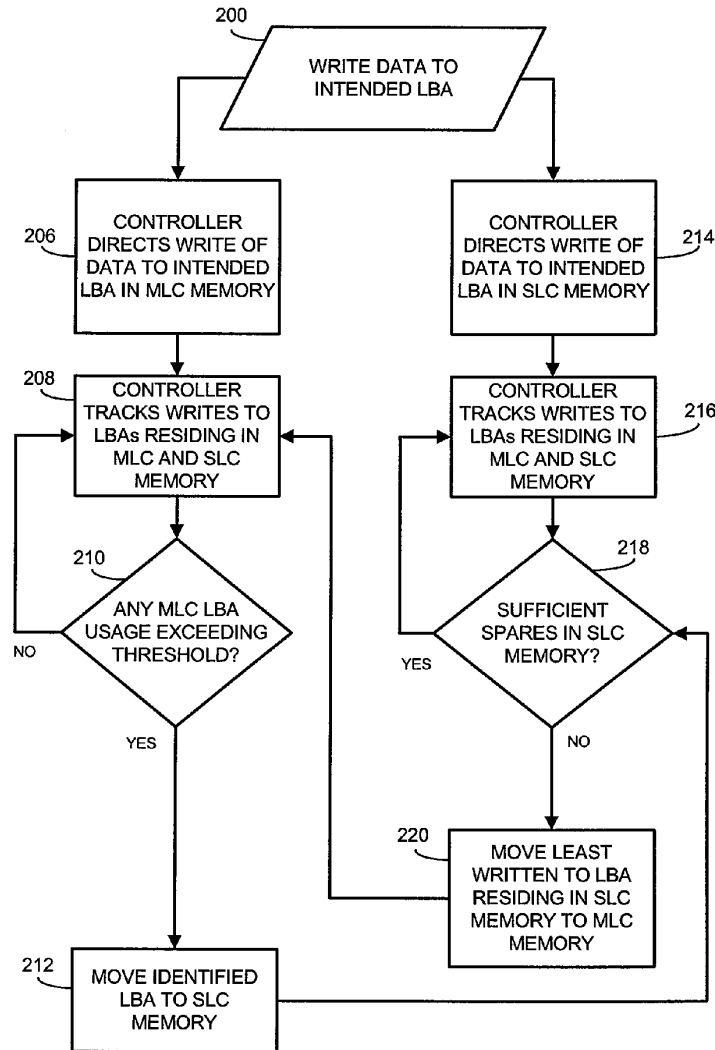
(57) **ABSTRACT**

Methods and apparatus for managing data storage in hybrid memory devices utilizing single level and multi level memory cells. Logical addresses can be distributed between single level and multilevel memory cells based on a frequency of write operations performed. Initial storage of data corresponding to a logical address in memory can be determined by various methods including initially writing all data to single level memory or initially writing all data to multilevel memory. Other methods permit a host to direct logical address writes to single level or multilevel memory cells based on anticipated usage.

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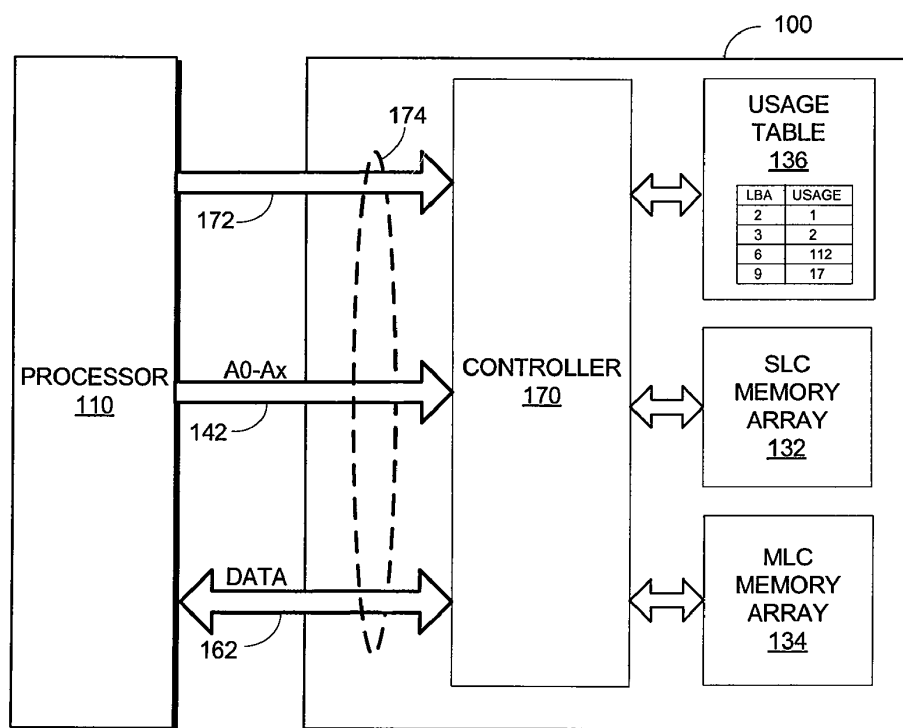


FIG. 1

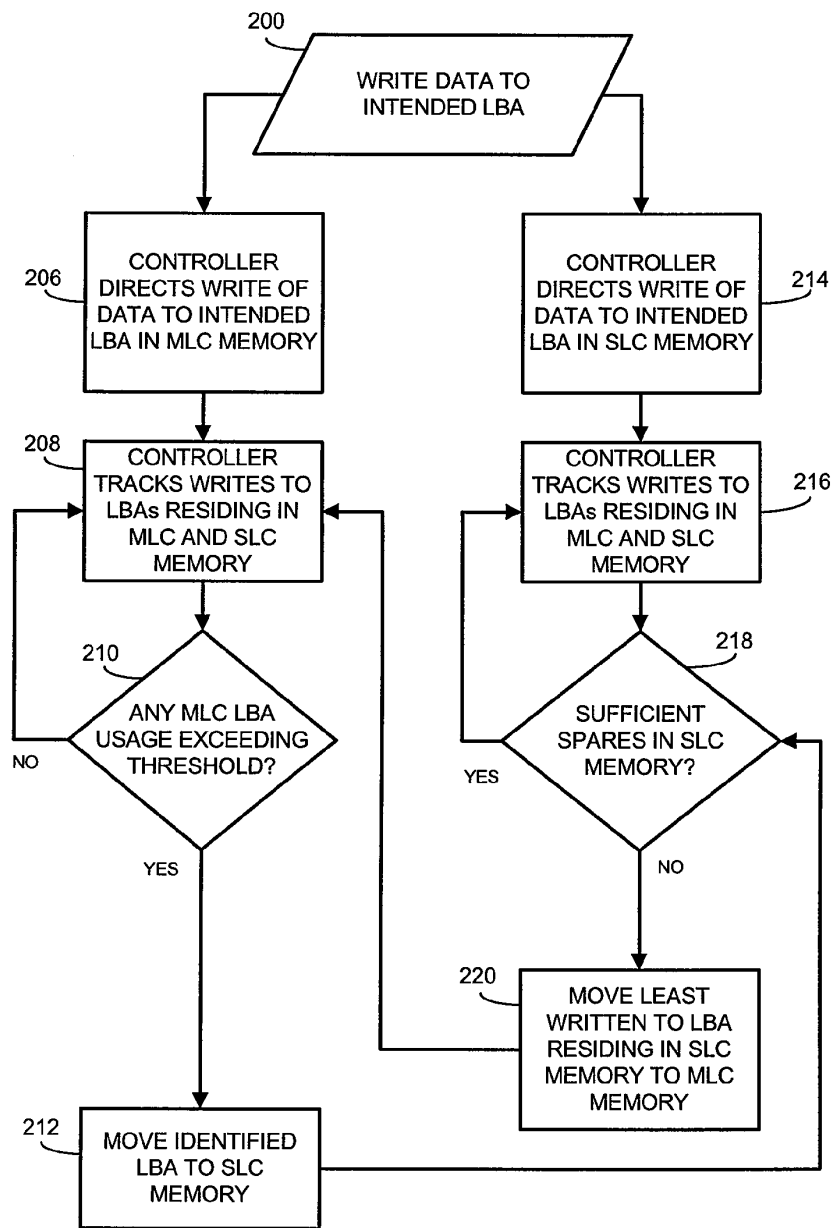


FIG. 2

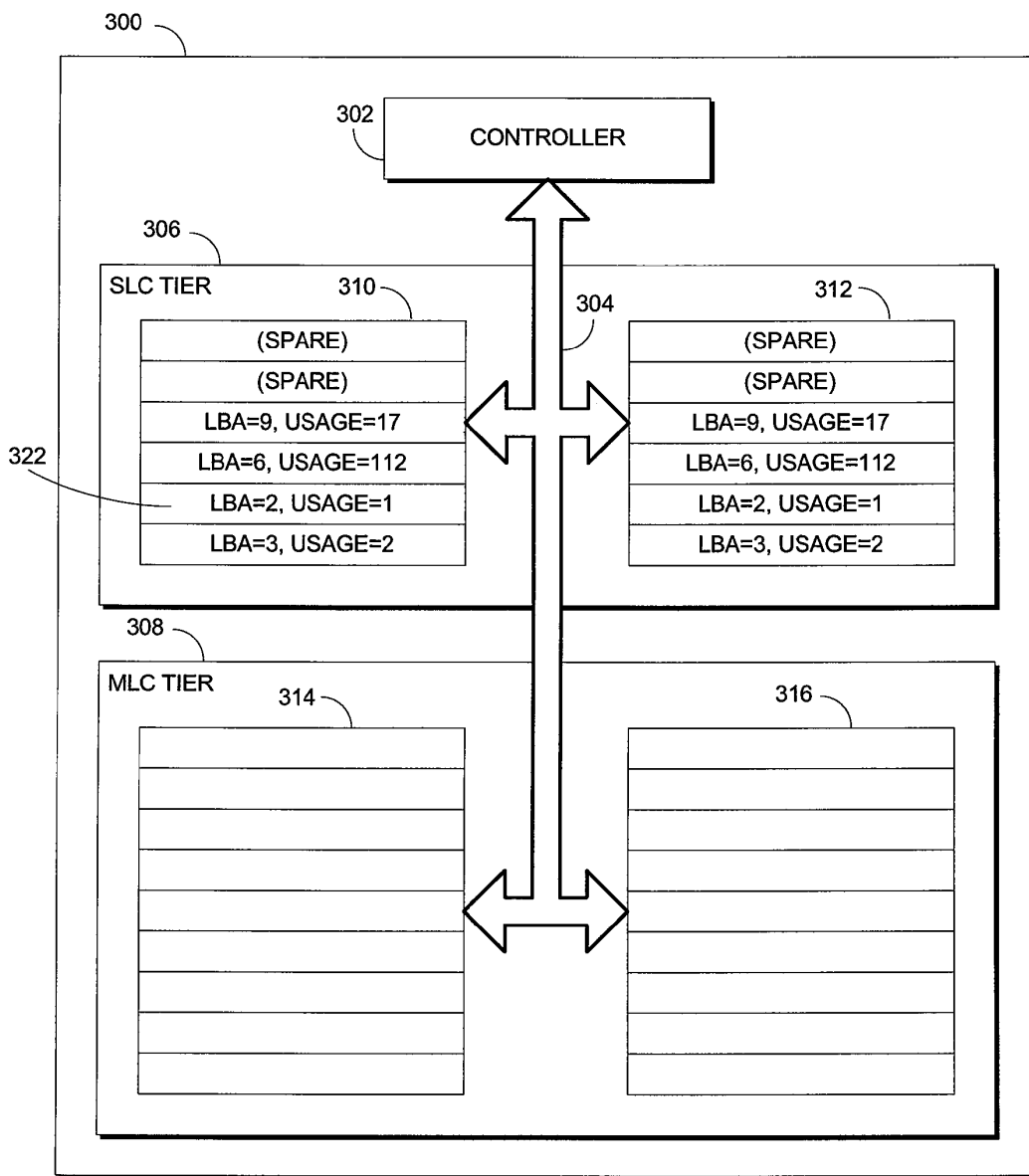


FIG. 3

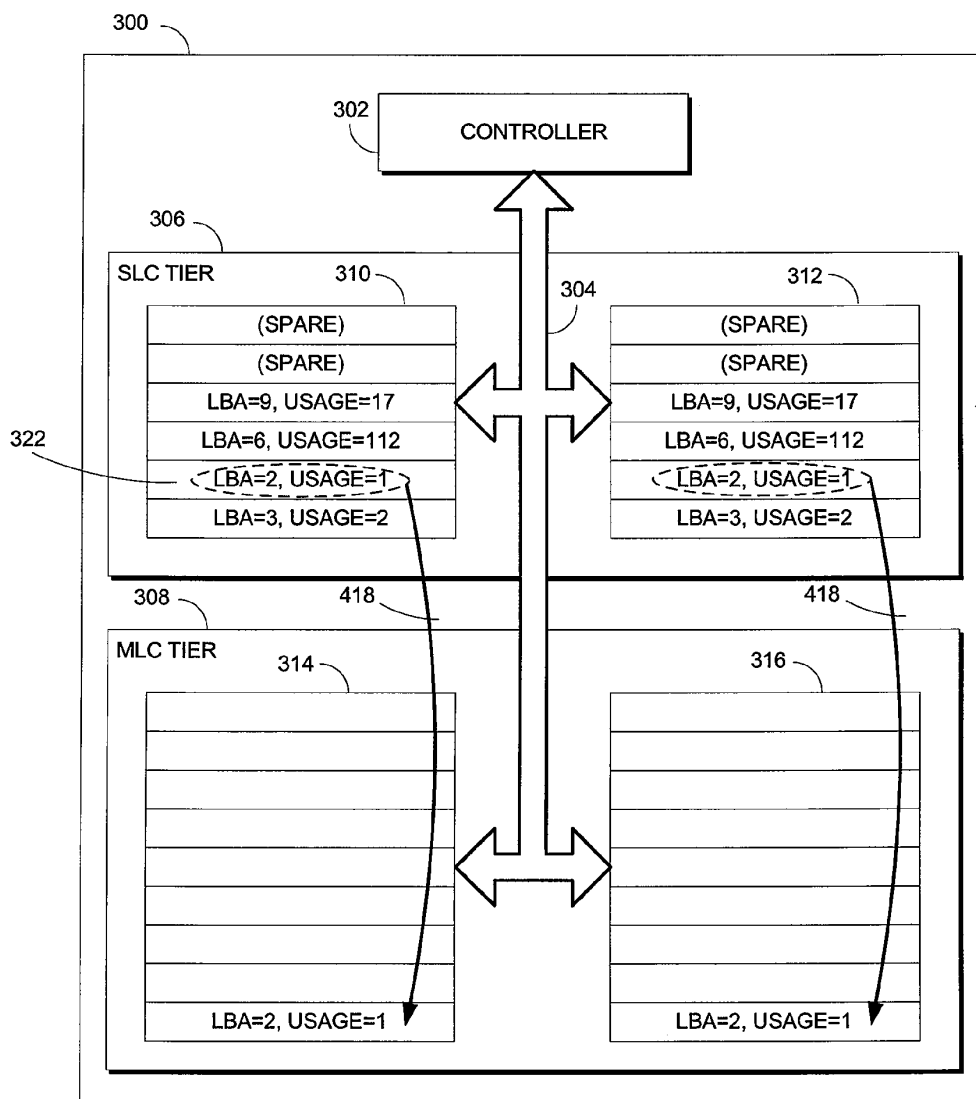


FIG. 4

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