Introduction
Typically, flash memory devices fall into two categories, SLC and MLC. An SLC flash memory cell can store only 1 bit data, whereas 2 or more bits can be stored in an MLC memory cell. An MLC flash cell can work in an SLC mode by selectively using its fast pages. We find that different workloads running on a fixed partitioning configuration exhibit distinctive partition utilizations, and different utilizations lead to various levels of performance. We develop a new FTL called BROMS that integrates the dynamic partitioning method, which optimizes the overall performance of a partitioned SSD via adjusting the capacities of its two partitions on the fly.

Model Verification
We implement our scheme on an FPGA board to evaluate the accuracy of our model. The conclusion is that a fixed partitioning normally leads to an inferior performance. To address this problem, we analyze the garbage collection cost in both partitions and then build a write cost model for an SSD. For each workload there always exists a best partition configuration.

Conclusions
The conclusion is that a fixed partitioning normally leads to an inferior performance. To address this problem, we analyze the garbage collection cost in both partitions and then build a write cost model for an SSD. For each workload there always exists a best partition configuration.

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References