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(54) **REGION-BASED MANAGEMENT METHOD OF NON-VOLATILE MEMORY**

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(58) **Field of Classification Search** ..... None  
See application file for complete search history.

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(57) **ABSTRACT**

A region-based management method of a non-volatile memory is provided. In the region-based management method, the storage space of all chips in the non-volatile memory is divided into physical regions, physical block sets, and physical page sets, and a logical space is divided into virtual regions, virtual blocks, and virtual pages. In the non-volatile memory, each physical block set is the smallest unit of space allocation and garbage collection, and each physical page set is the smallest unit of data access. The region-based management method includes a three-level address translation architecture for converting logical block addresses into physical block addresses.

14 Claims, 5 Drawing Sheets

