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(54) Title: APPARATUS INCLUDING MEMORY SYSTEM CONTROLLERS AND RELATED METHODS

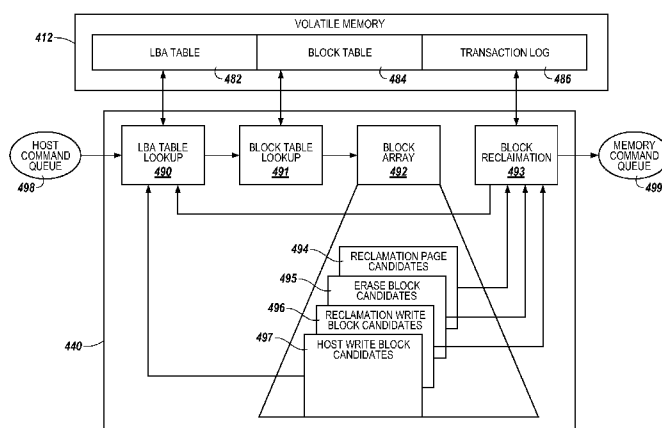


Fig. 4

(57) **Abstract:** Memory controllers can include a switch and non-volatile memory control circuitry including channel control circuits coupled to the switch. The channel control circuits can be coupled to logical units including blocks. Volatile memory and memory management circuitry including local memory can be coupled to the switch. The memory management circuitry can be configured to store health and status information for each of the blocks in a block table in the volatile memory, store a candidate block table that identifies a candidate block for a particular operation based on criteria in the local memory, update the health and status information for a particular block in the block table, compare the updated health and status information for the particular block with the candidate block according to the criteria, and update the candidate block table to identify the particular block in response to the comparison indicating that the particular block better satisfies the criteria.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2012/039412**A. CLASSIFICATION OF SUBJECT MATTER****G11C 7/10(2006.01)i, G11C 16/06(2006.01)i, G06F 12/00(2006.01)i**

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

G11C 7/10; G06F 12/02; G11C 16/04; G06F 12/00; G06F 11/16

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Korean utility models and applications for utility models

Japanese utility models and applications for utility models

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

eKOMPASS(KIPO internal) & Keywords: SSD, status, health, update, memory, switch, channel

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2011-0078496 A1 (JEDDELOH) 31 March 2011 See abstract, paragraphs [0029],[0033],[0034], claims 1,7, and figures 1-3.	1-20
A	US 2009-0175075 A1 (YEH et al.) 09 July 2009 See abstract, paragraphs [0051]-[00054],[0064],[0065], claims 1-3, and figures 1-4.	1-20
A	US 2010-0088482 A1 (HINZ) 08 April 2010 See abstract, paragraphs [0011],[0020],[0021],[0031], claims 1,5,6, and figures 1-3.	1-20
A	US 2009-0198947 A1 (KHMELNITSKY et al.) 06 August 2009 See abstract, paragraphs [0007],[0008],[0056], claims 1-8, and figures 1,5-7.	1-20



Further documents are listed in the continuation of Box C.



See patent family annex.

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Date of the actual completion of the international search

07 DECEMBER 2012 (07.12.2012)

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INTERNATIONAL SEARCH REPORT

Information on patent family members

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