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DATARAM, INC. [US/US]; 186 Princeton Road, West Windsor, NJ 08550 (US).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **CAULKINS, Jason** [US/US]; 186 Princeton Road, West Windsor, NJ 08550 (US).(74) Agent: **BOYS, Donald**; 3 Hangar Way, Suite D, Wat-
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(54) Title: PRIORITY ORDERED MULTI-MEDIUM SOLID-STATE STORAGE SYSTEM AND METHODS FOR USE

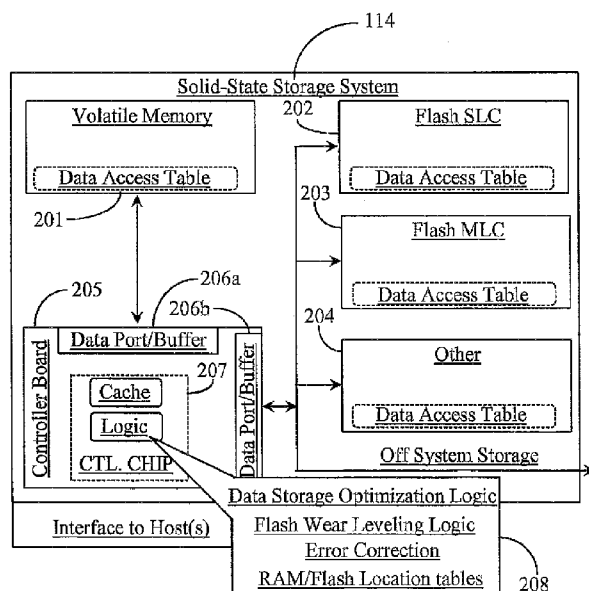


Fig. 2

(57) Abstract: A hierarchical data-storage system has a
volatile storage medium, a first non-volatile storage medi-
um, and a controller including a ranking engine tracking
data writes to each of the memory mediums. Each medium
is associated with a pre-set capacity threshold, and the con-
troller, upon the volatile medium reaching its pre-set
threshold, identifies one or more blocks of data as least-fre-
quently written to the volatile medium, copies the data in
those blocks to the non-volatile medium, and marks those
blocks as available for new data writes, and the controller,
upon the non-volatile medium reaching its pre-set thresh-
old, identifies one or more blocks of data as least-frequent-
ly written to the non-volatile medium, and marks those
blocks as available for new data writes from the volatile
medium.



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INTERNATIONAL SEARCH REPORT

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PCT/US2011/022915**A. CLASSIFICATION OF SUBJECT MATTER****G06F 13/14(2006.01)i, G06F 12/06(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)

G06F 13/14; G06F 12/02; G06F 12/16; G06F 17/30; G06F 12/00

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: non-volatile, volatile, memory, solid, state, storage, ranking, data, block, copy, RAM, flash, threshold, capacity

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2005-0204107 A1 (RANJANI NARAYAN et al.) 15 September 2005 See abstract; paragraphs [0041] - [0096]; figures 1-5.	1-20
A	US 2009-0300269 A1 (WILLIAM H. RADKE et al.) 03 December 2009 See abstract; paragraphs [0023] - [0030]; figures 1-6.	1-20
A	US 2009-0077408 A1 (YOON KEAN WONG) 19 March 2009 See abstract; paragraphs [0025] - [0072]; figures 1-3.	1-20
A	US 6292808 B1 (RONALD OBERMARCK et al.) 18 September 2001 See abstract; col. 3, line 37 - col.9, line 10; figures 2-6B.	1-20
A	US 2009-0172286 A1 (MENAHEM LASSER et al.) 02 July 2009 See abstract; paragraphs [0030] - [0039]; figures 1, 4, 5.	1-20



Further documents are listed in the continuation of Box C.



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Authorized officer

KIM Jong Kee

Telephone No. 82-42-481-8301



INTERNATIONAL SEARCH REPORT

Information on patent family members

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