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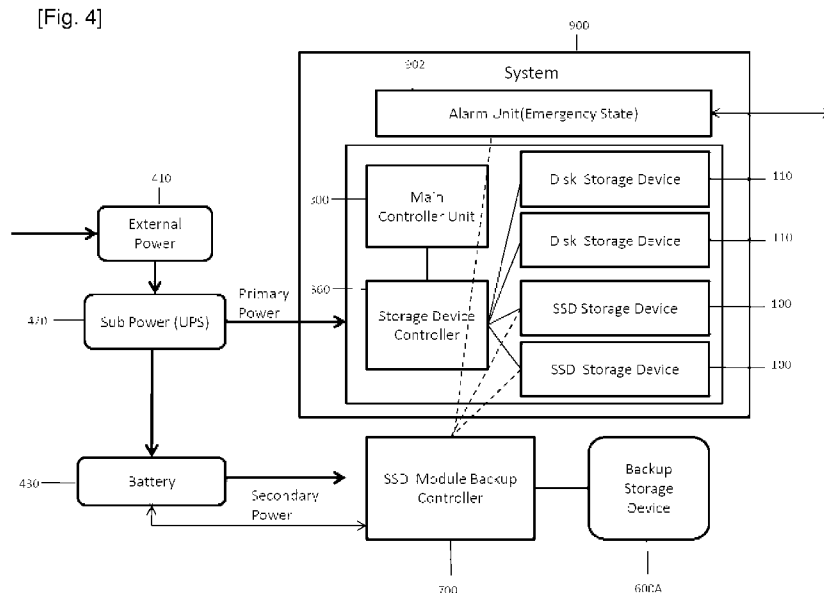
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(54) Title: ALARM-BASED BACKUP AND RESTORATION FOR A SEMICONDUCTOR STORAGE DEVICE



(57) Abstract: Embodiments of the present invention provide backup and restoration functions for a storage device of a PCI-Express (PCI-e) type that support a low-speed data processing speed for a host. Specifically, embodiments of this invention provide backup and restoration functions for one or more (i.e., a set of) semiconductor storage devices (SSDs). In general, the present invention provides an alarm unit and a secondary power supply coupled to a backup controller. The backup controller is coupled to a backup storage device. When a primary power supply is deactivated (e.g., fails), an alarm unit and the secondary power supply is activated. In response to this activation, the backup controller will backup any data stored on any SSDs of the storage system (as well as any data stored in main memory of the storage system or in main memory of any host server connected thereto). When the primary power supply is reactivated, the secondary power supply (and the alarm unit) is deactivated, and all data backed up is restored to its original source.

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PCT/KR2012/001051**A. CLASSIFICATION OF SUBJECT MATTER****G06F 13/14(2006.01)i, G06F 13/16(2006.01)i, G06F 12/16(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; G11C 29/42; G06F 3/06; G06F 1/30; G11C 11/00

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: SSD, backup, power, alarm

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	KR 10-0928438 B1 (TAEJIN INFO TECH CO., LTD) 25 November 2009 See paragraphs [0013]-[0017]; figure 1	1-20
Y	JP 2009-025926 A (FUJITSU LTD) 05 February 2009 See paragraphs [0014]-[0015]; figure 1	1-20
Y	US 2008-0298120 A1 (CHOW DAVID Q. et al.) 04 December 2008 See figure 7 and its corresponding description	1,6,8,11,14,19
Y	KR 10-2009-0019593 A (SAMSUNG ELECTRONICS) 25 February 2009 See the abstract; figure 1 and its corresponding description	1,6,8,11,14,19

 Further documents are listed in the continuation of Box C. See patent family annex.

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