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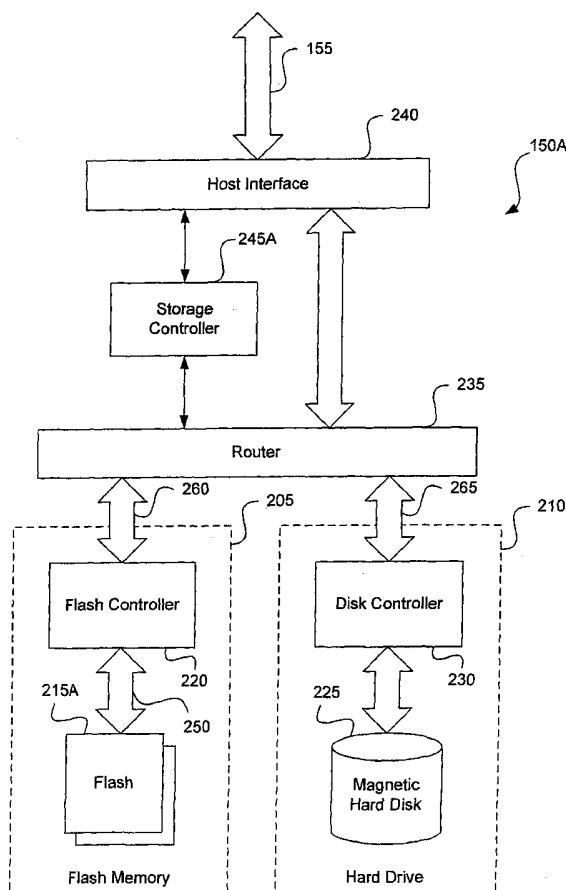
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[Continued on next page]

(54) Title: MASS STORAGE ACCELERATOR



(57) Abstract: A data storage device is provided. A disk device is combined with a non-volatile memory device to provide much shorter write access time and much higher data write speed than can be achieved with a disk device alone. Interleaving bursts of sector writes between the two storage devices can effectively eliminate the effect of the seek time of the disk device. Following a non-contiguous logical address transition from a host system, the storage controller can perform a look-ahead seek operation on the disk device, while writing current data to the non-volatile memory device. Such a system can exploit the inherently faster write access characteristics of a non-volatile memory device, eliminating the dead time normally caused by the disk seek time.



FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO,
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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 G06F3/06

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B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 G06F

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

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

EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|------------|---|--------------------------|
| X | US 6 646 948 B1 (STENCE RONALD W ET AL) 11 November 2003 (2003-11-11) | 1,4-6, 9-20, 22-24 |
| Y | the whole document | 2,3,7,8, 21 |
| Y | US 5 708 846 A (RYAN ET AL) 13 January 1998 (1998-01-13) column 2, line 30 - line 42 column 7, line 15 - line 44 | 21 |
| Y | US 6 408 357 B1 (HANMANN JONATHAN LEE ET AL) 18 June 2002 (2002-06-18) column 1, line 57 - line 62 | 7,8 |
| Y | US 5 754 888 A (YANG ET AL) 19 May 1998 (1998-05-19) column 3, line 60 - line 64 | 2,3 |

☐ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

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- * & * document member of the same patent family

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INTERNATIONAL SEARCH REPORT

Information on patent family members

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