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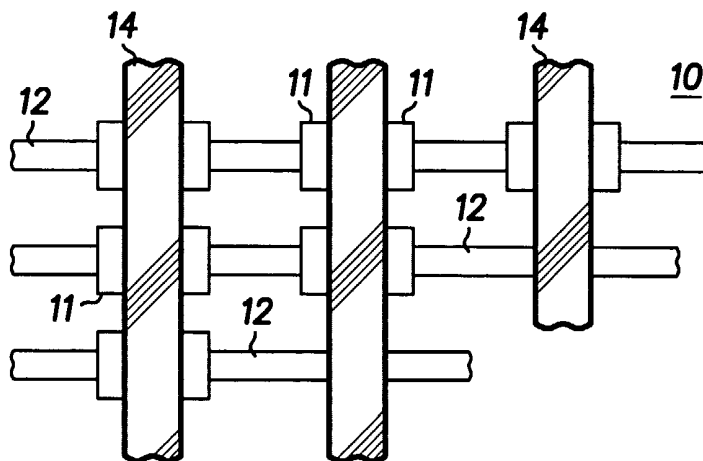
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- (71) Applicant: **MOTOROLA, INC.** [US/US]; 1303 East Algonquin Road, Schaumburg, IL 60196 (US). (88) Date of publication of the international search report: 3 October 2002
- (72) Inventors: **SHI, Jing**; 1270 North Brentwood Place, Chandler, AZ 85224 (US). **ZHU, Theodore**; 1351 North Congress Drive, Chandler, AZ 85226 (US). *For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

(54) Title: METHOD TO WRITE/READ MRAM ARRAYS



(57) Abstract: A method of writing/reading an array of magnetoresistive cells (11), with each cell in the array having associated therewith a first current line (14) that generates an easy axis field and a second orthogonal current line (12) that generates a hard axis field when current is applied thereto. The method includes initially applying a current to the second orthogonal current lines in a first direction that generates a hard axis field to switch end domains in all cells in the array to a fixed direction, and selecting a cell in the array for write/read using a half-select technique including supplying a half-select current to the first current line associated with the selected cell to generate a half-select easy axis field and, simultaneously, supplying a half-select current in the first direction to

the second current line associated with the selected cell to generate a half-select hard axis field.

INTERNATIONAL SEARCH REPORT

In **national Application No**
PCT/US 99/16304

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 G11C11/15

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)

IPC 7 G11C

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)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0 613 148 A (IBM) 31 August 1994 (1994-08-31)	1,6
A	column 3, line 37 -column 4, line 1; figures 2A,2B column 5, line 39 -column 6, line 10 ---	10
X	PATENT ABSTRACTS OF JAPAN vol. 1998, no. 11, 30 September 1998 (1998-09-30) & JP 10 162326 A (INTERNATL BUSINESS MACH CORP <IBM>), 19 June 1998 (1998-06-19) abstract & US 5 801 984 A (STUART STEPHEN PAPWORTH PARKIN) 1 September 1998 (1998-09-01) column 5, line 31 - line 59 --- -/--	1,6

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

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P document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

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INTERNATIONAL SEARCH REPORT

Int'l Application No
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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

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