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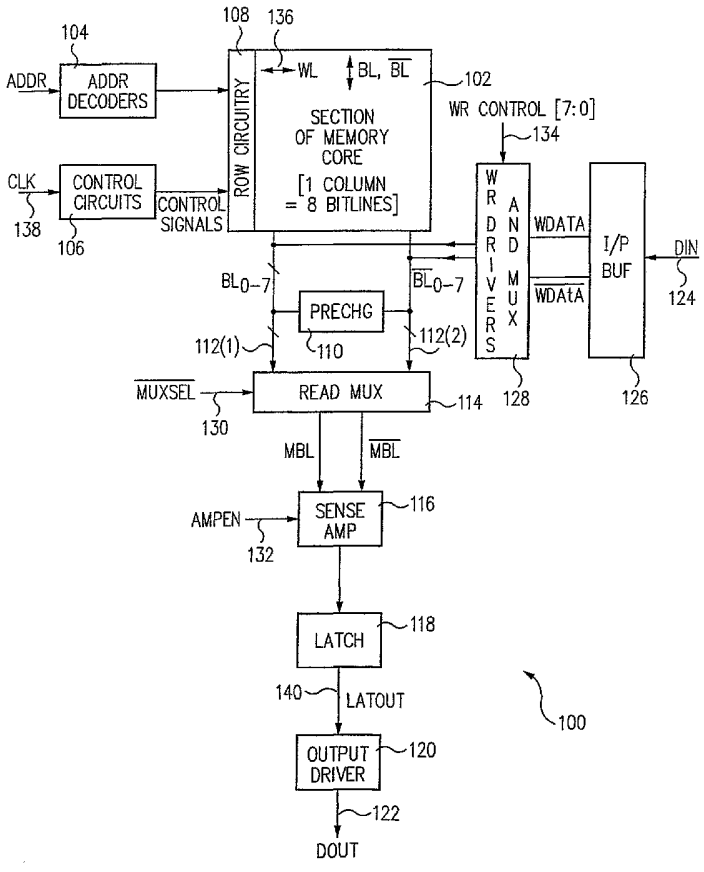
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[Continued on next page]

(54) Title: MEMORY SYSTEMS AND METHODS



(57) Abstract: Systems and methods are disclosed for memory, including techniques for reading and writing to memory. For example, in accordance with an embodiment of the present invention, a method of implementing a read and a write operation (e.g., a read before write operation) is disclosed for a memory, such as for example for a single port or a multiport memory, with the write operation beginning prior to the completion of the read operation.

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Declarations under Rule 4.17:

— *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*

— *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US05/23686

A. CLASSIFICATION OF SUBJECT MATTER
IPC: **G11C 7/10**(2006.01)

USPC: 365/189.05
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)
U.S. : 365/154, 185.11, 189.2, 189.4, 189.05, 203, 230.02, 230.08

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
NONE

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

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6,549,452 B1 (PARK) 15 April 2003 (15.04.2003), Figures 4-7; column 2, line 62 - column 3, line 5; column 7, lines 55-57; column 5, line 57 - column 6, line 27; column 8, lines 1-14.	15-22
A	US 6,295,238 B1 (TANIZAKI et al) 25 September 2001 (25.09.2001), see entire document.	1-22
A	US 2003/0058688 A1 (NGUYEN) 27 March 2003 (27.03.2003), see entire document.	1-22

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

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INTERNATIONAL SEARCH REPORT

International application No.
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Continuation of B. FIELDS SEARCHED Item 3:
EAST: US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB
search terms: 365/189.05,189.04.154,185.11,189.02.ccls. and memory and (read-before write or RBW or (read adj before adj write)) and multiplexer and (sense near amplifier) and latch$3 and ((write near circuit) or (output near driver)); memory; memory and (rad near2 multiplexer); memory and (read near2 multiplexer) and (sense near2 amplifier) and latch$3 and ((write near circuit) or (output near driver)); nguyen.in.. and "365"/$.ccls.; nguyen.in.. and "365"/185.11.ccls.; memory and (read-before write or RBW or (read adj before adj write)) and (read near multiplexer) adn (sense near amplifier) and latch$3 and ((write near circuit) or (output near driver)); (control near signal) same (read$3 with delay) same (sense near2 amplifier) same latch$3 same output