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(54) Title: DYNAMIC PARTITIONING FOR AREA-EFFICIENT MULTI-PORT MEMORY

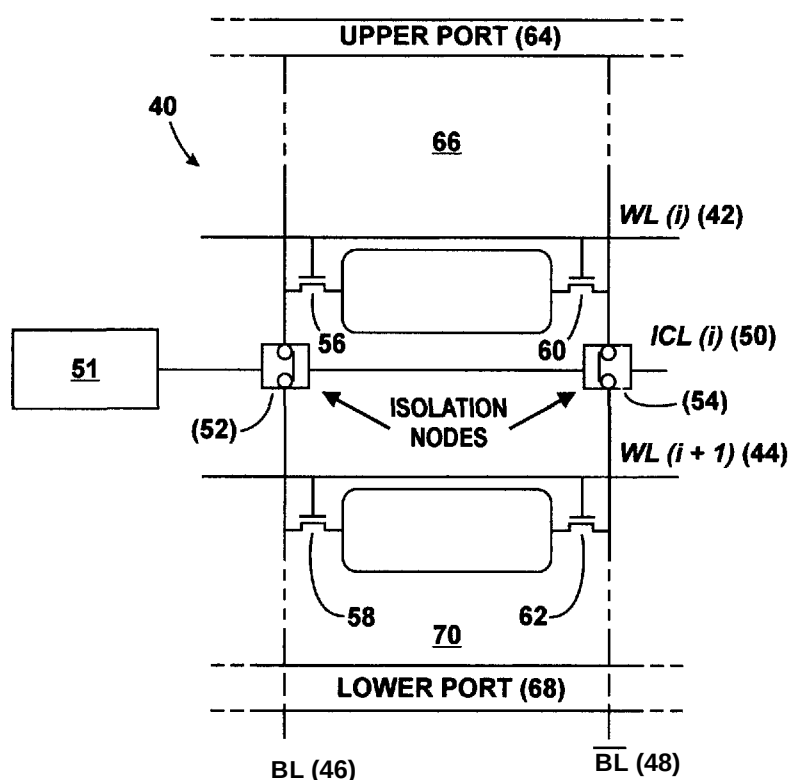


FIG. 3

(57) Abstract: Dynamic partitioning for area-efficient multi-port memory (40) At least one bit-9 line isolation node (52, 54) is placed on bit lines (46, 48) between word line sections (42, 44) and separate a long physical bit line (46, 48) into two virtually and electronically 5 separate sections (66, 70), with one section (66) electronically connected to an upper port (64) and the other section (70) electronically connected to a lower port (68) to shorten effective bit lines physically connected to a port (64, 68) At least one isolation control line (50), each of which controls the bit-line isolation nodes (52, 54) separating same word line sections (42, 44) At least one dynamic memory partition control circuit (51) has outputs feeding corresponding isolation control lines (50)

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A CLASSIFICATION OF SUBJECT MATTER

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USPC - 365/230 03

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)

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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
365/230 03, 365/230 05, 365/220, 365/221, 365/230 08, 365/230 09 (keyword limited - see terms below)

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

PubWEST(PGPB, USPT, EPAB, JPAB), Google, Search Terms multi-port memory, multiport memory, memory cell, physical memory, bit line, bit-line, word line, word-line, decoder, bus, isolation node, isolation line, isolation control line, isolation, upper port, dual port, dual-port, port, turning on, on, off, address

C DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No
X	US 6,944,709 B2 (NATARAJ et al) 13 September 2005 (13 09 2005), entire document, especially abstract, col 3, ln 12, ln 34-36, ln 46, col 4, ln 3-4, ln 6, col 6, ln 17-18, col 7, ln 17-19, ln 56, col 8, ln 11-12, ln 40-41, col 9, ln 59, coMO, ln 4-5, ln 9-10, ln 15, col 12, ln 13-14, ln 23-29, col 13, ln 40-42, col 14, ln 17-22, ln 44-49, col 15, ln 44-45, ln 55-56, col 16, ln 19-20, col 18, ln 21, ln 39-40, ln 48, col 19, ln 27, ln 31-38, ln 47-52, col 20, ln 4-5, ln 10-11, col 21, ln 15, col 24, ln 45-46, col 25, ln 27-30, ln 58-59, col 26, ln 10-16, ln 21-22, col 27, ln 50, col 28, ln 24-26, col 30, ln 20-23, col 35, ln 37, col 36, ln 33-35, col 37, ln 27-28, col 39, ln 3-10, ln 26-27, col 40, ln 35-40, col 44, ln 37-38, col 46, ln 45, ln 61-63, col 49, ln 42, col 59, ln 11, ln 29, col 62, ln 24-26, ln 37-38, col 64, ln 42-44, col 65, ln 16-18, col 66, ln 53-55, col 71, ln 55-56, col 73, ln 22-23, ln 29, ln 38-41, col 74, ln 35-39, col 75, ln 4, col 79, ln 16-18, and col 80, ln 1-5	1-10
A	US 6,999,372 B2 (TAKAYANAGI) 14 February 2006 (14 02 2006)	1-10
A	US 2004/0066697 A1 (NAGANO) 08 April 2004 (08 04 2004)	1-10
A	US 5,978,307 A (PROEBSTING et al) 02 November 1999 (02 11 1999)	1-10

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