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(54) Title: SHARED MEMORY SYSTEM FOR A TIGHTLY-COUPLED MULTIPROCESSOR

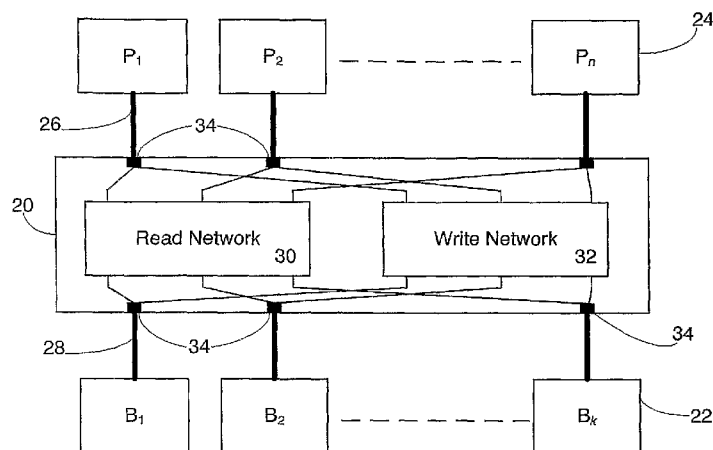


Fig. 2

(57) Abstract: A shared memory system for a multicore computer system utilizing an interconnection network that furnishes tens of processing cores or more with the ability to refer concurrently to random addresses in a shared memory space with efficiency comparable to the typical efficiency achieved when referring to private memories is disclosed. The interconnection network is generally composed of a sub-network for writing and a separate multicasting sub-network for reading. The shared memory system computes paths between processing cores and memory banks anew at every clock cycle, without rearrangement. It returns an approval reply to every core whose initiative of accessing memory leads to the successful establishment of a path and is fulfilled, or a rejection reply to every core whose initiative is not fulfilled.



INTERNATIONAL SEARCH REPORT

International application No.

PCT/IL 08/01474

A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - G06F 12/06 (2009.01)

USPC - 711/5

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)

USPC: 711/5

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
USPC: 709/201,212,213,223,226; 710/1,3,36,37,38; 711/1,5,147,148,149,150,167,168Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
Electronic Databases Searched: USPTO WEST (PGPUB,USPAT,USOCR,EPAB,JPAB); GOOGLE Patents; DIALOG PRO
Search Terms Used: multiprocessor/interconnection network, multi-core/processor shared memory, multibank memory port/path establishing, plural memory transactions per clock cycle, reading/writing transactions, pipelining, etc

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2007/0124532 A1 (BENNETT) 31 May 2007 (31.05.2007) Abstract, para [0009]-[0028], [0039]-[0041], [0182]-[0202], [0214]-[0223], [0228]-[0233], [0236], [0242]-[0249], [0255]-[0257], [0280]-[0285], [0361]-[0364], [0371]	1-16
A	US 2006/0251109 A1 (MULLER et al.) 09 November 2006 (09.11.2006) Entire Document	1-16
A	US 6,801,985 B1 (COMISKY et al.) 05 October 2004 (05.10.2004) Entire Document	1-16
A	US 5,659,687 A (KIM et al.) 19 August 1997 (19.08.1997) Entire Document	1-16

☐ Further documents are listed in the continuation of Box C.

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"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

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