(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(54) Title: METHOD AND APPARATUS FOR INTEGRATION OF COMMUNICATION LINKS WITH A REMOTE DIRECT MEMORY ACCESS PROTOCOL
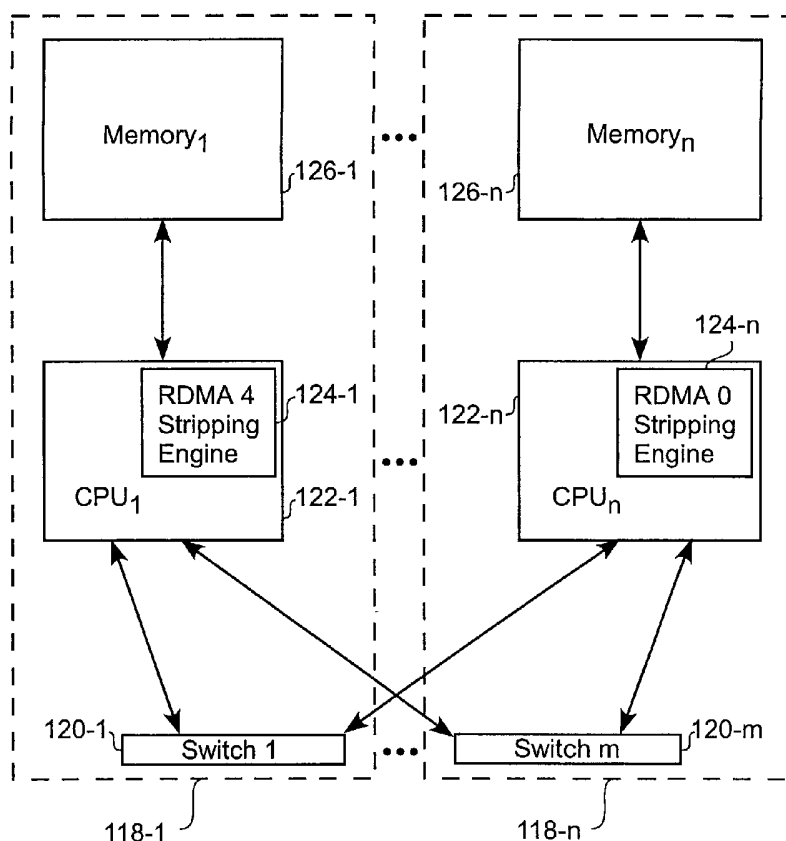
(57) Abstract: In one embodiment, a server is provided. The server includes multiple application processor chips. Each of the multiple application processor chips includes multiple processing cores. Multiple memories corresponding to the multiple processor chips are included. The multiple memories are configured such that one processor chip is associated with one memory. A plurality of fabric chips enabling each of the multiple application processor chips to access any of the multiple memories are included. The data associated with one of the multiple application processor chips is stored across each of the multiple memories. In one embodiment, the application processor chips include a remote direct memory access (RDMA) and striping engine. The RDMA and striping engine is configured to store data in a striped manner across the multiple memories. A method for allowing multiple processors to exchange information through horizontal scaling is also provided.

— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

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12 August 2004

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.

INTERNATIONAL SEARCH REPORT

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7   H04L12/56

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   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

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4 754 394 A (BRANTLEY JR WILLIAM C ET AL) 28 June 1988 (1988-06-28) abstract; figure 5 column 3, line 13 - line 17 -----	1,2,4,6, 7,9, 11-14, 18,19
A	DELL-COM: "Infiniband Architecture: Next-Generation Server I/O" WHITE PAPER, October 2000 (2000-10), XP002242048 figure 1 figure 6 page 8, left-hand column, line 12 - line 20 -----	2,13
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X	Further documents are listed in the continuation of box C.		X	Patent family members are listed in annex.

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Date of the actual completion of the international search	Date of mailing of the international search report
21 June 2004	30/06/2004

Name and mailing address of the ISA	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL – 2280 HV Rijswijk Tel. (+31–70) 340–2040, Tx. 31 651 epo nl, Fax: (+31–70) 340–3016	Bosch Vivancos, P

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	LONG D D E ET AL: "Swift/RAID: A Distributed RAID System" COMPUTING SYSTEMS, USENIX ASSOCIATION, BERKELEY, CA, US, 1994, pages 333-359, XP002156330 ISSN: 0895-6340 abstract page 2, line 1 - line 15 figure 2	1,3,5, 8-12, 14-17
A	OLUKOTUN K ET AL: "THE CASE FOR A SINGLE-CHIP MULTIPROCESSOR" ACM SIGPLAN NOTICES, ASSOCIATION FOR COMPUTING MACHINERY, NEW YORK, US, vol. 31, no. 9, 1 September 1996 (1996-09-01), pages 2-11, XP000639220 NEW-YORK, ÉTATS-UNIS DAMÉRIQUE ISSN: 0362-1340 figure 3	1-19
P,X	US 2002/065998 A1 (BUCKLAND PAT ALLEN) 30 May 2002 (2002-05-30) figure 5 page 1, left-hand column, line 36 - line 42 page 1, left-hand column, line 54 - line 57 page 1, right-hand column, line 1 - line 2 page 3, left-hand column, line 30 - line 34 page 4, left-hand column, line 43 - line 48	1,3-8

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