

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
9 March 2006 (09.03.2006)

PCT

(10) International Publication Number  
**WO 2006/026461 A3**

(51) International Patent Classification:

**H04L 12/28** (2006.01) **G06F 12/00** (2006.01)

**H04J 3/14** (2006.01) **G06F 13/00** (2006.01)

(21) International Application Number:

PCT/US2005/030466

(22) International Filing Date: 26 August 2005 (26.08.2005)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

60/604,925 27 August 2004 (27.08.2004) US

(63) Related by continuation (CON) or continuation-in-part (CIP) to earlier application:

US 60/604,925 (CON)

Filed on 27 August 2004 (27.08.2004)

(71) Applicant (for all designated States except US): **BOARD OF REGENTS, THE UNIVERSITY OF TEXAS SYSTEM** [US/US]; 201 West 7th St., Austin, TX 78701 (US).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **KUMAR, Sanjeev** [IN/US]; P.O. Box 4686, Edinburg, TX 78540 (US).

(74) Agent: **HIGHLANDER, Steven, L.**; Fulbright & Jaworski, L.L.P., 600 Congress Avenue, Suite 2400, Austin, TX 78701 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US (patent), UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

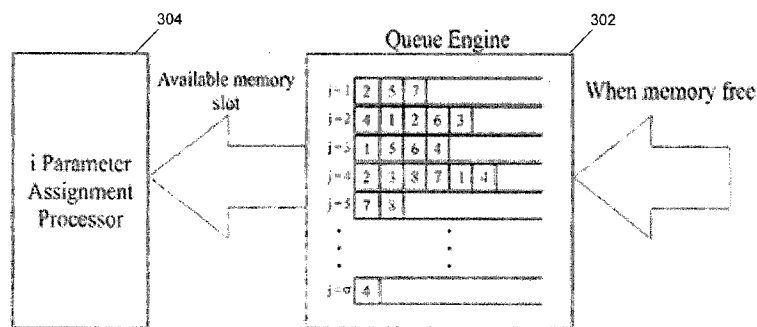
Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(88) Date of publication of the international search report:  
21 December 2007

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: METHODS FOR MEMORY ASSIGNMENT SCHEMES AND ARCHITECTURE FOR SHAREABLE PARALLEL MEMORY MODULE BASED INTERNET SWITCHES



(57) Abstract: System and methods are described for high-speed memory assignment schemes for routing packets in a shareable parallel memory module based switch system (Fig. 3). A method includes receiving a parameter, determining availability of memory location, determining if an available memory location is pre-assigned, and assigning a packet a parameter if the memory location is available (302). Systems of present invention provides hardware and/or software based components for implementing the steps of receiving a parameter, determining available memory location, determining if available memory location is pB-assigned, and assigning a packet a parameter if the memory location is available (304, 302).

# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US05/30466

## A. CLASSIFICATION OF SUBJECT MATTER

IPC: **H04L 12/28**( 2006.01);**H04J 3/14**( 2006.01);**G06F 12/00**( 2006.01),**13/00**( 2006.01)

USPC: 370/392,230;711/144;709/215;395/284

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. : 370/392,230;711/144;709/215;395/284

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 practicable, 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.
A	US 20040143710 A1 (Walmsley) 22 July 2004 (22.07.2004), entire reference	1-20
A	US 6687247 B1 (Wilford et al.) 3 February 2004 (03.02.2004), entire reference	1-20
A	6011775 (Bonomi et al.) 4 January 2000 (04.01.2000), entire reference	1-20
A	5887146 (Baxter et al.) 23 March 1999 (23.03.1999), entire reference	1-20
A	6014690 (VanDoren et al.) 11 January 2000 (11.01.2000), entire reference	1-20

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

☐ See patent family annex.

* Special categories of cited documents:	
"A" document defining the general state of the art which is not considered to be of particular relevance	"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
"E" earlier application or patent published on or after the international filing date	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"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
"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search

10 September 2007 (10.09.2007)

Date of mailing of the international search report

23 OCT 2007

Name and mailing address of the ISA/US

Mail Stop PCT, Attn: ISA/US  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

Facsimile No. (571) 273-3201

Authorized officer

Edan D. Orgad

Telephone No. (703) 305-7884

Jacqueline A. Whitfield  
Special Project Asst.