### (19) World Intellectual Property **Organization**

International Bureau





(43) International Publication Date 10 June 2004 (10.06.2004)

**PCT** 

### (10) International Publication Number WO 2004/049175 A3

- (51) International Patent Classification<sup>7</sup>: 13/12
- G06F 13/16,
- (21) International Application Number:

PCT/US2003/037400

(22) International Filing Date:

21 November 2003 (21.11.2003)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

60/428,646

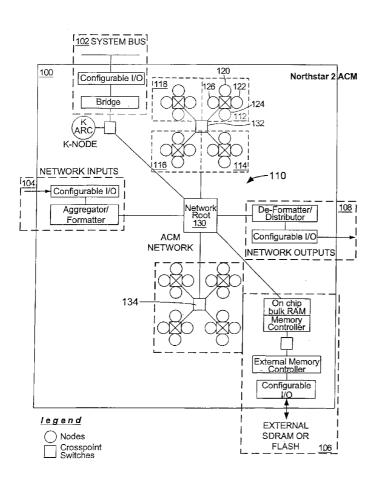
22 November 2002 (22.11.2002)

- (71) Applicant: QUICKSILVER TECHNOLOGY, INC. [US/US]; 6640 Via Del Oro, Suite 120, San Jose, CA 95119 (US).
- (72) Inventor: MASTER, Paul, L.; 796 Dartshire Way, Sunnyvale, CA 94087 (US).

- (74) Agents: KULAS, Charles, J. et al.; 1900 Embarcadero Road, Suite 109, Palo Alto, CA 94303 (US).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, 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, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: EXTERNAL MEMORY CONTROLLER NODE



(57) Abstract: A memory controller to provide memory access services in an adaptive computing engine is provided. The controller comprises: a network interface configured to receive a memory request from a programmable network; and a memory interface configured to access a memory to fulfill the memory request from the programmable network, wherein the memory interface receives and provides data for the memory request to the network interface, the network interface configured to send data to and receive data from the programmable network.



# WO 2004/049175 A3



#### **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 April 2005

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

Int jonal Application No PC1/US 03/37400

			101/03 03	7 3 7 4 0 0						
A. CLASSIFICATION OF SUBJECT MATTER IPC 7 G06F13/16 G06F13/12										
According to International Patent Classification (IPC) or to both national classification and IPC										
B. FIELDS S EARCHED										
Minimum documentation searched (classification system followed by classification symbols)  IPC 7 G06F H03K										
	tion searched other than minimum documentation to the extent that s									
Electronic data base consulted during the international search (name of data base and, where practical, search terms used)  EPO-Internal										
C. DOCUM	ENTS CONSIDERED TO BE RELEVANT									
Category °	Citation of document, with indication, where appropriate, of the re	levant passages		Relevant to claim No.						
Х	US 6 347 346 B1 (TAYLOR) 12 February 2002 (2002-02-12) the whole document			1-17, 27-32						
Х	US 6 282 627 B1 (WONG ET AL) 28 August 2001 (2001-08-28)			1-4,6-8, 10,11, 13-17, 27-32						
	abstract column 3, line 57 - column 5, line 50 column 10, line 8 - line 11 figures 3,7,8,11,14,18a									
Further documents are listed in the continuation of box C.  Patent family members are listed in annex.										
"A" docume	tegories of cited documents :  ent defining the general state of the art which is not le red to be of particular relevance document but published on or after the international	"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								
which	late  nt which may throw doubts on priority claim(s) or is cited to establish the publication date of another n or other special reason (as specified)	<ul> <li>"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</li> <li>"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the</li> </ul>								
other r	ent referring to an oral disclosure, use, exhibition or means ent published prior to the international filing date but ean the priority date claimed	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								
Date of the actual completion of the international search  Date of mailing of the international search report										
2	5 February 2005	04/03/2	2005							
Name and r	nailing address of the ISA  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	Authorized officer . McDonag	ıh, F							

## INTERNATIONAL SEARCH REPORT

nformation on patent family members

Interpolation No PCT/US 03/37400

Patent document cited in search report		Publication date		Patent fa.mily member(s)	Publication date
US 6347346	B1	12-02-2002	AU EP WO US	5899100 A 1198888 A1 0101575 A1 2002038414 A1	31-01-2001 24-04-2002 04-01-2001 28-03-2002
US 6282627	В1	28-08-2001	AU CA EP JP	817 <b>7</b> 598 A 229 <b>1</b> 789 A1 1015984 A1 200251 <b>1</b> 173 T	19-01-1999 07-01-1999 05-07-2000 09-04-2002