# (19) World Intellectual Property Organization

International Bureau



# 

#### (43) International Publication Date 5 June 2008 (05.06.2008)

(51) International Patent Classification: G06F 9/38 (2006.01)

(21) International Application Number:

PCT/US2007/085574

(22) International Filing Date:

27 November 2007 (27.11.2007)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

11/563,943 28 November 2006 (28.11.2006)

- (71) Applicant (for all designated States except US): QUAL-COMM Incorporated [US/US]; Attn: International Ip Administration, 5775 Morehouse Drive, San Diego, California 92121 (US).
- (72) Inventor; and
- (75) Inventor/Applicant (for US only): MORROW, Micheal

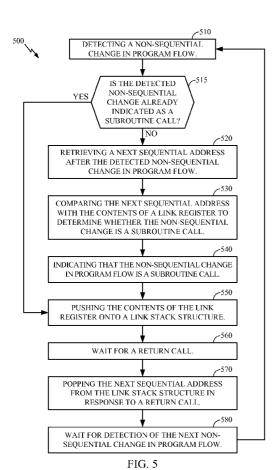
## (10) International Publication Number WO 2008/067277 A3

William [US/US]; 5775 Morehouse Drive, San Diego, California 92121 (US).

- (74) Agent: BACHAND, Richard A.; 5775 Morehouse Drive, San Diego, California 92121 (US).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, 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,

[Continued on next page]

#### (54) Title: METHODS AND APPARATUS FOR RECOGNIZING A SUBROUTINE CALL



(57) Abstract: An apparatus for recognizing a subroutine call is disclosed. The apparatus includes a circuit comprising a first input for receiving contents of a register, a second input for receiving a non-sequential change in program flow, and a third input for receiving the next sequential address after the non-sequential change in program flow. The circuit is configured to compare the next sequential address and the contents of the register to determine whether the non-sequential change in program flow is a subroutine call.



## WO 2008/067277 A3



FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, 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).

#### **Declarations under Rule 4.17:**

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))

#### **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: 25 September 2008

# INTERNATIONAL SEARCH REPORT

international application No PCT/US2007/085574

A. CLASSIF INV. (	GO6F9/38	•	
According to	International Patent Classification (IPC) or to both national clas	sification and IPC	
B. FIELDS	· · · · · · · · · · · · · · · · · · ·		
	cumentation searched (classification system followed by classifi	ication symbols)	
G06F			·
		to an in the fields pe	المرم باعد
Documentat	ion searched other than minimum documentation to the extent tr	nat such documents are included in the lielus se	where practical, search terms used)  assages Relevant to claim No.  2] ET 1–20  5] 1–20  ET 1–20  T-20  See patent family annex.  er document published after the international filing date repriority date and not in conflict with the application but lied to understand the principle or theory underlying the vention current of particular relevance; the claimed invention annot be considered novel or cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combined with one or more other such documents, such combined with one or more other such documents, such combined with one or more other such documents, such combination being obvious to a person skilled in the art.  courment member of the same patent family ate of mailing of the international search report  01/08/2008  uthorized officer
Electronic da	ala base consulted during the international search (name of data	Classification (PC) or to both national classification and IPC  In classification expelem followed by classification and IPC  In minimum documentation to the extent that such documents are included in the fields searched  In the international search (name of data base and, where practical, search terms used)  In the international search (name of data base and, where practical, search terms used)  In the international search (name of data base and, where practical, search terms used)  In the international search (name of data base and, where practical, search terms used)  In the international search (name of data base and, where practical, search terms used)  In the international search (name of data base and, where practical, search terms used)  In the international search (name of data base and, where practical, search terms used)  In the international search (name of data base and, where practical, search terms used)  In the international search (name of data base and, where practical, search terms used)  In the international family data base and, where practical, search terms used)  In the international family data base and, where practical, search terms used)  In the international family data base and, where practical, search terms used)  In the international family data base and, where practical, search terms used)  In the continuation of Box C.  In the continuation o	
EPO-In	ternal	•	
C. DOCUME	ENTS CONSIDERED TO BE RELEVANT		Dobrosta dein No
Category*	Citation of document, with indication, where appropriate, of the	e relevant passages	Relevant to claim No.
A	US 6 898 698 B1 (SUNAYAMA RYUI AL) 24 May 2005 (2005-05-24) column 2, line 36 - column 3,		1-20
A	US 6 910 124 B1 (SINHAROY BALA 21 June 2005 (2005-06-21) column 1, line 12 - column 2,	•	1-20
A	US 6 157 999 A (ROSSBACH PAUL AL) 5 December 2000 (2000-12-0 column 1, line 12 - column 2,	5)	1–20
			,
}			
			,
Furt	ther documents are listed in the continuation of Box C.	X See patent family annex.	
* Special	categories of cited documents :	"T" later document published after the interest of the interes	ernational filing date
	ent defining the general state of the art which is not dered 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	
	document but published on or after the international	"X" document of particular relevance; the	claimed invention
"L" docum	ent which may throw doubts on priority claim(s) or	involve an inventive step when the do	ocument is taken alone
citatio	n is cited to establish the publication date of another on or other special reason (as specified)	cannot be considered to involve an ir	ventive step when the
other	nent referring to an oral disclosure, use, exhibition or means	ments, such combination being obvio	
"P" docum later t	ent published prior to the international filling date but than the priority date claimed		t family
Date of the	actual completion of the international search	Date of mailing of the international sea	arch report
2	25 July 2008	01/08/2008	
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	Bijn, Koen	

### **INTERNATIONAL SEARCH REPORT**

Information on patent family members

International application No
PCT/US2007/085574

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 6898698	31 24-05-2005	JP 3723019 B2 JP 2001100993 A	07-12-2005 13-04-2001
US 6910124	31 21-06-2005	NONE	
US 6157999	A 05-12-2000	NONE	