



- (51) International Patent Classification:
G06F 9/46 (2006.01)
- (21) International Application Number:
PCT/US2013/029981
- (22) International Filing Date:
8 March 2013 (08.03.2013)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
61/636,058 20 April 2012 (20.04.2012) US
13/476,302 21 May 2012 (21.05.2012) US
- (71) Applicant: QUALCOMM INCORPORATED [US/US];
Attn: International IP Administration, 5775 Morehouse Drive, San Diego, California 92121 (US).
- (72) Inventors: VIJAYARAJAN, Vinod; 5775 Morehouse Drive, San Diego, California 92121 (US). GARGASH, Norman S.; 5775 Morehouse Drive, San Diego, California 92121 (US).
- (74) Agent: COLE, Nicholas Albert; 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, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, 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, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, 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, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, 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))

[Continued on next page]

(54) Title: METHOD AND SYSTEM FOR MINIMAL SET LOCKING WHEN BATCHING RESOURCE REQUESTS IN A PORTABLE COMPUTING DEVICE

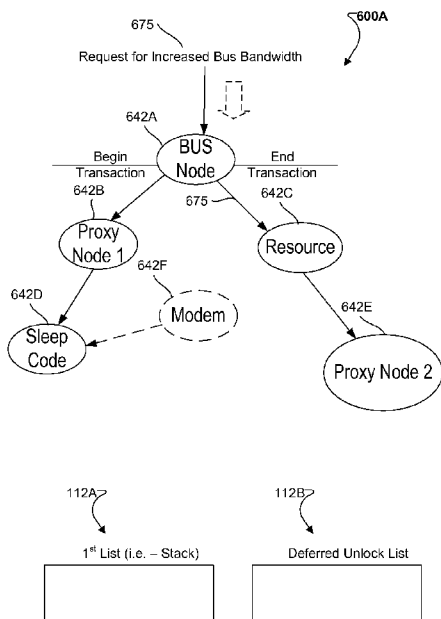


FIG. 24A

(57) Abstract: Requests (675) of a PCD are determined if they are part of a transaction involving a plurality of resources. Next, each resource (642) that is part of the request involving multiple resources is identified. As each resource is identified, a framework manager determines if a resource has completed processing the request directed at it. If the resource has returned a value that it has completed the request, then the framework manager allows the resource to return to an unlocked state while other requests in the transaction are being processed. If the resource has not completed processing and has deferred some of the processing to the end of the transaction, then the resource is added to a deferred unlock list (112B). It is determined if the resource (642C) is a dependent on another resource (642E) in the current request path. If it is dependent, then the other resource (642C) is also placed on the deferred unlock list.





— *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))* — *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*

Published:

— *with international search report (Art. 21(3))*

(88) Date of publication of the international search report:

28 August 2014

INTERNATIONAL SEARCH REPORT

International application No
PCT/US2013/029981

A. CLASSIFICATION OF SUBJECT MATTER
INV. G06F9/52 G06F9/46
ADD.
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)
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 practicable, 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	BERENSON H ET AL: "A critique of ANSI SQL isolation levels", SIGMOD RECORD, ACM, NEW YORK, NY, US, vol. 24, no. 2, 1 June 1995 (1995-06-01), pages 1-10, XP002234701, ISSN: 0163-5808, DOI: 10.1145/568271.223785	1,3,4,6, 7,9-11, 13,14, 16,17, 19-21, 23,24, 26,27, 29-31, 33,34, 36,37, 39,40
Y	Section 1. Introduction:: page 1, left-hand column, paragraph 1 page 1, right-hand column, paragraph 1 Section 2.3 Locking:: page 3, left-hand column, paragraph 4 - right-hand column, paragraph 5 ----- -/--	2,5,8, 12,15, 18,22, 25,28, 32,35,38

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 but 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 30 June 2014	Date of mailing of the international search report 10/07/2014
---	--

Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016	Authorized officer Ross, Christopher
--	---

INTERNATIONAL SEARCH REPORT

International application No

PCT/US2013/029981

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	<p>US 2005/044205 A1 (SANKARANARAYAN MUKUND [US] ET AL) 24 February 2005 (2005-02-24)</p> <p>abstract paragraph [0092] - paragraph [0093]; figure 2 paragraph [0175] - paragraph [0176] paragraph [0181]</p> <p>-----</p>	<p>2, 5, 8, 12, 15, 18, 22, 25, 28, 32, 35, 38</p>

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2013/029981

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2005044205	A1	24-02-2005	
		AU 4976901 A	12-11-2001
		EP 1342156 A2	10-09-2003
		JP 5065566 B2	07-11-2012
		JP 2004508611 A	18-03-2004
		JP 2012138126 A	19-07-2012
		US 6799208 B1	28-09-2004
		US 2005033846 A1	10-02-2005
		US 2005044205 A1	24-02-2005
		WO 0184301 A2	08-11-2001
