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

(19) World Intellectual Property Organization

International Bureau





(10) International Publication Number WO 2013/036688 A3

(43) International Publication Date 14 March 2013 (14.03.2013)

(51) International Patent Classification: G06Q 30/06 (2012.01) G06F 17/30 (2006.01)

(21) International Application Number:

PCT/US2012/054027

(22) International Filing Date:

6 September 2012 (06.09.2012)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

13/226,333 6 September 2011 (06.09.2011)

) US

- (71) Applicant (for all designated States except US): GOOGLE INC. [US/US]; 1600 Amphitheatre Parkway, Mountain View, CA 94043 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): CARLSON, Andy [US/US]; 420 Kaercher Street, Pittsburgh, PA 15207 (US). WU, Liangying [CN/US]; 5326 5th Avenue, Apt. 21, Pittsburgh, PA 15213 (US). STEVENSON, Timothy [AU/CH]; Klebestrasse 17, CH-8041 Zurich (CH).
- (74) Agent: ISAACS, II, William, O.; Johnson, Marcou & Isaacs, LLC, 317 A E. Liberty Street, Savannah, GA 31401 (US).

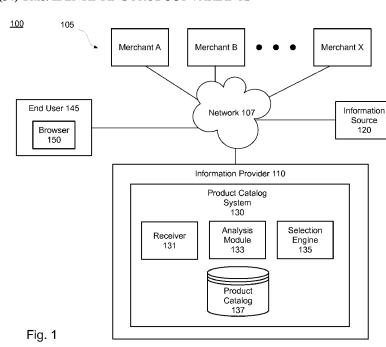
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, 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, 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).

Published:

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

[Continued on next page]

(54) Title: IDENTIFYING PRODUCT VARIANTS



(57) Abstract: A product catalog system includes a product catalog having product offers received from various merchants. The product catalog system includes an analysis module that determines, for each merchant that provides product offers, which product offers are for products that are likely to be variants of one another based in part on titles of the products and assigns sets of product offers that are likely to be variants a merchant cluster identifier. The analysis module groups the product offers into product catalog entries based on the particular product that the offers are for. The analysis module determines which products are variants based on associations between the product catalog entries and the merchant cluster identifiers of the product offers included in the product catalog entries.





 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)) (88) Date of publication of the international search report: $$10{\rm\ May}\ 2013$

International application No. **PCT/US2012/054027**

A. CLASSIFICATION OF SUBJECT MATTER

G06Q 30/06(2012.01)i, G06F 17/30(2006.01)i

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) G06Q 30/06; G06F 17/00; G06F 17/30; G06Q 30/02

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Korean utility models and applications for utility models

Japanese utility models and applications for utility models

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) eKOMPASS(KIPO internal) & keywords: presenting information, product variant, product identifier

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X Y	US 2004-0143600 A1 (TIMOTHY ALLEN MUSGROVE et al.) 22 July 2004 See abstract, claims 1, 4, 10-12 and figures 7-9.	1,3-6,8-12,14-23 2,7,13
Y A	US 2005-0289158 A1 (JOCHEN WEISS et al.) 29 December 2005 See abstract, claims 1, 2 and figures 1, 3, 5.	2,7,13 1,3-6,8-12,14-23
A	KR 10-2009-0002145 A (NHN CO., LTD.) 09 January 2009 See abstract, claims 1-12 and figures 1-7.	1-23
A	JP 2009-026195 A (NAT. UNIV. YOKOHAMA et al.) 05 February 2009 See abstract, claims 1-7 and figures 3, 6-7.	1-23
A	KR 10-2009-0076575 A (SK TELECOM CO., LTD.) 13 July 2009 See abstract, claims 1-3, 6-9, 12 and figures 1-3.	1-23
l		

	Further documents are listed in the continuation of Box C.		See patent family annex.
*	Special categories of cited documents:	"T" 1a	ter document published after the international filing date or priority
"A"	document defining the general state of the art which is not considered		ate and not in conflict with the application but cited to understand
	to be of particular relevance	tl	ne principle or theory underlying the invention
"E"	earlier application or patent but published on or after the international	"X" d	ocument of particular relevance; the claimed invention cannot be
	filing date	c	onsidered novel or cannot be considered to involve an inventive
"L"	document which may throw doubts on priority claim(s) or which is	S	ep when the document is taken alone
	cited to establish the publication date of citation or other	"Y" d	ocument of particular relevance; the claimed invention cannot be
	special reason (as specified)	c	onsidered to involve an inventive step when the document is
"O"	document referring to an oral disclosure, use, exhibition or other	c	ombined with one or more other such documents, such combination
	means	b	eing obvious to a person skilled in the art
"P"	document published prior to the international filing date but later	"&" d	ocument member of the same patent family
	than the priority date claimed		
Date of the actual completion of the international search		Date o	f mailing of the international search report
	26 FEBRUARY 2013 (26.02.2013)		27 FEBRUARY 2013 (27.02.2013)

Name and mailing address of the ISA/KR

Facsimile No. 82-42-472-7140

Authorized officer

OH, Eung Gie

Telephone No. 82-42-481-8744



INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/US2012/054027

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2004-0143600 A1	22.07.2004	AU 2001-59400 A1 AU 2003-234693 A1 CA 2378175 A1 EP 1287419 A2 EP 1493107 A1 EP 1639505 A2 EP 1668538 A2 JP 2005-522784 A JP 2006-527886 A US 2003-0065643 A1 US 2004-0078284 A1 US 2006-0242192 A1 US 6535880 B1 US 6714933 B2 US 6725222 B1 US 7082426 B2 W0 2003-088086 A1 W0 2005-001595 A2 W0 2005-036306 A2	20.11.2001 27.10.2003 15.11.2001 05.03.2003 05.01.2005 29.03.2006 14.06.2006 28.07.2005 07.12.2006 03.04.2003 22.04.2004 26.10.2006 18.03.2004 20.04.2004 25.07.2006 23.10.2003 06.01.2005 21.04.2005
US 2005-0289158 A1	29.12.2005	None	
KR 10-2009-0002145 A	09.01.2009	JP 2009-003932 A JP 4856122 B2 US 2008-0319831 A1	08.01.2009 18.01.2012 25.12.2008
JP 2009-026195 A	05.02.2009	None	
KR 10-2009-0076575 A	13.07.2009	None	