(19) World Intellectual Property Organization

International Bureau



(43) International Publication Date

7 September 2007 (07.09.2007)

(51) International Patent Classification: G06Q 10/00 (2006.01)

(21) International Application Number:

PCT/US2007/062606

(22) International Filing Date:

22 February 2007 (22.02.2007)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

60/776,270 24 February 2006 (24.02.2006) US 11/677,571 21 February 2007 (21.02.2007) US

- (71) Applicant (for all designated States except US): FAIR ISAAC CORPORATION [US/US]; 901 Marquette Avenue, Suite 3200, Minneapolis, MN 55402 (US).
- (72) Inventors: GRIEGEL, David; 9863 Fox Valley Way, San Diego, CA 92127 (US). YANG, Linyu; 10310 Scripps Poway Parkway #17, San Diego, California 92131 (US). LI, Danfeng; 13006 Deer Park Way, San Diego, CA 92130 (US). ZHANG, Bo; 8162 Regents Rd., #202, San Diego, CA 92122 (US). MILANA, Joseph; 11222 Sunnydale Court, San Diego, CA 92127 (US). ZHANG, Zuohua; 8730 Costa Verde Blvd. #2330, San Diego, CA 92122

(10) International Publication Number WO 2007/101074 A3

(US). GANCARZ, Gregory; 12934 Carmel Creek Rd.,

(74) Agents: GLENN, Michael, A. et al.; Glenn Patent Group, 3475 Edison Way, Ste. L., Menlo Park, CA 94025 (US).

#69, San Diego, CA 92130 (US).

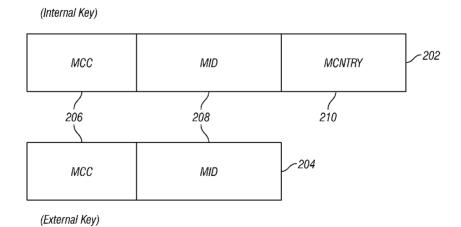
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN. CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, 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, 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

[Continued on next page]

(54) Title: METHOD AND APPARATUS FOR A MERCHANT PROFILE BUILDER



(57) Abstract: A merchant profile builder (MPB) is provided. The complete merchant profiling process is split into three pieces: Data Preprocessing, Weekly Summary Calculation, and Merchant Profile Calculation. In the Data Preprocessing stage, authorization data and daily fraud data are processed on a weekly basis to yield: an authorization extract file and fraud authorization data, each of which are sorted by a merchant key. In the Weekly Summary Calculation stage, the files output by the Data Preprocessing stage are used as input to compile basic statistics for each merchant based only on data for one week. There are separate weekly summaries for authorizations and fraud authorizations. In the Merchant Profile Calculation stage, the weekly summaries from the 16 most recent weeks are combined together and averages are calculated and output a set of merchant profiles and a set of default profiles.



WO 2007/101074 A3



 before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

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.

 $\textbf{(88)} \ \ \textbf{Date of publication of the international search report:}$

17 January 2008

INTERNATIONAL SEARCH REPORT

International application No. PCT/US 07/62606

IPC(8) - USPC -			
According to International Patent Classification (IPC) or to both national classification and IPC B. FIELDS SEARCHED			
	ocumentation searched (classification system followed b	y classification symbols)	
Documentat USPC: 235/	ion searched other than minimum documentation to the e 379 (see keywords below)	extent that such documents are included in the	fields searched
Pub WEST (Search Tern	ata base consulted during the international search (name USPT, PGPB, JPAB, EPAB), Google Scholar, Google source of the search (name used: merchant adj profile, fraud adj (detect\$ or pred adj deviation, conditional adj fraud, segment\$ adj inc	Patents. edict\$), score, card adi authori compar\$ me	erchant adi key fraud adi
C. DOCU	MENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages		Relevant to claim No.
Y	US 5,819,226 A (GOPINATHAN et al.), 06 October 1998 (06.10.1998), entire document especially col 6, in 10-16; col 6, in 40-60; col 8, in 1-32; col 17, in 1-6; col 17, in 1-55; col 27 in 64 to col 28, in 15; col 28, in 2-9.		1-24
Y	US 2002/0099649 A1 (LEE et al.), 25 July 2002 (25.07.2002), entire document especially table 1; table 2; para [0044]; para [0065]; para [0066]; para [0101]; para [0131]; para [0367].		1-24
Y	US 2002/0046092 A1 (OSTROFF), 18 April 2002 (18.04.2002), para [0014]-[0022]		8-10 and 20-22
	r doguments are listed in the continuation of Dur G		
Further documents are listed in the continuation of Box C. * Special categories of cited documents:			
"A" document defining the general state of the art which is not considered to be of particular relevance "document defining the general state of the art which is not considered to be of particular relevance 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 "C" 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			
cited to establish the publication date of another citation or other special reason (as specified) 'O' document referring to an oral disclosure, use, exhibition or other more of the combined with one or more other such documents, such combination			tep when the document is ocuments, such combination
means being obvious to a person skilled in the art document published prior to the international filing date but later than the priority date claimed "&" document member of the same patent family			art
pate of the actual completion of the international search Date of mailing of the international search report			
29 September 2007 (29.09.2007) 2007			
	ame and mailing address of the ISA/US all Stop PCT, Attn: ISA/US, Commissioner for Patents Authorized officer: Lee W. Young		
CO. Box 1450, Alexandria, Virginia 22313-1450		PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774	
			1