



INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁶:

G06K 7/00

A2

(11) International Publication Number:

WO 99/13427

(43) International Publication Date:

18 March 1999 (18.03.99)

(21) International Application Number: PCT/US98/19039

(22) International Filing Date: 11 September 1998 (11.09.98)

(30) Priority Data:

08/928,851

12 September 1997 (12.09.97) US

(71) Applicant (for all designated States except US): MCI WORLD-COM, INC. [US/US]; 515 East Amite Street, Jackson, MS 39201 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): GAVAN, John [US/US]; 1624 N. Cascade Avenue, Colorado Springs, CO 80907 (US). PAUL, Kevin [US/US]; 660C Autumn Crest Circle, Colorado Springs, CO 80919 (US). RICHARDS, Jim [US/US]; 2613 N. 103 Court, Omaha, NE 68134 (US). VAN ARKEL, Hans [US/US]; 4125 Brigadoon Lane, Colorado Springs, CO 80909 (US). HERRINGTON, Cheryl [US/US]; 19086 Doewood Circle, Monument, CO 80132 (US). MAHONE, Saralyn [US/US]; 7220 Janice Place, Colorado Springs, CO 80920 (US). CURTIS, Terril, J. [US/US]; 660 W. Capistrano Avenue, Pueblo West, CO 81007 (US). WAGNER, James, J. [US/US]; 2796 Landers Drive, Larkspur, CO 80118 (US). DALLAS, Charles, A. [US/US]; 4945 Old Farm Circle W., Colorado Springs, CO 80917 (US).

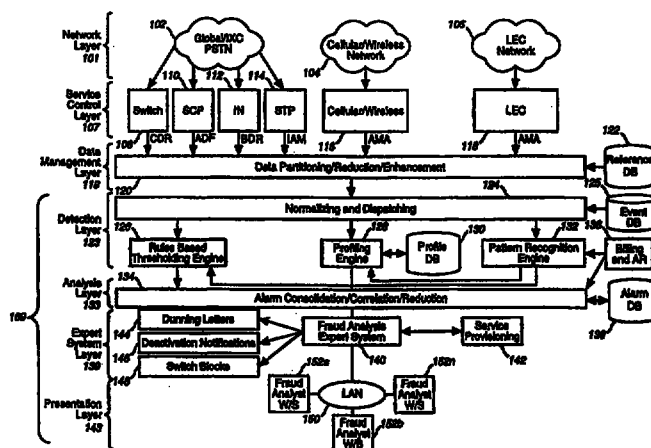
(74) Agent: GROLZ, Edward, W.; Scully, Scott, Murphy & Presser, 400 Garden City Plaza, Garden City, NY 11530 (US).

(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE).

Published

Without international search report and to be republished upon receipt of that report.

(54) Title: SYSTEM AND METHOD FOR DETECTING AND MANAGING FRAUD



(57) Abstract

A system, method and computer program product for processing event records. The present invention includes a detection layer, an analysis layer, an expert systems layer and a presentation layer. The layered system includes a core infrastructure and a configurable, domain-specific implementation. The detection layer employs one or more detection engines, such as, for example, a rules-based thresholding engine and a profiling engine. The detection layer can include an AI-based pattern recognition engine for analyzing data records, for detecting new and interesting patterns and for updating the detection engines to ensure that the detection engines can detect the new patterns. In one embodiment, the present invention is implemented as a telecommunications fraud detection system. When fraud is detected, the detection layer generates alarms which are sent to the analysis layer. The analysis layer filters and consolidates the alarms to generate fraud cases. The analysis layer preferably generates a probability of fraud for each fraud case. The expert systems layer receives fraud cases and automatically initiates actions for certain fraud cases. The presentation layer also receives fraud cases for presentation to human analysts. The presentation layer permits the human analysts to initiate additional actions.