

- (51) International Patent Classification:
G06N 5/02 (2006.01) G06N 5/00 (2006.01)
- (21) International Application Number:
PCT/US2013/043061
- (22) International Filing Date:
29 May 2013 (29.05.2013)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
61/652,723 29 May 2012 (29.05.2012) US
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- (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, 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.

[Continued on next page]

(54) Title: METHOD OF ANALYZING A GRAPH WITH A COVARIANCE-BASED CLUSTERING ALGORITHM USING A MODIFIED LAPLACIAN PSEUDO-INVERSE MATRIX

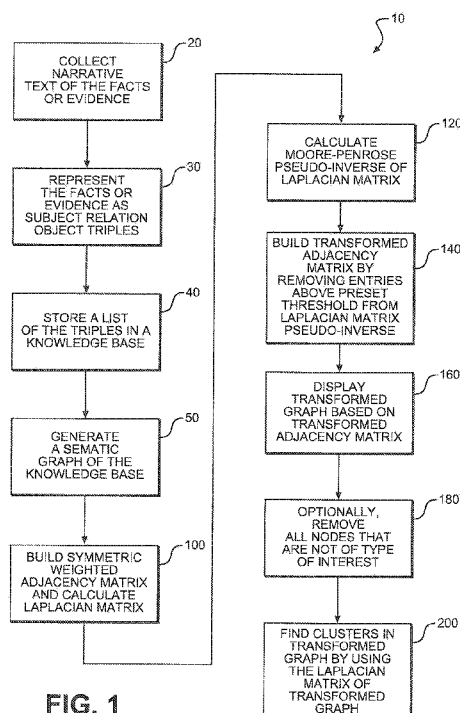


FIG. 1

(57) Abstract: A covariance-clustering algorithm (10) for partitioning a graph (300) into subgraphs (clusters) (320, 330, 340) using variations of the pseudo-inverse of the Laplacian matrix (A) associated with the graph (300). The algorithm (10) does not require the number of clusters as an input parameter and, considering the covariance of the Markov field associated with the graph (10), algorithm (10) finds sub-graphs (320, 330, 340) characterized by a within-cluster covariance larger than an across-clusters covariance. The covariance-clustering algorithm (10) is applied to a semantic graph (300) representing the simulated evidence of multiple events.



(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, KM, ML, MR, NE, SN, TD, TG).

Published:

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

21 August 2014

INTERNATIONAL SEARCH REPORT

International application No
PCT/US2013/043061

A. CLASSIFICATION OF SUBJECT MATTER

INV. G06N5/02

ADD. G06N5/00

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)

G06N

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, INSPEC, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

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Date of the actual completion of the international search

1 July 2014

Date of mailing of the international search report

08/07/2014

Name and mailing address of the ISA/

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INTERNATIONAL SEARCH REPORT

International application No
PCT/US2013/043061

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
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PCT/US2013/043061

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