

(19) World Intellectual Property Organization
International Bureau



(10) International Publication Number
WO 2009/158135 A3

(43) International Publication Date
30 December 2009 (30.12.2009)

(51) International Patent Classification:
G06F 17/30 (2006.01) *G06F 17/00* (2006.01)
(21) International Application Number:
PCT/US2009/045764
(22) International Filing Date:
30 May 2009 (30.05.2009)

(25) Filing Language: English
(26) Publication Language: English
(30) Priority Data:
12/130,943 30 May 2008 (30.05.2008) 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, BR, BW, BY, BZ, CA, CH, 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, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, 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, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, SE, SI, SK, 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))
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))

Published:

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

(88) Date of publication of the international search report:
15 April 2010

(54) Title: STATISTICAL APPROACH TO LARGE-SCALE IMAGE ANNOTATION

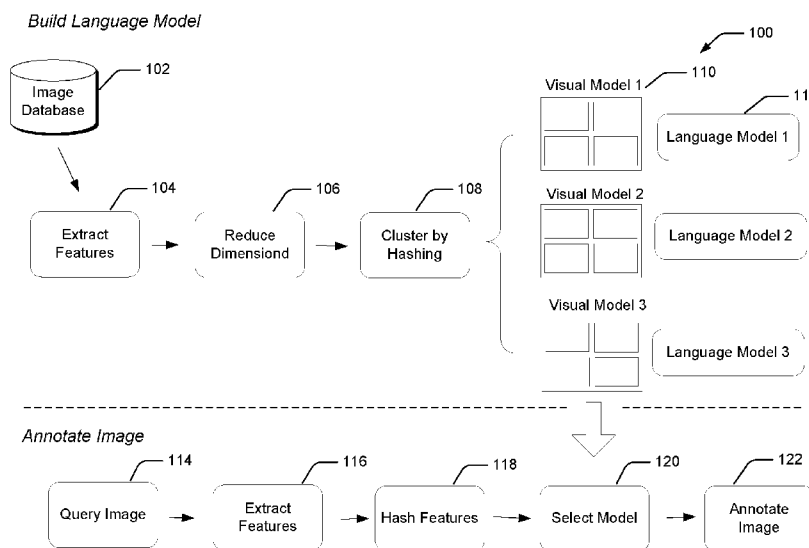


Fig. 1

(57) Abstract: Statistical approaches to large-scale image annotation are described. Generally, the annotation technique includes compiling visual features and textual information from a number of images, hashing the images visual features, and clustering the images based on their hash values. An example system builds statistical language models from the clustered images and annotates the image by applying one of the statistical language models.



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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2009/045764**A. CLASSIFICATION OF SUBJECT MATTER****G06F 17/30(2006.01)i, G06F 17/00(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)

IPC : G06F

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 since 1975
Japanese Utility models and applications for Utility models since 1975

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

eKOMPASS(KIPO internal) "hash, value, cluster, feature, statistical, language, annotate, image"

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	XIN-JING WANG et al. 'IMAGE ANNOTATION USING SEARCH AND MINING TECHNOLOGIES', IN: International World Wide Web Conference(WWW 2006), 2006, pp 1045 - 1046. see abstract, 2.1 Hash coding Algorithm, 2.3 Mining Annotations by Clustering.	1-15
A	XIN-JING WANG et al. 'ANNOSEARCH : IMAGE AUTO-ANNOTATION BY SEARCH', IN: IEEE Computer Society Conference on Computer Vision and Pattern Recognition (CVPR), 2006. see abstract, 3. The AnnoSearch system, 3.3 Content-based search.	1-15
A	H. GLOTIN et al. 'FAST IMAGE AUTO-ANNOTATION WITH VISUAL VECTOR APPROXIMATION CLUSTERS', IN: International Workshop on Content-Based Multimedia Indexing(CBMI), 2005. 06. see abstract, 3. VISUAL VECTOR APPROXIMATION CLUSTERS, 4. THE DIMATEX AUTO-ANNOTATION MODEL.	1-15

 Further documents are listed in the continuation of Box C. See patent family annex.

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Date of the actual completion of the international search

28 DECEMBER 2009 (28.12.2009)

Date of mailing of the international search report

30 DECEMBER 2009 (30.12.2009)

Name and mailing address of the ISA/KR

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