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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
5 February 2009 (05.02.2009)

PCT

(10) International Publication Number
WO 2009/018538 A3

(51) International Patent Classification:
G05B 19/00 (2006.01)

(21) International Application Number:
PCT/US2008/071983

(22) International Filing Date: 1 August 2008 (01.08.2008)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
11/833,187 2 August 2007 (02.08.2007) 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),

[Continued on next page]

(54) Title: SYSTEM AND METHOD OF THREE-DIMENSIONAL POSE ESTIMATION

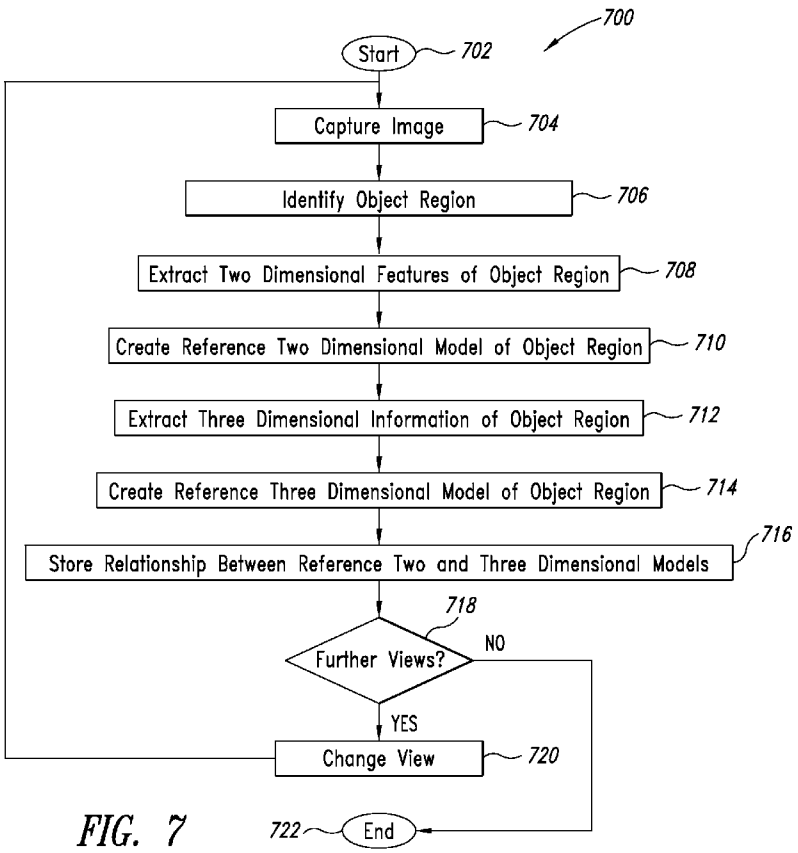


FIG. 7

(57) Abstract: A system and method for identifying objects using a machine-vision based system are disclosed. Briefly described, one embodiment is a method that captures a first image of at least one object with an image capture device, processes the first captured image to find an object region based on a reference two-dimensional model and determines a three-dimensional pose estimation based on a reference three-dimensional model that corresponds to the reference two-dimensional model and a runtime three-dimensional representation of the object region where a point-to-point relationship between the reference three-dimensional models of the object and the runtime three-dimensional representation of the object region is not necessarily previously known. Thus, two-dimensional information or data is used to segment an image and three-dimensional information or data used to perform three-dimensional pose estimation on a segment of the image.

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European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, 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).

Published:

— *with international search report*

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

(88) Date of publication of the international search report:
9 April 2009

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2008/071983

A. CLASSIFICATION OF SUBJECT MATTER

G05B 19/00(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: G05B

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)

eKIPASS (KIPO internal) & keywords: pose, 3 dimensional, object, vision

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	JP 63-288683 A (TOSHIBA CORP.) 25 November 1988 See Abstract and Figures 1-7.	1-37
A	US 4,011,437 A (RICHARD EDWARD HOHN) 8 March 1977 See See Column 1, Line 8 - Column 6, Line 4; Abstract and Figures 1-3.	1-37
A	US 4,187,454 A (YOSHIMASA ITO et al.) 5 February 1980 See See Column 1, Line 6 - Column 9, Line 58; Abstract and Figures 1-7.	1-37

☐ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

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Date of the actual completion of the international search	Date of mailing of the international search report
17 FEBRUARY 2009 (17.02.2009)	**17 FEBRUARY 2009 (17.02.2009)**

Name and mailing address of the ISA/KR

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INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/US2008/071983

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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US 4,187,454 A	05.02.1980	None	