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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, 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, 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, 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.
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[Continued on next page]

(54) Title: SYSTEM FOR RECOGNIZING AN OPEN OR CLOSED HAND

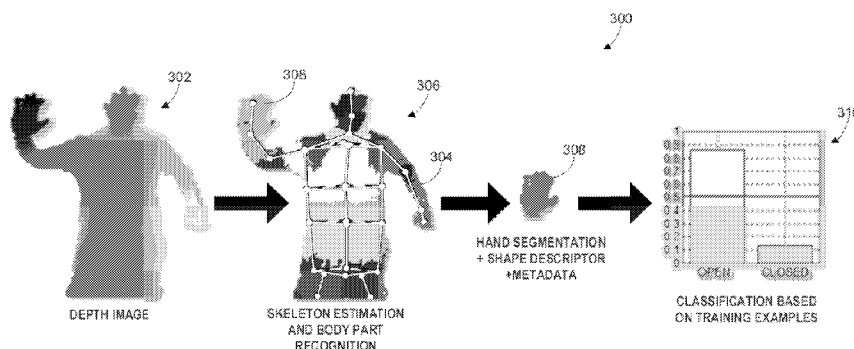


Fig. 7

(57) Abstract: A system and method are disclosed relating to a pipeline for generating a computer model of a target user, including a hand model of the user's hands, captured by an image sensor in a NUI system. The computer model represents a best estimate of the position of a user's hand or hands and whether the hand or hand is in an open or closed state. The generated hand model may be used by a gaming or other application to determine such things as user gestures and control actions.

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TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

**Published:**

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- *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*

- *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))*

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21 February 2013

**A. CLASSIFICATION OF SUBJECT MATTER***G06T 7/20(2006.01)i, G06K 9/00(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)

G06T 7/20; G09G 5/08; G06F 3/033; G06T 17/00; G06T 15/00; G06F 9/00

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

Japanese utility models and applications for utility models

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

eKOMPASS(KIPO internal) &amp; Keywords: hand, open, close, position, orientation, sensor, depth, filter

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2008-0212836 A1 (FUJIMURA KIKUO et al.) 04 September 2008 See paragraph [0050], claim 1 and figure 6.	1-10
A	US 06005548A A (LATYPOV; NURAKHMED NURISLAMOVICH et al.) 21 December 1999 See column 7, line 24 - column 8, line 11; claim 1 and figure 2.	1-10
A	US 2008-0225041 A1 (EL DOKOR TAREK et al.) 18 September 2008 See paragraph [0052], claim 1 and figure 8.	1-10
A	US 2009-0033623 A1 (LIN MING-YEN) 05 February 2009 See abstract and claims 1, 11.	1-10
A	US 2011-0025689 A1 (PEREZ KATHRYN STONE et al.) 03 February 2011 See paragraphs [0003]-[0016], claim 1 and figure 1.	1-10

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

\* Special categories of cited documents:

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"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of citation or other special reason (as specified)

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"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" 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

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&amp;" document member of the same patent family

Date of the actual completion of the international search

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**INTERNATIONAL SEARCH REPORT**

Information on patent family members

International application No.

**PCT/US2012/040788**

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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