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[Continued on next page]

### (54) Title: SYSTEMS AND METHODS FOR ESTIMATING BODY COMPOSITION

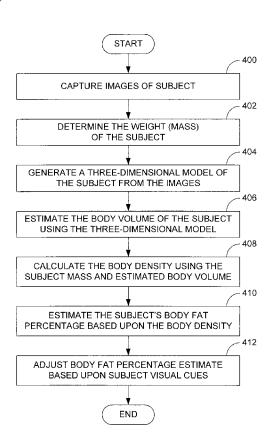


FIG. 4

(57) Abstract: In one embodiment, a system and method for estimating body composition relate to constructing a three-dimensional model of a subject based upon captured images of the subject, estimating the body volume of the subject using the three-dimensional model, and estimating the body composition of the subject based in part upon the estimated volume.



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

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## A. CLASSIFICATION OF SUBJECT MATTER

A61B 5/00(2006.01)i, G06T 15/00(2006.01)i, G06F 19/00(2011.01)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)

A61B 5/00; H04N 7/18; H04N 13/02; A61B 5/107; A61B 6/00

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) & Keywords: body composition, camera, 3D, body volume

### C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2010-0277571 A1 (XU BUGAO et al.) 04 November 2010 See abstract, paragraphs [0034]-[0133], claims 1,16 and figures 1,2a.	1-2,6,7,9,11,16,17,20,22
A		3-5,8,10,12-15,18
A	EP 2258265 A2 (MINIMEDREAM CO., LTD.) 08 December 2010 See abstract, paragraph [0059], claim 2 and figure 1.	1-18,20-22
A	US 2009-0099457 A1 (BARNES RICHARD) 16 April 2009 See abstract, paragraph [0032] and claim 23.	1-18,20-22
A	US 2010-0245555 A1 (TALLURI ANTONIO et al.) 30 September 2010 See abstract, paragraph [0046], claims 6,9 and figure 5.	1-18,20-22

		Further documents are	listed in the	e continuation	of Box C.
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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 mailing of the international search report

Date of the actual completion of the international search

23 OCTOBER 2012 (23.10.2012)

25 OCTOBER 2012 (25.10.2012)

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# INTERNATIONAL SEARCH REPORT

International application No.

Information on	patent family members	PCT/U	PCT/US2011/064220	
Patent document cited in search report	Publication date	Patent family member(s)	Publication date	
US 2010-0277571 A1	04.11.2010	None		
EP 2258265 A2	08.12.2010	EP 2258265 A3 US 2010-0312143 A1	15.02.2012 09.12.2010	
US 2009-0099457 A1	16.04.2009	EP 1993443 A2 WO 2007-096652 A2 WO 2007-096652 A3 WO 2007-096652 A3	26.11,2008 30.08.2007 30.10.2008 30.08.2007	
US 2010-0245555 A1	30.09.2010	EP 2148619 A1 EP 2148619 A4 WO 2008-147888 A1	03.02.2010 09.06.2010 04.12.2008	

# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US2011/064220

Box No. II	Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)
This internat	ional search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:
	nims Nos.: cause they relate to subject matter not required to be searched by this Authority, namely:
bec ext C	tims Nos.: 19 cause they relate to parts of the international application that do not comply with the prescribed requirements to such an ent that no meaningful international search can be carried out, specifically:  laims of this application are not numbered consecutively in Arabic numbers, since claim 19 is found missing(PCT Rule 6.1 b)).
3. Cla	nims Nos.: eause they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).
Box No. III	Observations where unity of invention is lacking (Continuation of item 3 of first sheet)
This Internation	tional Searching Authority found multiple inventions in this international application, as follows:
	all required additional search fees were timely paid by the applicant, this international search report covers all searchable ims.
	all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment any additional fee.
	only some of the required additional search fees were timely paid by the applicant, this international search report covers y those claims for which fees were paid, specifically claims Nos.:
	required additional search fees were timely paid by the applicant. Consequently, this international search report is tricted to the invention first mentioned in the claims; it is covered by claims Nos.:
Remark on	Protest  The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.  The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.  No protest accompanied the payment of additional search fees.