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- (71) Applicant: **IRISS MEDICAL TECHNOLOGIES LIMITED** [GB/GB]; Acre House, 11/15 William Road, London NW1 3ER (GB).
- (72) Inventors: **YASHIV, Yuval**; 26 The Ridgeway, London NW11 8TB (GB). **MAOR, Ron Uriel**; 17 Limes Avenue, London N12 8QN (GB). **BARNARD, Nigel Andrew Simon**; 17b Hendon Avenue, London N3 1UJ (GB).

- (74) Agent: **BLAKE, Stephen**; Marks & Clerk LLP, Fletcher House (2nd Floor), Heatley Road, The Oxford Science Park, Oxford Oxfordshire OX4 4GE (GB).
- (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, IR, IS, JP, KE, KG, KN, KP, KR, KZ, LA, LC, LK, LR, LS, 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, SA, 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: CONTACT LENS ASSESSMENT

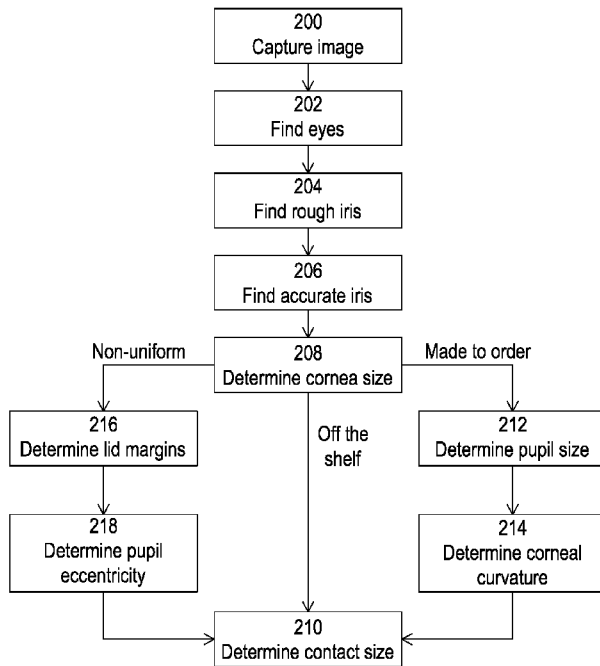


Fig. 2

(57) Abstract: A method and apparatus (100) for processing an image to determine one or more parameters of a contact lens suitable for a human or animal subject. The image comprises a plurality of pixels forming an image of at least part of one eye of the subject. The apparatus comprises: an iris detector (116) configured to determine a diameter of an iris of the subject; a cornea determiner (118) configured to determine a diameter of a cornea of the subject based on the determined diameter of the iris; and a contact lens determiner (120) configured to determine one or more parameters of contact lens for the subject based on the determined cornea diameter.

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Published:

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4 February 2016

- *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))*

INTERNATIONAL SEARCH REPORT

International application No.
PCT/EP2015/061462

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. Claims Nos.:
because 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 International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.

2. As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.

3. As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-5, 28-30

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.

INTERNATIONAL SEARCH REPORT

International application No
PCT/EP2015/061462

A. CLASSIFICATION OF SUBJECT MATTER
INV. G06K9/00 A61B3/10 G02C7/04
ADD.
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 G06K G02C
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

C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	D.R. ISKANDER: "A Parametric Approach to Measuring Limbus Corneae From Digital Images", IEEE TRANSACTIONS ON BIOMEDICAL ENGINEERING, vol. 53, no. 6, 1 June 2006 (2006-06-01), pages 1134-1140, XP055205719, ISSN: 0018-9294, DOI: 10.1109/TBME.2006.873387	1-3, 28-30
Y	the whole document	4,5
Y	US 2007/189582 A1 (HAMZA RIDA M [US] ET AL) 16 August 2007 (2007-08-16) paragraph [0025] - paragraph [0032]	4,5

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
- "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 another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "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
- "&" document member of the same patent family

Date of the actual completion of the international search 4 August 2015	Date of mailing of the international search report 15/12/2015
Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016	Authorized officer de Bont, Emma

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/EP2015/061462

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2007189582	A1	16-08-2007	
		EP 1991946 A1	19-11-2008
		JP 5155886 B2	06-03-2013
		JP 2009529196 A	13-08-2009
		KR 20080108116 A	11-12-2008
		US 2007189582 A1	16-08-2007
		WO 2007101269 A1	07-09-2007

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-5, 28-30

An apparatus for detecting eyes in an image comprising one or two eyes.

2. claims: 6-16, 18(completely); 17(partially)

An apparatus for determining physical parameters of a contact lens diameter based on the iris detection.

3. claims: 19-27(completely); 17(partially)

An apparatus for determining optical parameters of a contact lens based on the pupil detection.
