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(54) Title: SYSTEMS AND METHODS FOR DISCERNING EYE SIGNALS AND CONTINUOUS BIOMETRIC IDENTIFICATION

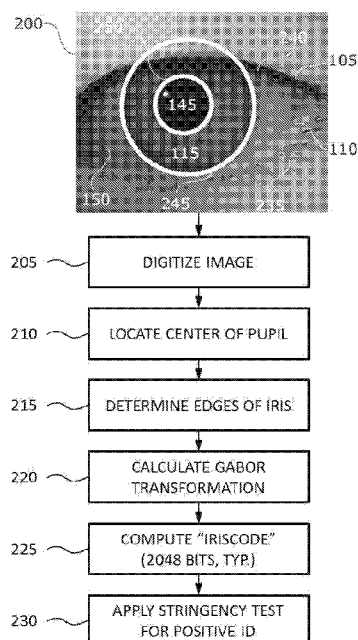


FIG. 2

(57) Abstract: Apparatus, systems, and methods are provided for substantially continuous biometric identification (CBID) of an individual using eye signals in real time. The apparatus is included within a wearable computing device with identification of the device wearer based on iris recognition within one or more cameras directed at one or both eyes, and/or other physiological, anatomical and/or behavioral measures. Verification of device user identity can be used to enable or disable the display of secure information. Identity verification can also be included within information that is transmitted from the device in order to determine appropriate security measures by remote processing units. The apparatus may be incorporated within wearable computing that performs other functions including vision correction, head-mounted display, viewing the surrounding environment using scene camera(s), recording audio data via a microphone, and/or other sensing equipment.



GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, 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, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

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INTERNATIONAL SEARCH REPORT

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PCT/US2015/030052**A. CLASSIFICATION OF SUBJECT MATTER****G06K 9/00(2006.01)i, G06F 21/32(2013.01)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)

G06K 9/00; A61B 3/113; H04N 5/232; G06F 3/033; G09G 5/00; G06F 21/32

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: biometric identification, headgear, camera, iris

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 2013-0176533 A1 (HAYES SOLOS RAFFLE et al.) 11 July 2013 See paragraphs [0021]–[0052] and figures 1–3.	1–50
Y	US 2012-0275664 A1 (BERGEN) 01 November 2012 See paragraphs [0006], [0077]–[0108] and figures 7–11.	1–50
A	US 2013-0021374 A1 (MIAO et al.) 24 January 2013 See figures 1–4.	1–50
A	US 2013-0258089 A1 (LYONS et al.) 03 October 2013 See figures 1–7.	1–50
A	US 2011-0170067 A1 (SATO et al.) 14 July 2011 See figures 1–5.	1–50



Further documents are listed in the continuation of Box C.



See patent family annex.

* Special categories of cited documents:

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

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"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

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Information on patent family members

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