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(54) Title: SYSTEMS AND METHODS FOR BIOMECHANICALLY-BASED EYE SIGNALS FOR INTERACTING WITH REAL AND VIRTUAL OBJECTS

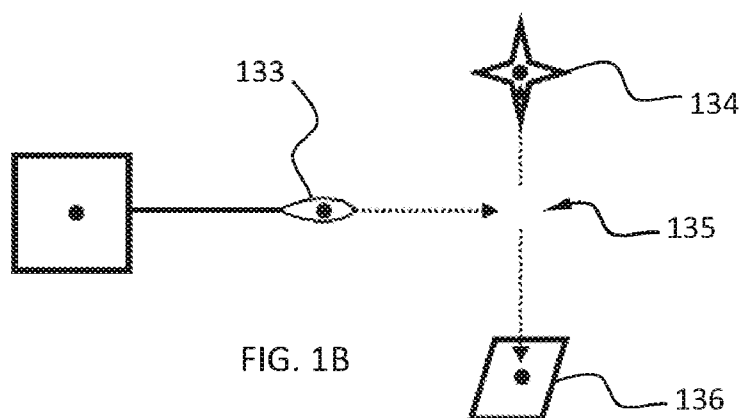


FIG. 1B

(57) Abstract: Systems and methods are provided for discerning the intent of a device wearer primarily based on movements of the eyes. The system can be included within unobtrusive headwear that performs eye tracking and controls screen display. The system can also utilize remote eye tracking camera(s), remote displays and/or other ancillary inputs. Screen layout is optimized to facilitate the formation and reliable detection of rapid eye signals. The detection of eye signals is based on tracking physiological movements of the eye that are under voluntary control by the device wearer. The detection of eye signals results in actions that are compatible with wearable computing and a wide range of display devices.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2015/030050**A. CLASSIFICATION OF SUBJECT MATTER****G06F 3/01(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)

G06F 3/01; G06F 3/048; H04N 7/18; H04N 13/00; G06F 3/033; G06K 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) & Keywords: intent, eye movement, tracking, saccadic movement, gaze, HMD, sampling rate, camera

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2014-0096077 A1 (MICHAL JACOB et al.) 03 April 2014 See paragraphs [0004], [0017]-[0018], [0021]-[0022], [0029], [0030]-[0031], [0045]-[0046], [0053], [0067]; claims 1, 10, 19; and figure 6.	1, 6-11, 14-16, 23-28, 35
Y		2-5, 12-13, 17-22, 29-34, 36-74
Y	US 2010-0045596 A1 (RICHARD DAVID CLAUDIUS DE LEON) 25 February 2010 See paragraphs [0003]-[0004], [0007], [0015], [0020], [0036]-[0037], [0051]; claim 10; and figure 5.	2-5, 12-13, 20-22, 29-31, 36-47
Y	US 2012-0154557 A1 (KATIE STONE PEREZ et al.) 21 June 2012 See paragraphs [0034], [0038], [0055], [0058], [0111], [0137]; and figure 2.	17-19, 48-74
Y	WO 2013-060826 A1 (TOBII TECHNOLOGY AB) 02 May 2013 See page 5, line 30 - page 6, line 2; page 10, lines 13-14; and figure 3.	32-34, 65-66, 72
A	US 2013-0207887 A1 (HAYES S. RAFFLE et al.) 15 August 2013 See paragraphs [0012], [0014]; and figure 1A.	1-74



Further documents are listed in the continuation of Box C.



See patent family annex.

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"&" document member of the same patent family

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INTERNATIONAL SEARCH REPORT

Information on patent family members

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