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G06F 3/048 (2013.01) **G04G 21/02** (2010.01)
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G04B 23/03 (2006.01) **H04N 21/41** (2011.01)
G08G 1/09 (2006.01) **H04N 21/4147** (2011.01)
G08G 1/16 (2006.01) **H04N 21/414** (2011.01)
H04M 1/60 (2006.01)

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[Continued on next page]

(54) Title: EYE GAZE TO ALTER DEVICE BEHAVIOR

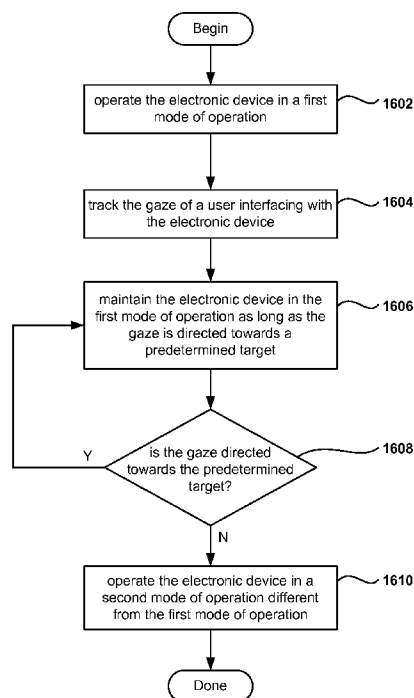


FIG. 16

(57) Abstract: Methods, devices, and computer programs for controlling behavior of an electronic device are presented. A method includes an operation for operating the electronic device in a first mode of operation, and an operation for tracking the gaze of a user interfacing with the electronic device. The electronic device is maintained in a first mode of operation as long as the gaze is directed towards a predetermined target. In another operation, when the gaze is not detected to be directed towards the predetermined target, the electronic device is operated in a second mode of operation, which is different from the first mode of operation.



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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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER INV. G06F3/01 G06F3/048 A63H3/00 B60K35/00 G04B23/03 G08G1/09 G08G1/16 H04M1/60 H04N5/45 G04G21/02 H04N21/433 H04N21/4728 H04N21/41 H04N21/4147 H04N21/414		
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 G01C G08G G10L		
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, WPI Data		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2009/315869 A1 (SUGIHARA RYOHEI [JP] ET AL) 24 December 2009 (2009-12-24) paragraph [0002] paragraph [0108] - paragraph [0113] paragraph [0164] paragraph [0192] - paragraph [0206] paragraph [0234] figures 2, 6-9,15 -----	1,7-9, 12,25-28
X	DE 10 2009 034069 A1 (VOLKSWAGEN AG [DE]) 12 May 2010 (2010-05-12) paragraph [0001] paragraph [0007] paragraph [0028] - paragraph [0030] paragraph [0044] figures 1,2, ----- -/--	1,2,12, 13,25
☒ 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 10 August 2012		Date of mailing of the international search report 21/02/2013
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 Hauber, Jörg

INTERNATIONAL SEARCH REPORT

International application No

PCT/US2012/038153

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DE 10 2005 003535 A1 (DAIMLER CHRYSLER AG [DE]) 3 August 2006 (2006-08-03) paragraph [0011] claim 1 -----	1,2,12, 25

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2012/038153

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, 2, 7-9, 12, 13, 25-28

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.

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, 2, 7-9, 12, 13, 25-28

gaze-dependent adaptation of the output modality of an electronic device

2. claim: 3

gaze-dependent adaptation of the behavior of a toy

3. claim: 4

gaze-dependent switching between a first and second video on a television screen having a picture-in-picture display

4. claim: 5

gaze-dependent adaptation of the behavior of a television system

5. claims: 6, 10, 11, 14-16

gaze-dependent adaptation of the power consumption of an electronic device

6. claim: 17

gaze-dependent collision avoidance system

7. claims: 18, 19

gaze-dependent adaptation of content shown on multiple displays in a multi-user scenario

8. claims: 20-22

gaze-dependent allocation of computing resources

9. claim: 23

gaze-dependent control of an alarm clock

10. claim: 24

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

gaze-dependent control of a screensaver program

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2012/038153

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2009315869 A1	24-12-2009	CN 101609660 A	23-12-2009
		JP 2010004118 A	07-01-2010
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