



New connection on: : 06-04-2018 : 14:41:06 - Last disconnection on: : 05-04-2018 : 18:03:46
V 4.0.0.44358(LP,U,linux) (Rev:43856 2017-04-27 09:03:29 +0200#(D201802)) (RPM D201802)

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 Database: EPODOC

[EPODOC: SS 1] electrooculography and wheelchair

Results in EPODOC 0

[SS 2] wheelchair and control

Results in EPODOC 3.275

[SS 3] 2 and (gaze or eye)

Results in EPODOC 16

[SS 4] 3 and speed

Results in EPODOC 4

[SS 5] ..li



1/4	© EPODOC / EPO	.
PN	- CN107260420 A 20171020	
PR	- CN20171531252 20170703	
AP	- CN20171531252 20170703	
DT	- I	
PA	- UNIV NANJING POSTS & TELECOMMUNICATIONS	
TI	- Intelligent wheelchair man-machine interaction control system and method based on eye movement recognition	
AB	- The invention discloses an intelligent wheelchair man-machine interaction control system and an intelligent wheelchair man-machine interaction control method based on eye movement recognition. According to the system and the method, an electromyographic signal acquisition module is used for collecting electromyographic signals of the eyes, characteristic selection is carried out on the electromyographic signals, eye movement recognition is carried out according to the electromyographic characteristic change difference during blink, thus the accurate judgment on the conscious blinking is realized, further, the accurate control over the direction of a wheelchair is realized by combining a plurality of conscious blinking modes, a fuzzy controller part takes a signal electromyographic integral value and signal slope as input and the running speed of the intelligent wheelchair as output, then a two-	

dimensional structure fuzzy controller with two inputs and single output is built, and thus the accurate **control** over the running **speed** of the **wheelchair** is realized. According to the system and the method, the scheme is diversified, the operation mode is simple, convenient and rapid, the learning is easy, the special requirements of old people and disabled people in the **control** mode are fully considered, the **control** problem of the intelligent **wheelchair** system caused by the fact that a traditional **control** mode is not flexible in operation and a user responds slowly is avoided, and the practical requirements of the old people and the disabled people are well adapted.

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PN - [US2015139486](#) A1 20150521

PR - JO20130000326 20131121

AP - US201414201816 20140308

DT - *; Rep

CT - || R141 (A1)
[US2011213664](#) A1 20110901 [] (OSTERHOUT RALPH F [US], et al);
[US2003169907](#) A1 20030911 [] (EDWARDS TIMOTHY [AU], et al);
[US6426600](#) B1 20020730 [] (LAUTZENHISER JOHN L [US], et al);
[US2001012976](#) A1 20010809 [] (MENIG PAUL M [US], et al);
[US6075443](#) A 20000613 [] (SCHEPPS JONATHAN LLOYD [US], et al);
[US2004183749](#) A1 20040923 [] (VERTEGAAL ROEL [CA]);
[US6163281](#) A 20001219 [] (TORCH WILLIAM C [US]);
[US5606307](#) A 19970225 [] (KUAN JACK [TW])

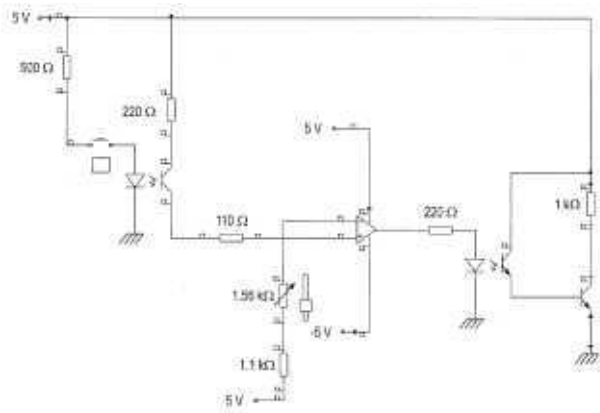
CCI - [G06F3/013](#) ; [G06F3/017](#) ;
[A61G5/1051](#)

CCA - [A61G2203/12](#) ; [A61G2203/18](#) ;
[A61G2203/36](#)

PA - DARAWI ZIAD ALI HASSAN

TI - ELECTRONICEYEGLASSESAND METHOD OF MANUFACTURE THERE TO

AB - A system and methods for recognizing certain **eye** or eyelid gestures such as by opening or closing of eyelid or movement of the pupil as signals to trigger certain predesigned desired events. An embodiment comprises of electronic glasses placed in front of the **eye** to recognize certain **eye** or eyelid gestures as signals to **control** an electronic device such as a chair for the special needs, or TVs or Car system or some video games. This is achieved through an



apparatus and method of Integrated Circuits (IC) for the purpose of detecting black or white color; for the purpose of controlling the **speed** of movement of a **wheelchair**; a wireless **control** system for the **wheelchair**. The electronic glasses embodiment is designed using optical probes (IR), some high capacity relays and some amplifiers to run transistors which work to run relays to separate the **control** circuit from the power circuits.

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- PN - [EP2876525](#) A2 20150527
- PNFP - EP2876525 A3 20150603
- PR - JO20130000326 20131121
- AP - EP20140001392 20140513
- DT - *; Rep
- CT - || STSE (A3)
[US2009018419](#) A1 20090115 [X] (TORCH WILLIAM C [US])
[X] 1-15
* paragraphs [0048] - [0071] - [0074] *
* figures 1,2,6A,7A,8,9 *;
[US2013257709](#) A1 20131003 [X] (RAFFLE HAYES SOLOS [US], et al)
[X] 1-15
* the whole document *;
[US2013135181](#) A1 20130530 [X] (EBERL ROLAND [DE], et al)
[X] 1-15
* paragraphs [0027] , [0031] , [0091] - [0095] - [0108] - [0113] - [0400] *;
[US2004220704](#) A1 20041104 [A] (LIN CHERN-SHENG [TW], et al)
[A] 1-15
* the whole document *
- CCI - [A61G5/04](#) ; [G06F3/013](#) ; [G02B27/017](#)
- CCA - [A61G2203/18](#) ; [A61G2203/726](#) ; [G02B2027/0178](#) ; [G02B2027/0187](#) ; [G02B27/0093](#)
- PA - (A2 A3)
ZIAD ALI HASSAN DARAWI
- TI - (A2 A3)
Electronic eyeglasses and method of manufacture thereto
- AB - (A2)
A system and methods for recognizing certain **eye** or eyelid gestures such as by opening or closing of eyelid or movement of the pupil as signals to trigger certain predesigned desired events. An embodiment comprises of electronic glasses placed in front of the **eye** to recognize certain **eye** or eyelid gestures as signals to **control** an electronic device such as a chair for the special needs, or TVs or Car system or some video games. This is achieved through an apparatus and method of Integrated Circuits (IC) for the purpose of detecting black or white color; for the purpose of controlling the **speed** of movement of a **wheelchair**; a wireless **control** system for the **wheelchair**. The electronic glasses embodiment is designed using optical probes (IR), some high capacity relays and some amplifiers to run transistors which work to run relays to separate the **control** circuit from the power circuits.

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- PN - [CN103349595](#) A 20131016

PR - CN20131301467 20130716

AP - CN20131301467 20130716

DT - I

CT - || STSE (A)
[CN102309380](#) A 20120111 [] (UNIV SOUTH CHINA TECH)

CTNP - || STSE (A)
[] 蔡新波,
"基于脑电信号的电动轮椅控制方法研究", <<中国优秀硕士学位论文全文数据库 信息科技辑>>, (20120815), no. 8
[] 谷艳蕾,
"基于运动想象和alpha波的脑机接口及虚拟漫游系统", <<中国优秀硕士学位论文全文数据库 信息科技辑>>, (20120715), no. 7
[] 于旭宏,王玉英,
"睁闭眼脑电差异的关联维数分析及计算条件探讨", <<中国医学物理学杂志>>, (19980731), vol. 15, no. 3

PA - UNIV HANGZHOU DIANZI

TI - Intelligent brain-computer interface **wheelchair** based on multi-mode hierarchical **control**

AB - The invention discloses an intelligent brain-computer interface **wheelchair** based on multi-mode hierarchical **control**. The intelligent brain-computer interface **wheelchair** comprises an electroencephalogram signal collection module, an electroencephalogram signal processing module, a motion **control** module and an electronically powered **wheelchair**. From the aspect of multi-mode hierarchical **control**, electroencephalogram signals caused by motion imagery conceptual work for expressing **control** intentions are collected, imagery right-left hands for reflecting human motion **control** wishes and **eye** opening and closing for reflecting selective **control** behaviors are combined, and thus the information transmission rate of a **control** system and the reliability of **control** information are improved. The electroencephalogram signals after amplification and filter are input to the signal processing module for conducting denoising, feature extraction and classification, the motion wishes of an operator are sent to the **control** module through an order, and therefore the motion such as going forward, turning left, turning right, drawing back, stopping, accelerating and decelerating of the electrically powered **wheelchair** can be achieved. The intelligent brain-computer interface **wheelchair** can meet the need for actual **control** operation of the **wheelchair**, can **control** the **speed** of the **wheelchair**, and has great value in the aspects like medical rehabilitation training and the disabled service.