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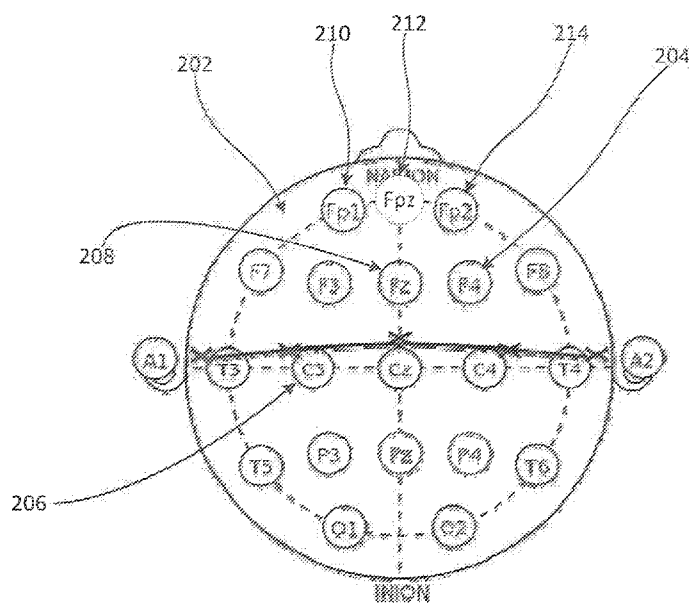


Fig. 2

(57) Abstract: Computer-implemented systems and methods are provided for determining indications of a mental state of a subject. A computing system may receive at least one electrophysiological signal from at least one pair of electrodes on a head of a subject. The system may store at least one threshold bio-electrical value, and compare a plurality of portions of the at least one electrophysiological signal with the stored value. The system may determine, based on the comparing, identities of portions of the at least one electrophysiological signal that surpass the stored at least one threshold bio-electrical value. The system may also determine the existence of a portion sequence among the portions of the at least one electrophysiological signal that surpass the stored at least one threshold bio-electrical value. And the system may output an indication of a mental state of the subject when it is determined that the portion sequence exists.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/IB16/01179

A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - A61B 5/0476, 5/16, 5/04, 5/00, 5/0478 (2016.01)

CPC - A61B 5/4088, 5/7282, 5/04004; A61N 1/36064, 1/36082

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)

IPC(8) Classifications: A61B 5/0476, 5/16, 5/04, 5/00, 5/0478 (2016.01)

CPC Classifications: A61B 5/4088, 5/7282, 5/04004; A61N 1/36064, 1/36082

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)

PatSeer (US, EP, WO, JP, DE, GB, CN, FR, KR, ES, AU, IN, CA, INPADOC Data);

IP.COM Prior Art Database; Google/Google Scholar; IEEE/IEEE Xplore

KEYWORDS: mental*, state*, electrophysiological, bioelectric*, threshold*

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X --- Y	US 2014/0358024 A1 (MEDTRONIC INC) 04 December 2014; paragraphs [0061], [0062], [0065], [0080], 0082-0084, 0139, 0147, 0158, 0166	1-9, 11-13 ----- 10
X	EP 1795122 A1 (GENERAL ELECTRIC CO) 13 June 2007; abstract; paragraphs [0017], [0020], [0034], [0038], [0050], [0055]; claims 11-14, 26-28 & 31	14, 15, 24
Y	WO 2013/162698 A1 (MEDTRONIC INC) 31 October 2013; abstract; page 7, line 27 to page 8, line 16; page 8, line 27 to page 9, line 5 & page 49, lines 11 to 21	10
A	US 2014/0073953 A1 (ENGELBRECHT, P) 13 March 2014; paragraphs [0006] & [0243]	16-23
A	WO 2014/059431 A2 (THE REGENTS OF THE UNIVERSITY OF CALIFORNIA, et al.) 17 April 2014; paragraphs [0035] & [00104]	16-23

☐ Further documents are listed in the continuation of Box C.☐ See patent family annex.

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