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[Continued on next page]

(54) Title: METHODS FOR TREATING NEUROLOGICAL DISORDERS, INCLUDING NEUROPSYCHIATRIC AND NEUROPSYCHOLOGICAL DISORDERS, AND ASSOCIATED SYSTEMS

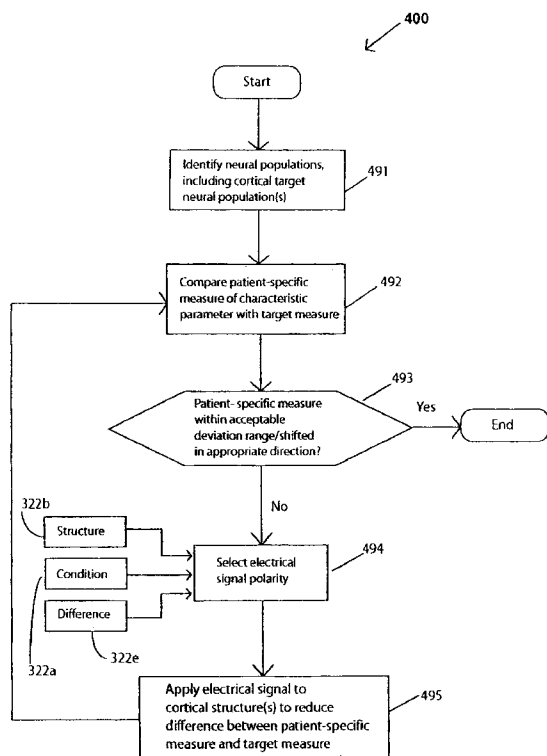


Fig. 4

(57) Abstract: Methods for treating neurological disorders, including neuropsychiatric and neuropsychological disorders, and associated systems are disclosed. One such method includes identifying one or more neural populations, including a cortical target neural population, associated with a neurological condition. The method can further include comparing a patient-specific measure of a characteristic parameter for a selected one of the neural populations with a target measure for the same parameter. If the patient-specific measure differs from the target measure by at least a target amount, the method can include selecting an electrical signal polarity, frequency, or both polarity and frequency based at least in part on the difference between the patient-specific measure and the target measure. The method can further include applying electrical signals to the target neural population at the selected signal polarity, frequency, or both polarity and frequency to reduce the difference between the patient-specific measure and the target measure.

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FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL,  
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**A. CLASSIFICATION OF SUBJECT MATTER**  
 IPC: A61N 1/00(2006.01)

USPC: 607/45  
 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)  
 U.S. : 607/45

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)  
 Please See Continuation Sheet

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5611350 A (John) 18 MArch 1997 (18.03.97)	
X	US 2006/0259094 A1 (Naisberg et al.) 16 November 2006 (16.11.2006)	1-79
Y	US 20070244519 A1 (Keacher et al.) 18 October 2007 (18.10.2007)	

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	"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
"E" earlier application or patent published on or after the international filing date	"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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"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search 21 August 2008 (21.08.2008)	Date of mailing of the international search report <b>23 SEP 2008</b>
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (571) 273-3201	Authorized officer <i>Deena Watson</i> Carl H. Layno Telephone No. 571-272-4949

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Continuation of B. FIELDS SEARCHED Item 3:

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