Title: PACEMAKER FOR TREATING PHYSIOLOGICAL SYSTEM DYSFUNCTION

Abstract: Disclosed is a device and method for preventing seizures due to physiological system dysfunction. The method is based on a conjectural model of the brain wherein each brain site is modeled as a chaotic oscillator; a normal brain generates an internal feedback signal to prevent long-term entrainment among the oscillators; and a pathological brain fails to provide this feedback signal. The device of the present invention measures and characterizes the brain sites to determine if entrainment is occurring among the oscillators, derives an appropriate feedback signal to counteract the entrainment, and applies the feedback signal to the critical brain sites. The feedback signal generated by the device supplements or takes the place of the feedback signal that would otherwise be generated by the normal brain.
INTERNATIONAL SEARCH REPORT

A. CLASSIFICATION OF SUBJECT MATTER
IPC(7) : A61N 1/08
US CL : 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, 1, 2, 62

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)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

<table>
<thead>
<tr>
<th>Category*</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
<th>Relevant to claim No.</th>
</tr>
</thead>
</table>

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

“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: 06 December 2005 (06.12.2005)

Date of mailing of the international search report: 07 FEB 2006

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