Title: MEASURING A NEUROLOGICAL EVENT USING CLUSTERING

Abstract: Apparatus and method detect a detection cluster that is associated with a neurological event, such as a seizure, of nervous system disorder and update therapy parameters that are associated with a treatment therapy. The occurrence of the detection cluster is detected when the maximal ratio exceeds an intensity threshold. If the maximal ratio drops below the intensity threshold for a time interval that is less than a time threshold and subsequently rises above the intensity threshold, the subsequent time duration is considered as being associated with the detection cluster rather than being associated with a different detection cluster. Consequently, treatment of the nervous system disorder during the corresponding time period is in accordance with one detection cluster. Treatment therapy may be provided by providing electrical stimulation, drug infusion or a combination. Therapy parameters may be updated for each mth successive group of applications of the treatment therapy or for each nth detection cluster.
Published:
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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.
INTERNATIONAL SEARCH REPORT

A. CLASSIFICATION OF SUBJECT MATTER
   IPC(7) : A61B 05/00
   US CL : 600/544;
   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. : 600/544-545;

   Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
   none

   Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
   none

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>
<tbody>
<tr>
<td>A</td>
<td>US. 5,995,868, A (Dorfmeister et al) 30 November 1999, see entire document.</td>
<td>1-92</td>
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</tbody>
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☐ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

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