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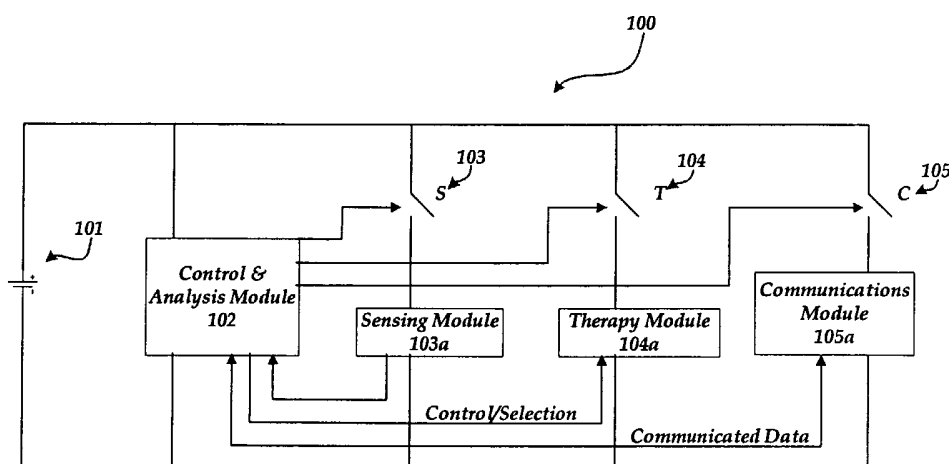
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(88) Date of publication of the international search report:
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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: **IMPLANTABLE MEDICAL DEVICE HAVING A CONTROLLED DIAGNOSTIC FUNCTION**



(57) **Abstract:** Methods and systems for providing an implantable medical device with a controlled diagnostic function adapted to convert from a monitoring mode to a therapeutic mode upon sensing an actionable cardiovascular event are disclosed. A preferred embodiment uses an interactive control module to selectively control a plurality of gated circuits that turn the sensing, therapeutic and communications functions of the device on and off to conserve battery power and extend the life of the device. Some embodiments of a system disclosed herein also can be configured as a component of an Advanced Patient Management System that helps better monitor, predict and manage chronic diseases.

INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 03/37945

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 A61N1/372

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 7 A61N

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 practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 6 016 448 A (CINBIS CAN ET AL) 18 January 2000 (2000-01-18) column 10, line 46 -column 11, line 13 ----	96
Y	WO 01/43823 A (MEDTRONIC INC) 21 June 2001 (2001-06-21) abstract; figure 4 ----	96
A	US 5 746 697 A (BERNSTEIN MICHAEL J ET AL) 5 May 1998 (1998-05-05) the whole document ----	96
A	US 5 350 407 A (MCCLURE LAWRENCE C ET AL) 27 September 1994 (1994-09-27) the whole document ----- -/--	96



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
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- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

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- *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.
- *Z* document member of the same patent family

Date of the actual completion of the international search

18 May 2004

Date of mailing of the international search report

26/05/2004

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INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 03/37945

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 6 073 049 A (ALT ECKHARD ET AL) 6 June 2000 (2000-06-06) the whole document -----	96
A	US 4 390 022 A (MINER JAY ET AL) 28 June 1983 (1983-06-28) the whole document -----	96

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US 03/37945

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.: 1-95
because they relate to subject matter not required to be searched by this Authority, namely:
Rule 39.1(iv) PCT - Diagnostic method practised on the human or animal body -
Method for treatment of the human or animal body by therapy
2. ☒ Claims Nos.: 97-213
because they relate to parts of the International Application that do not comply with the prescribed requirements to such
an extent that no meaningful International Search can be carried out, specifically:
see FURTHER INFORMATION sheet PCT/ISA/210
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all
searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment
of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report
covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is
restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box I.2

Claims Nos.: 97-213

The application contains a large number of claims. Although some of the claims refer back to other claims they are independent claims, since they do not claim all the features of the claim to which they refer back (cf., for example claims 97 and 98).

It is clear from the description that the application is directed to an implantable device comprising various modules, wherein selected ones of the various sensing, therapy and communication modules can be disabled or deactivated, in order to conserve the device's power. The search has been therefore limited to the subject-matter of claim 96 in the light of the description.

The applicant's attention is drawn to the fact that claims, or parts of claims, relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 03/37945

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