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- (71) **Applicant (for all designated States except US):** EN-
TEROMEDICS, INC. [US/US]; 2800 Patton Road, St.
Paul, MN 551 13 (US).
- (72) **Inventors; and**
- (75) **Inventors/Applicants (for US only):** VALLAPUREDDY,
Vineel [IN/US]; 1448 132nd Lane N.W., Coon Rapids,
MN 55448 (US). DONDEERS, Adrianus, P. [NL/US];
15089 Crane Street N.w., Andover, MN 55304 (US).
RAMADHYANI, Satish [IN/US]; 132 Cecil Street S.E.,
Minneapolis, MN 55414 (US). WANG, Wu [US/US];
16448 Holbrook Avenue, Lakeville, MN 55044 (US).
CHAN, Hang [CN/US]; 2201 Baneberry Way W., Chan-
hassen, MN 55317 (US).

- (74) **Agent:** BRUESS, Steven, C ; Merchant & Gould RC,
P.O. Box 2903, Minneapolis, MN 55402-0903 (US).
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(54) **Title:** REMOTE MONITORING AND CONTROL OF IMPLANTABLE DEVICES

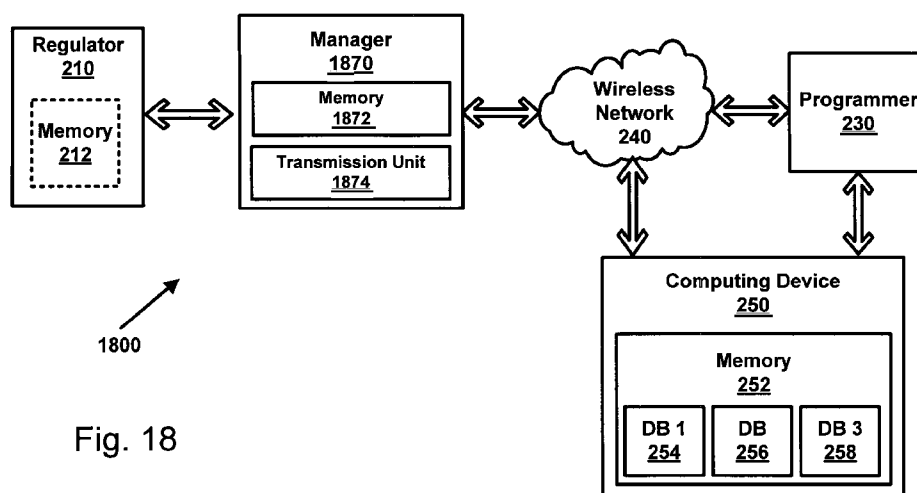


Fig. 18

(57) **Abstract:** A treatment system includes a regulator implanted within a patient, a computing device storing at least one patient database associated with the patient in whom the regulator is implanted, and a data transfer device. The data transfer device provides bi-directional communication (e.g., voice communication) and a data exchange (e.g., a treatment history, a patient database, and operational instructions) between the regulator and the computing device. A programmer can obtain patient reports and/or default treatment values from the computing device based on the data exchange.

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INTERNATIONAL SEARCH REPORT

International application No
PCT/US2008/055098

A. CLASSIFICATION OF SUBJECT MATTER
INV. A61N1/372

According to International Patent Classification ((PC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
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.
X	US 5 749 907 A (MANN BRIAN M [US]) 12 May 1998 (1998-05-12)	1-13
Y	column 1, line 5 - column 8, line 34; figures 1,2,4	14-16
Y	US 6 418 346 B1 (NELSON CHESTER GARY [US] ET AL) 9 July 2002 (2002-07-09) column 4, lines 13-34 column 9, lines 18-65 column 11, lines 3-14 column 13, lines 18-23; figures 1,6A	14-16
Y	US 2001/051787 A1 (HALLER MARKUS [CH] ET AL) 13 December 2001 (2001-12-13) figure 6A	14-16

D 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
 "E" earlier document but published on or after the international filing date
 "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
 "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

"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

13 June 2008

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Name and mailing address of the ISA/
European Patent Office, PB. 5818 Patentlaan 2
NL- 2280 HVRIJSWIJK
Tel. (+31-70) 340-2040,
Fax (431-70) 340-3016

Authorized officer

Schöfmann

INTERNATIONAL SEARCH REPORT

International application No.
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Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 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.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. Claims Nos.:
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:

3. Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule S.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

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

see additional sheet

1. As all required additional search fees were timely paid by the applicant, this international search report covers allsearchable claims.

2. As all searchable claims could be searched without effort Justifying an additional fees, this Authority did not invite payment of additional fees.

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.:

see annex

Remark on Protest

- The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-16

a system comprising,
- an IMD for providing therapy to a patient with a memory to store treatment events
- a remote computer storing patient data bases including treatment events, and
- a data transfer device communicating with the IMD and the computer over a network for patient event data transfer.

2. claim: 17

a method for programming a treatment system, the system receiving at a computing device a plurality of treatment events from a plurality of patient IMDs, evaluating patient databases to determine which databases are associated with patients similar to a first patient to form a subset of patients and determining treatment values corresponding with successful treatment in the subset of patients and transmitting the determined treatment values to the programmer ;

3. claims: 18-20

method of updating software on an IMD;

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No PCT/US2008/055098

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 5749907	A	12-05-1998 NONE	
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us 6418346	B1	09-07-2002 EP 1239764 A1	18-09-2002
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