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[Continued on next page]

(54) Title: AMBULATORY SENSING SYSTEM AND ASSOCIATED METHODS

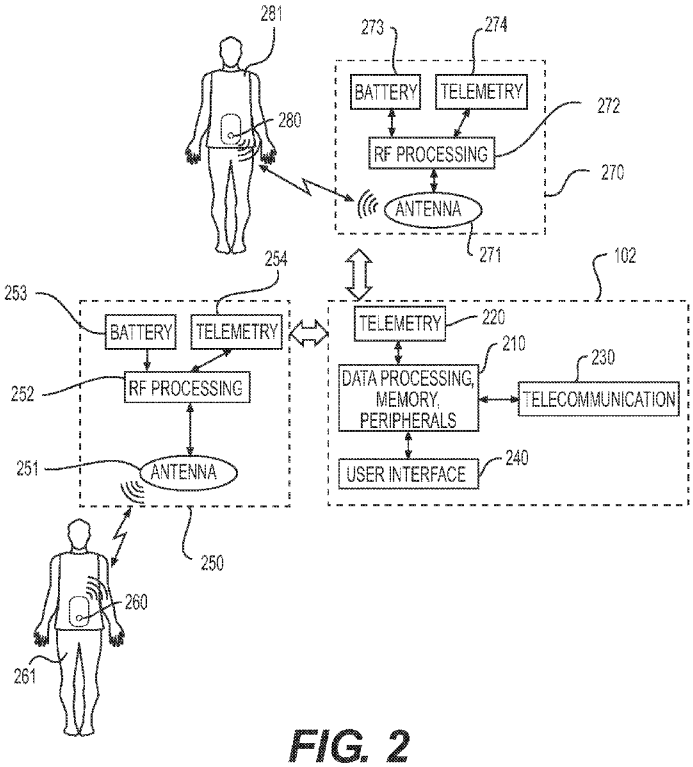

FIG. 2

(57) Abstract: A method for monitoring data in a clinical environment comprises receiving information indicative of a number of ambulatory sensing systems in a measurement environment comprising a plurality of ambulatory sensing systems. The method also comprises establishing a communication scheme associated with the measurement environment based on the number of ambulatory sensing systems in the measurement environment. The method further comprises providing, to each ambulatory sensing system, information indicative of the established communication scheme. The method also comprises configuring, in a central data module associated with the measurement environment, parameters for communicating with each respective ambulatory sensing system in accordance with the established control scheme.

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— *with international search report (Art. 21(3))*

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US14/30322

A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - G01B 1/08 (2014.01)
USPC - 340/539.12
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(8) Classification(s): A61B 5/00; A61N 1/08; G01B 1/08 (2014.01)
USPC Classification(s): 340/10.2, 539.12; 607/60; CPC Classification(s): A61B 5/0002, 5/0004; A61N 1/08

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)
MicroPatent (US-G, US-A, EP-A, EP-B, WO, JP-bib, DE-C,B, DE-A, DE-T, DE-U, GB-A, FR-A); ProQuest; IEEE/IEEExplore; Google/Google Scholar, Espacenet; Keywords: monitor, implantable, passive, sensor, transceiver, patient, communications, polling, queue, scheme

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 2011/0003610 A1, (KEY, M. et al.), 06 January 2011; paragraphs [0015], [0024], [0035].	1-21
Y	US 2013/0044704 A1, (PANG, J. et al.), 21 February 2013; paragraphs [0017], [0036], [0038].	1-8, 15-21
Y	US 2012/0071735 A1, (CAYLOR, III, E. et al.), 22 March 2012; paragraphs [0033], [0034].	2-4, 5-7, 9-14, 16-21
Y	US 2002/0032384 A1, (RAYMOND, S. et al.), 14 March 2002; paragraphs [0143], [0144].	5-6, 13-14, 19-20
Y	US 2011/0273287 A1, (LALONDE, J. et al.), 10 November 2011; paragraph [0065].	8
Y	US 2008/0300650 A1, (GERBER, M. et al.), 04 December 2008; paragraphs [0119], [0130].	10

☐ Further documents are listed in the continuation of Box C. ☐

* 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 application or patent 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	Date of mailing of the international search report
14 October 2014 (05.10.2014)	13 APR 2015
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: Shane Thomas PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US14/30322

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 6.4(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:
Group I: Claims 1-8 and 15-21; Group II: Claims 9-14

-***-Please see Supplemental Page-***-

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 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.:

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.

INTERNATIONAL SEARCH REPORT

International application No.

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-***-Continued from Box No. III - Observations where unity of invention is lacking-***-

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1. In order for all inventions to be examined, the appropriate additional examination fee must be paid.

Group I: Claims 1-8 and 15-21 are directed toward a method for monitoring data in a clinical environment and a base unit.

Group II: Claims 9-14 are directed toward an ambulatory sensing system.

The inventions listed as Groups I-II do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

The special technical features of Group I include receiving information indicative of a number of ambulatory sensing systems; establishing a communication scheme; providing information indicative of the established communication scheme; and configuring parameters for communicating with each respective ambulatory sensing system in accordance with the established control scheme, which are not present in Group II.

The special technical features of Group II include first and second passive sensors configured for implantation within a first and second subject; first and second transceivers disposed outside of the first and second subjects and configured to: generate electromagnetic signals configured to energize at least a portion of the first and second passive sensors; measure feedback from the first and second passive sensors; wherein while the first transceiver transmits the electromagnetic signal, the second transceiver is prevented from transmitting an electromagnetic pulse, which are not present in Group I.

The common technical feature shared by Groups I-II is an ambulatory sensing system. However, this common feature is previously disclosed by US 8,391,981 B2 (MOSESOV). Mosesov discloses an ambulatory sensing system (Abstract).

Since the common technical feature is previously disclosed by the Mosesov reference, this common feature is not special and so Groups I-II lack unity.