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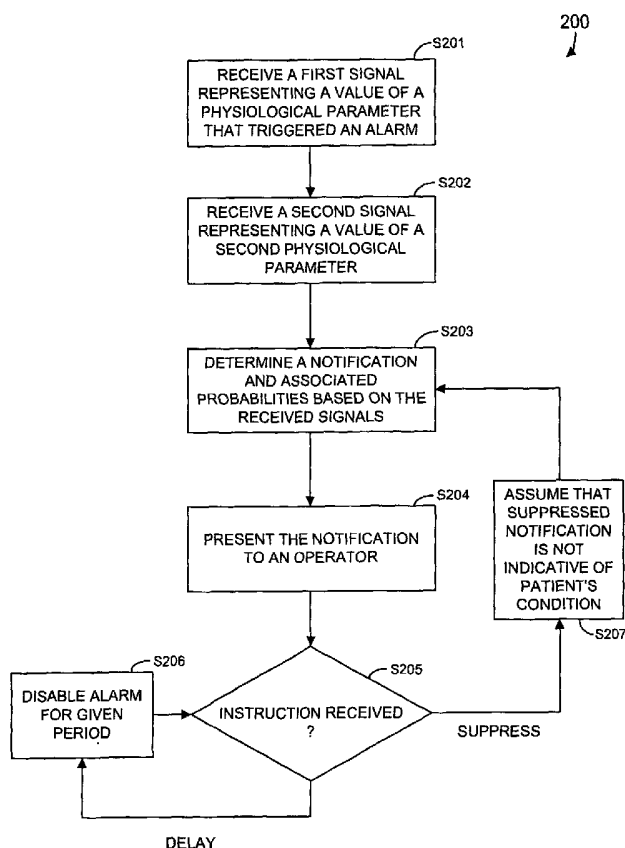
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- (21) International Application Number: PCT/US2002/026524 (74) Agents: **BURKE, Alexander, J.** et al.; Siemens Corporation - Intellectual Property Dept., 186 Wood Ave. South, Iselin, NJ 08830 (US).
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60/316,605 31 August 2001 (31.08.2001) US
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- (71) Applicant: **SIEMENS MEDICAL SOLUTIONS USA, INC.** [US/US]; 186 Wood Avenue South, Iselin, NJ 08830-2770 (US). Published:
— with international search report
- (72) Inventors: **SANTOSO, Nugroho, Iwan**; 21 Hilltown Court, Plainsboro, NJ 08536 (US). **HUANG, Johnnie, W.**; 5104 Heatherwood Lane, Peabody, MA 01960, MA (88) Date of publication of the international search report:
25 March 2004
- 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: PATIENT MONITORING AND ALARM PROCESSING SYSTEM USING AN EXPERT SYSTEM



(57) Abstract: Some embodiments of the invention provide a system to monitor a patient. In some aspects, a signal representing a value of a physiological parameter is received from a monitoring device. The received value is a value that caused the monitoring device to trigger an alarm associated with the physiological parameter. A notification is determined based on the received signal and on a second signal that represents a value of a second physiological parameter. The notification is then presented to an operator

INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 02/26524

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 A61B5/00

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 A61B

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)

EP0-Internal, PAJ, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 819 007 A (ELGHAZZAWI ZIAD F) 6 October 1998 (1998-10-06) column 4, line 47 - column 6, line 53; figures 1-3 column 13, line 50 - line 56 ---	14-17
X	WO 99 04685 A (VAEAENAENEN MIKKO) 4 February 1999 (1999-02-04) abstract page 5, line 23 - line 37; figures 4,5 page 26, line 10 - line 25 page 22, line 18 - line 23 ---	18,19
X	EP 1 099 406 A (GE MEDICAL SYSTEMS INFORMATION) 16 May 2001 (2001-05-16) abstract paragraph [0005] - paragraph [0006]; figure 1 ---	20
Y	---	21-23
	-/--	

☒ 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

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"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

26 May 2003

Date of mailing of the international search report

10. 06. 03

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INTERNATIONAL SEARCH REPORT

International Application No
PCT/US 02/26524

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 4 370 727 A (BELLET JEAN-MARIE) 25 January 1983 (1983-01-25) abstract; figure 1 ---	21-23
A	EP 1 034 734 A (BROWN ERIC W) 13 September 2000 (2000-09-13) abstract; figure 1 ---	14-17
A	US 5 692 220 A (NGUYEN DOYEN T ET AL) 25 November 1997 (1997-11-25) abstract; figures 1-3 -----	14-17

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US 02/26524

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.: 1-13
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
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 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:

see additional sheet

As a result of the prior review under R. 40.2(e) PCT,
no additional fees are to be refunded.

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

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

1. Claims: 14-17

System for monitoring a patient with notification subsystem.

2. Claims: 18-19

alarmssystem using a data prediction strategy.

3. Claims: 20-23

user interface displaying data with associated probability factors.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 02/26524

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
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