(19) World Intellectual Property Organization

International Bureau



(43) International Publication Date 29 April 2004 (29.04.2004)

PCT

(10) International Publication Number WO 2004/034898 A3

(51) International Patent Classification7: A61B 5/00, 5/026

(21) International Application Number:

PCT/IB2003/004354

(22) International Filing Date: 2 October 2003 (02.10.2003)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

102 47 984.4

15 October 2002 (15.10.2002) DE

- (71) Applicant (for DE only): PHILIPS INTELLECTUAL PROPERTY & STANDARDS GMBH [DE/DE]; Steindamm 94, 20099 Hamburg (DE).
- (71) Applicant (for all designated States except DE, US): KONINKLIJKE PHILIPS ELECTRONICS N.V. [NL/NL]; Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): NEUMANN, Rolf [DE/DE]; c/o Philips Intellectual Property & Standards

GmbH, Weisshausstr. 2, 52066 Aachen (DE). **BINDSZUS**, **Andreas** [DE/DE]; c/o Philips Intellectual Property & Standards GmbH, Weisshausstr. 2, 52066 Aachen (DE).

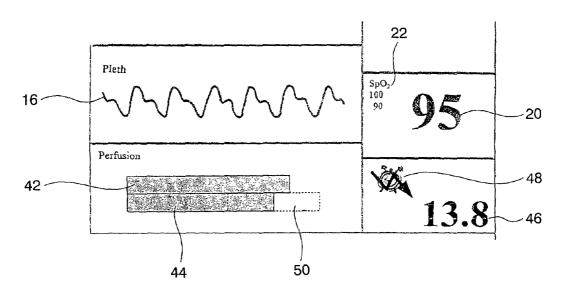
- (74) Agent: VOLMER, Georg; Philips Intellectual Property & Standards GmbH, Weisshausstr. 2, 52066 Aachen (DE).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

with international search report

[Continued on next page]

(54) Title: METHOD FOR THE PRESENTATION OF INFORMATION CONCERNING VARIATIONS OF THE PERFUSION



(57) Abstract: A method for the presentation of information concerning variations of the arterial filling with blood (perfusion) of organs of living beings on the user surface (10) of a display screen, in which method the data required for the presentation (perfusion index) is derived, using an algorithm, from measuring values of a non-invasive photometric measuring process for determining the arterial oxygen saturation of the blood. The invention is characterized in that a first perfusion index is defined as a reference value and the subsequent perfusion inbdices are determined as relative deviations with respect to the reference value, said relative deviations being presented in the form of analog, graphic elements (42, 44) on the user surface (10) as information concerning the 10 variations of the perfusion.



WO 2004/034898 A3



 before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

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.

(88) Date of publication of the international search report:

15 July 2004

PCT/IB 03/04354

A. CLASSIFICATION OF SUBJECT MATTER IPC 7 A61B5/00 A61B5/026

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

B. FIELDS SEARCHED

 $\begin{tabular}{ll} Minimum documentation searched (classification system followed by classification symbols) \\ IPC 7 & A61B \end{tabular}$

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. DOCUME	ENTS CONSIDERED TO BE RELEVANT	
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	CH 559 034 A (STEPHENS FREDERICK RICHARD NEA) 28 February 1975 (1975-02-28) column 1, line 51 - column 2, line 48 column 4, lines 10-37 column 5, line 43 - column 6, line 5	1-15
A	EP 0 261 787 A (PHYSIO CONTROL CORP) 30 March 1988 (1988-03-30) page 5, lines 31-42 page 15, lines 24-42; figure 17	5,13-15
A	EP 0 194 105 A (BOC GROUP INC) 10 September 1986 (1986-09-10) page 1, lines 14-24 page 12, line 17 - page 13, line 10; figure 8	9,10
	er documents are listed in the continuation of box C.	

X Further documents are listed in the continuation of box C.	Patent family members are listed in annex.
"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 19 January 2004	Date of mailing of the international search report 0 5. 05. 04
Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Authorized officer Pohjamo, T

PCT/IB 03/04354

		PCI/IB 03	PC1/1B 03/04354		
C.(Continua Category °	ation) DOCUMENTS CONSIDERED TO BE RELEVANT Citation of document, with indication, where appropriate, of the relevant passages		Relevant to claim No.		
Α	EP 0 807 402 A (OHMEDA INC) 19 November 1997 (1997-11-19) page 9, lines 28-49; figure 6		1-15		
	,				

PCT/IB 03/04354

Box I Obs	ervations where certain claims were found unsearchable (Continuation of item 1 of first sheet)
This Internation	nal Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:
1. Claim becau	is Nos.: use they relate to subject matter not required to be searched by this Authority, namely:
hecal	is Nos.: use they relate to parts of the International Application that do not comply with the prescribed requirements to such tent that no meaningful International Search can be carried out, specifically:
beca	is Nos.: use they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).
Box II Obs	ervations where unity of invention is lacking (Continuation of item 2 of first sheet)
This Internatio	nal Searching Authority found multiple inventions in this international application, as follows:
see	additional sheet
	required additional search fees were timely paid by the applicant, this International Search Report covers all hable claims.
	searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment y additional fee.
3. As or cover	nly some of the required additional search fees were timely paid by the applicant, this International Search Report s only those claims for which fees were paid, specifically claims Nos.:
	equired additional search fees were timely paid by the applicant. Consequently, this International Search Report is
4. X No restri	cted to the invention first mentioned in the claims; it is covered by claims Nos.:
Remark on Pi	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: 1-15

determining and presenting perfusion indeces, using a reference perfusion index

2. claims: 16-21

determining and presenting the quality of the measuring values

PCT/IB 03/04354

Patent document cited in search report					Patent family member(s)	Publication date
СН	559034	Α	28-02-1975	СН	559034 A5	28-02-1975
EP	0261787	Α	30-03-1988	US	4869253 A	26-09-1989
				ΑU	7716787 A	25-02-1988
				CA	1304503 C	30-06-1992
				EP	0261787 A1	30-03-1988
				JP	1500494 T	23-02-1989
				WO	8801149 A1	25-02-1988
EP	0194105	· A	10-09-1986	AU	603461 B2	15-11-1990
				ΑU	1856288 A	06-10-1988
				ΑU	571369 B2	14-04-1988
				ΑU	5365586 A	04-09-1986
				DE	3678980 D1	06-06-1991
				EP	0194105 A2	10-09-1986
				JР	1829560 C	15-03-1994
				JP	4017051 B	25-03-1992
				JP	61276541 A	06-12-1986
				ZA	8601179 A	30-12-1986
EP	0807402	Α	19-11-1997	US	5766127 A	16-06-1998
				CA	2201577 A1	15-10-1997
				EP	0807402 A1	19-11-1997
				JР	10052408 A	24-02-1998
				JР	3350521 B2	25-11-2002
				JР	2001178709 A	03-07-2001