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(54) Title: POSTURE STATE CLASSIFICATION FOR A MEDICAL DEVICE

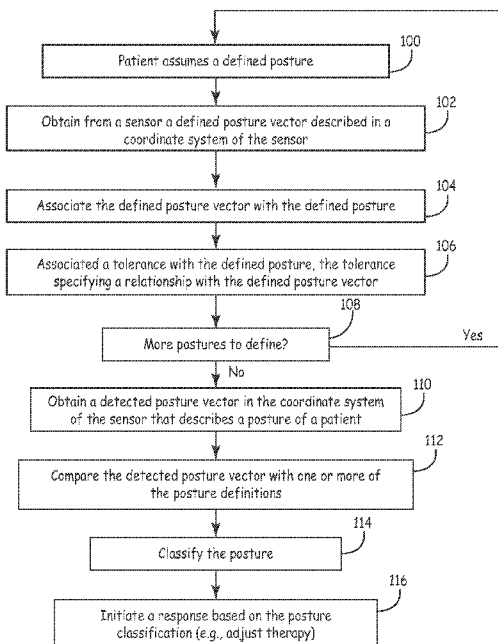


FIG. 6

(57) Abstract: One embodiment relates to a medical device including a sensor to provide signals indicative of a detected posture state of a patient. A memory stores one or more defined vectors, each defined vector being associated with a tolerance describing a relationship with the defined vector. A processor determines a respective similarity between the detected vector and each of one or more of the defined vectors and classifies a posture state of the patient based on whether any similarity has a relationship to the respective defined vector that is described by the associated tolerance. In one embodiment, the similarity is determined without regard to a coordinate system of the patient. Another embodiment relates to determining the similarity based on at least one of an inner product, a length of the defined posture vector and a length of the detected vector.

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- *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*
- *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*

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## INTERNATIONAL SEARCH REPORT

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## A. CLASSIFICATION OF SUBJECT MATTER

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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)

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)

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 2007/115277 A1 (WANG HUA [US] ET AL) 24 May 2007 (2007-05-24) the whole document	1,3-9, 11,16-17
X	US 6 044 297 A (SHELDON TODD J [US] ET AL) 28 March 2000 (2000-03-28)  column 3, line 58 - column 5, line 61 column 3, line 33 - column 17, line 61 column 21, lines 1-43	1,3-10, 12-17, 43-58
X	US 2007/118056 A1 (WANG HUA [US] ET AL) 24 May 2007 (2007-05-24)	1,3-9, 11,16-17
Y	paragraphs [0068] - [0083]; figures 5-6  -/--	2



Further documents are listed in the continuation of Box C.



See patent family annex.

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- \*G\* document member of the same patent family

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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X,P	US 2008/288200 A1 (NOBLE CHRISTOPHER R [US]) 20 November 2008 (2008-11-20) paragraphs [0020] - [0029] paragraphs [0064] - [0066] -----	1,43,58
Y	WO 2005/079487 A2 (DIAGNOSTIC ULTRASOUND CORP [US]; CHALANA VIKRAM [US]; DUDYCHA STEPHEN) 1 September 2005 (2005-09-01) page 16, paragraph 119-122 -----	2
A	EP 1 391 846 A1 (SEGA CORP [JP]) 25 February 2004 (2004-02-25) paragraphs [0044] - [0047] -----	2

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US2009/048686

## 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.: 18-42  
because they relate to subject matter not required to be searched by this Authority, namely:  
Rule 39.1(iv) PCT - Method for treatment of the human or animal body by therapy
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:

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 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

Information on patent family members

International application No

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