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*A61B 8/12* (2006.01)

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English

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[Continued on next page]

## (54) Title: SYSTEM AND METHOD FOR CALIBRATION FOR IMAGE-GUIDED SURGERY

(57) Abstract: A method of calibrating a transformation of ultrasound data in an imaging system from a first coordinate system into a second coordinate system, the method comprising applying a transformation having parameters. The parameters are calibrated by imaging a planar object, extracting points corresponding to ultrasound rays intersecting the planar object, and fitting the parameters such that the points when transformed by the transformation describe a planar surface in the second coordinate system.

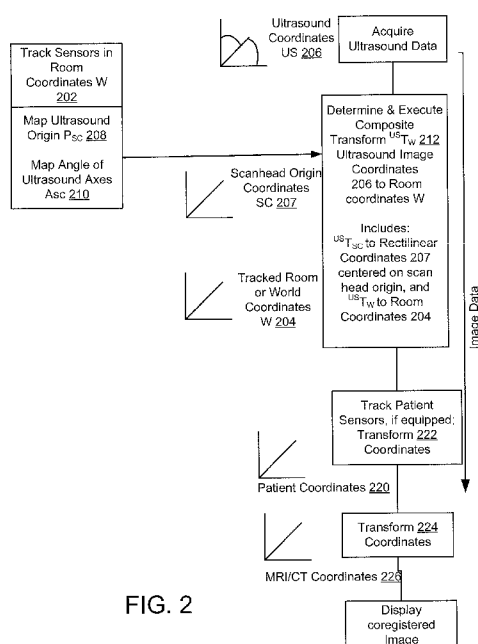


FIG. 2



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— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*

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## INTERNATIONAL SEARCH REPORT

International application No.  
**PCT/US2009/045082****A. CLASSIFICATION OF SUBJECT MATTER***A61B 8/13(2006.01)i, A61B 8/12(2006.01)i, A61B 17/00(2006.01)i*

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 8/13; A61B 8/00; G06K 9/00

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Korean utility models and applications for utility models since 1975.

Japanese utility models and applications for utility models since 1975.

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

eKOMPASS(KIPO internal) &amp; Keywords: ultrasound, calibration, track, coordinate

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 2005-099581 A1 (JOHNS HOPKINS UNIVERSITY et al.) 27 October 2005 See paragraph [0006] - paragraph [0046]; abstract and figures 1-4.	1-6
A	US 7085400 B1 (TROY HOLSING et al.) 01 August 2006 See column 1, line 39 - column 5, line 10; abstract and figures 1-2.	1-6
A	US 6379302 B1 (KESSMAN; PAUL et al.) 30 April 2002 See column 4, line 44 - column 7, line 62; abstract and figures 1-2.	1-6



Further documents are listed in the continuation of Box C.



See patent family annex.

\* Special categories of cited documents:

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"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

"&amp;" document member of the same patent family

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**INTERNATIONAL SEARCH REPORT**

Information on patent family members

International application No.

**PCT/US2009/045082**

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