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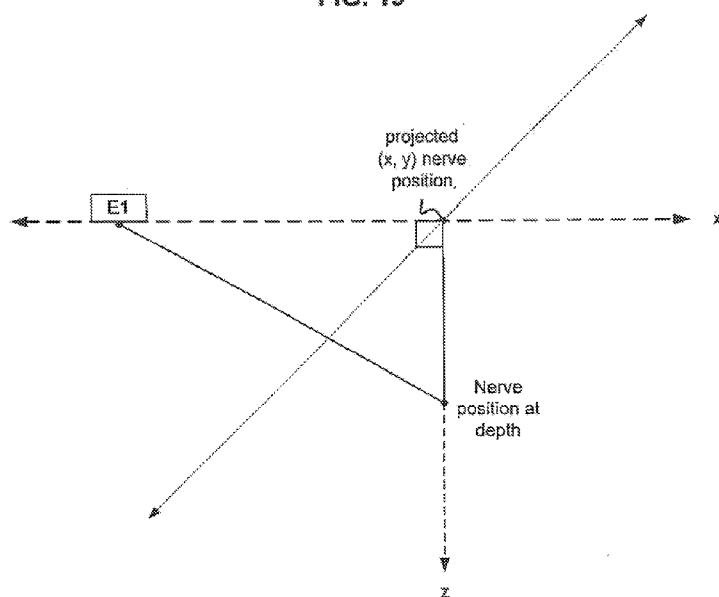
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(54) **Title:** METHOD AND SYSTEM FOR DETERMINING A LOCATION OF NERVE TISSUE IN THREE-DIMENSIONAL SPACE

FIG. 19

(57) **Abstract:** Systems and methods for discriminating and locating nerve tissues within a body involve applying a waveform signal to tissue between two electrodes and measuring the electrical characteristics of the signal transmitted through the tissue. Using impedance measurements, the (x, y) coordinates of a nerve relative to an electrode array on the skin surface, and the z-coordinate of the nerve depth position, may be determined. A controller may implement the process and perform the impedance calculations on the measured data to identify tissue types and locations within the measured area, and to present results in graphical form. Results may be combined with other tissue imaging technologies and with image-guided systems.

A. CLASSIFICATION OF SUBJECT MATTER***A61B 5/053(2006.01)i, G06F 19/00(2011.01)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 5/053; A61B 5/05; A61N 1/34; A61N 1/08; A61B 5/11; 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

Japanese utility models and applications for utility models

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

eKOMPASS(KIPO internal) & Keywords: nerve, depth, electrode, calculate impedance

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2008-0085049 A1 (ROLF-DIETER NASKE et al.) 10 April 2008 See abstract, paragraphs [0136],[0146],[0153]-[0165],[0229], claims 1,16,105 and figures 6,26.	1-23
A	US 05807270 A (WILLIAMS; CHRISTOPHER EDWARD) 15 September 1998 See abstract, column 5, lines 13-54, column 6, lines 44-55, claims 1-5 and figures 1-3.	1-23
A	US 2006-0085048 A1 (PHILIP C. CORY et al.) 20 April 2006 See abstract, paragraphs [0066],[0069],[0079]-[0091], claims 1,34 and figures 3-4.	1-23
A	WO 2010-064206 A1 (KONINKLIJKE PHILIPS ELECTRONICS N.V. et al.) 10 June 2010 See abstract, page 14, line 13 - page 15, line 2, page 17, lines 22-34, page 23, lines 23-33 and figures 1,3A-B,4A.	1-23



Further documents are listed in the continuation of Box C.



See patent family annex.

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INTERNATIONAL SEARCH REPORT

Information on patent family members

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