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(54) Title: DETECTION OF TARGETS USING MAGNETIC RESONANCE

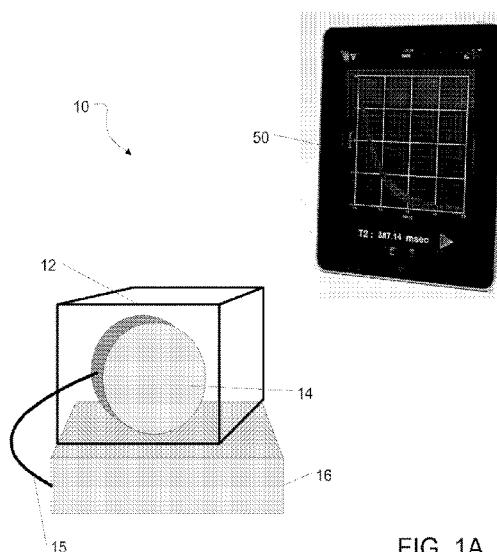


FIG. 1A

(57) Abstract: A portable magnetic resonance system includes a permanent magnet, a nuclear magnetic resonance probe, and control electronics. The control electronics are configured to transmit to the probe a magnetic resonance excitation signal having an excitation frequency f , receive from the probe a magnetic resonance measurement signal, detect in the magnetic resonance measurement signal a magnetic resonance frequency f_0 , and automatically adjust the excitation frequency f until the difference between the excitation frequency and the magnetic resonance frequency is approximately equal to a target offset.

A. CLASSIFICATION OF SUBJECT MATTER*A61B 5/055(2006.01)i, G01R 33/44(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 5/055; A61K 49/00; G01N 24/00; G01R 33/20; A61K 9/16; C12Q 1/26

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: nuclear magnetic resonance, offset, adjust, excitation frequency, relaxation time

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X Y A	US 2004-0014236 A1 (DROR ALBO et al.) 22 January 2004 See abstract, paragraphs [0021]-[0024], [0031], claims 1,3,10, and figures 1,3	1 12, 13, 14 2-11, 15-18
Y	WO 2009-026251 A1 (THE GENERAL HOSPITAL CORPORATION et al.) 26 February 2009 See abstract, page 28, line 21 - page 30, line 13, and claims 19,32	12, 13, 14
Y	US 05166620 A (PANOSH; RICHARD L.) 24 November 1992 See abstract, column 1, line 33-42, column 4, line 55- column 5, line 47, claims 1-2, and figure 1	14
A	US 2008-0305048 A1 (JOSEPHSON LEE et al.) 11 December 2008 See abstract and claim 39.	1-18



Further documents are listed in the continuation of Box C.



See patent family annex.

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Information on patent family members

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