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(54) Title: METHOD AND APPARATUS FOR DETERMINING HEART RATE VARIABILITY USING WAVELET TRANSFORMATION

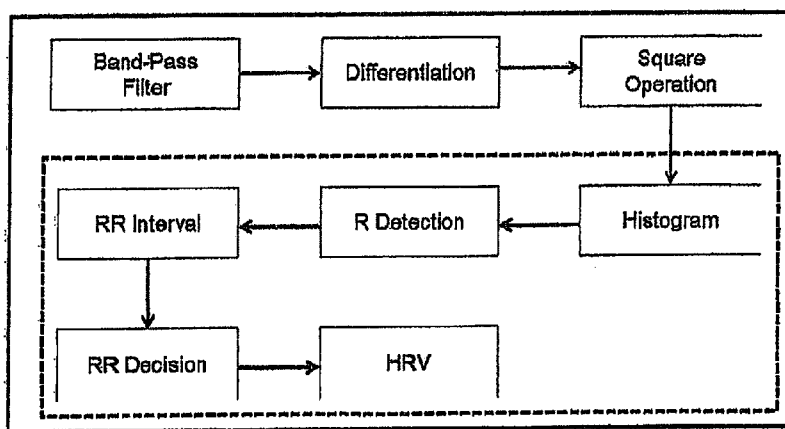


Fig. 51

(57) Abstract: The present invention relates to advanced signal processing methods including digital wavelet transformation to analyze heart-related electronic signals and extract features that can accurately identify various states of the cardiovascular system. The invention may be utilized to estimate the extent of blood volume loss, distinguish blood volume loss from physiological activities associated with exercise, and predict the presence and extent of cardiovascular disease in general.

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According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED		
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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: mammalian, ECG		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2006-0264775 A1 (GARY MILLS et al.) 23 November 2006 See paragraph [0030] - paragraph [0059]; abstract and figures 1A-8B.	1-39
A	US 5425373 A (CAUSEY, III; JAMES D.) 20 June 1995 See abstract and figures 1-8.	1-39
A	US 2003-0135097 A1 (MARK D. WIEDERHOLD et al.) 17 July 2003 See paragraph [0034] - paragraph [0237]; abstract and figures 1-26.	1-39
<input type="checkbox"/> Further documents are listed in the continuation of Box C. <input checked="" type="checkbox"/> See patent family annex.		
* Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier application or patent 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 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		
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