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Hans [DE/US]; 233 East Barnett Street, Ventura, California 93001 (US).

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(74) Agents: FANUCCI, Allan, A. et al.; WINSTON & STRAWN LLP, Patent Department, 1700 K Street, N.W., Washington, District of Columbia 20006-3817 (US).

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(71) Applicant (for all designated States except US): VIVO-METRICS, INC. [US/US]; 121 N. Fir Street, Suite E, Ventura, California 93001 (US).

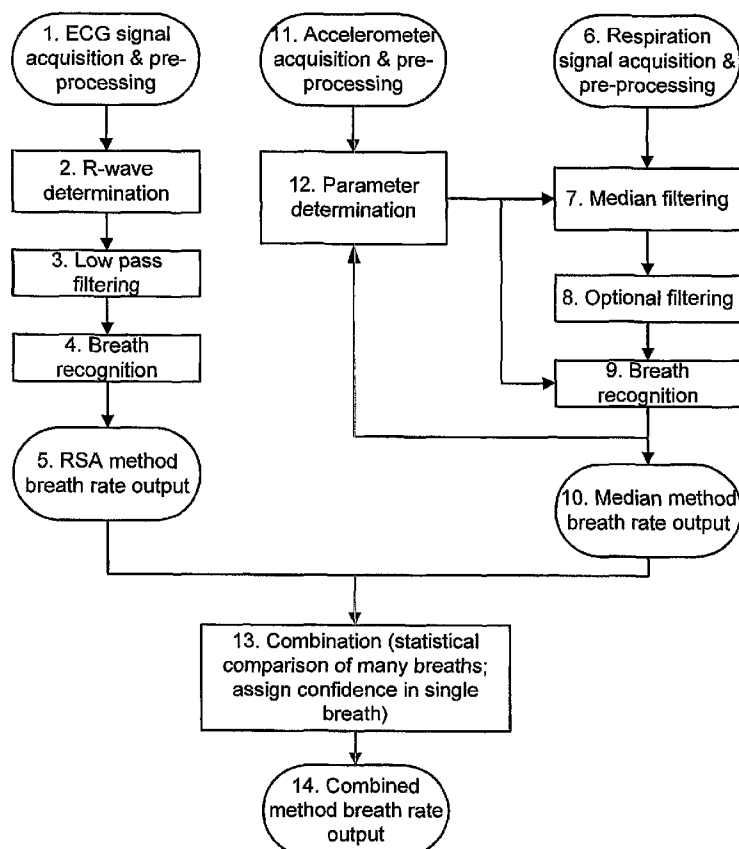
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(72) Inventor; and

(75) Inventor/Applicant (for US only): HEMPFLING, Ralf,

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(54) Title: METHODS AND SYSTEMS FOR REAL TIME BREATH RATE DETERMINATION WITH LIMITED PROCESSOR RESOURCES



(57) Abstract: A method for recognizing occurrences of breaths in respiratory signals. The method includes receiving digitized respiratory signals that includes tidal volume signals, filtering the received respiratory signals to limit artifacts having a duration less than a selected duration, and recognizing breaths in the filtered respiratory signals. A breath is recognized when amplitude deviations in filtered tidal volume signals exceed a selected fraction of an average of previously determined breaths. This invention also include methods for recognizing breaths from electrocardiogram R-waves; computer methods having code for performing the methods of this invention; monitoring systems that monitor a subject and include local or remote computers or other devices that perform the methods of this invention.



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C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X, P --- Y, P	US 2005/0119586 A1 (COYLE et al) 02 June 2005 (02.06.2005), entire document, especially paragraphs [0081]-[0087].	28, 29, 32, 40 ----- 1, 2, 4-7, 12-14, 16, 17, 30, 31, 39, 41
Y	US 4,306,567 A (KRASNER) 22 December 1981 (22.12.1981), column 6, lines 46-61	1, 2, 4-7, 12-14, 16, 17, 39, 41
Y, P	US 2005/0076908 A1 (LEE et al) 14 April 2005 (14.04.2005), paragraphs [0077], [0089]-[0090], [0099].	6, 16, 17, 39, 41
Y	US 4972842 A (KORTEN et al) 27 November 1990 (27.11.1990), columns 9-10	7, 17
Y	US 6,656,127 B1 (BEN-OREN et al) 02 December 2003 (02.12.2003), column 28	30, 31
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Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA US Commissioner of Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (571) 273-3201		Authorized Officer Charles Marmor, II <i>Sharon D. Greene for</i> Telephone No. 571-272-3700