

Title (en)
METHOD AND SYSTEM FOR IMPROVING PHOTOPLETHYSMOGRAPHIC ANALYTE MEASUREMENTS BY DE-WEIGHTING MOTION-CONTAMINATED DATA

Title (de)
VERFAHREN UND SYSTEM ZUR VERBESSERUNG VON PHOTOPLETHYSMOGRAPHISCHEN ANALYTMESSUNGEN DURCH MINDERGEWICHTUNG VON DATEN MIT BEWEGUNGSARTEFAKTEN

Title (fr)
PROCEDE ET SYSTEME POUR AMELIORER LES MESURES D'ANALYTES PHOTOPLETHYSMOGRAPHIQUES PAR DELESTAGE DES DONNEES CONTAMINEES PAR LE MOUVEMENT

Publication
EP 1237470 A4 20060426 (EN)

Application
EP 00992667 A 20001207

Priority

- US 0042647 W 20001207
- US 46588399 A 19991217
- US 63215300 A 20000803

Abstract (en)
[origin: WO0143624A2] A system is provided for improving photoplethysmographic analyte measurements by de-emphasizing motion-contaminated data and/or emphasizing motion-free data. The system (100) is used in a measurement instrument which includes at least illumination source (104) for transmitting at least two light signals at two center wavelengths through a patient's appendage (106) and a sensor (108) for converting the light signals transmitted through the appendage into electrical output signals. The system (100) includes a first buffer (116) configured to temporarily store at least one pulse cycle of output signals received from the sensor (108). A motion estimator (122) quantifies an amount of motion associated with the output signals stored in the first buffer (116) by performing a principal component analysis on differential absorption values derived from the output signals. Based on the amount of motion estimated, a weight application module (118) is configured to associate a weight with the output signals in the first buffer. The weighted output signals are transferred into a second buffer (120) which contains weighted output signals collected over multiple pulse cycles. An analyte computing module (126) computes blood analyte related values based on the weighted output signals stored in the second buffer (120).

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- No further relevant documents disclosed
- See references of WO 0143624A2

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