



- (51) **International Patent Classification:**
A61B 5/00 (2006.01) *A61B 5/048* (2006.01)
A61B 5/0476 (2006.01)
- (21) **International Application Number:**
 PCT/SG2015/050488
- (22) **International Filing Date:**
 7 December 2015 (07.12.2015)
- (25) **Filing Language:** English
- (26) **Publication Language:** English
- (30) **Priority Data:**
 10201408145X 5 December 2014 (05.12.2014) SG
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- (81) **Designated States** (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JP, KE, KG, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.
- (84) **Designated States** (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).
- Declarations under Rule 4.17:**
 — *of inventorship (Rule 4.17(iv))*
- Published:**
 — *with international search report (Art. 21(3))*

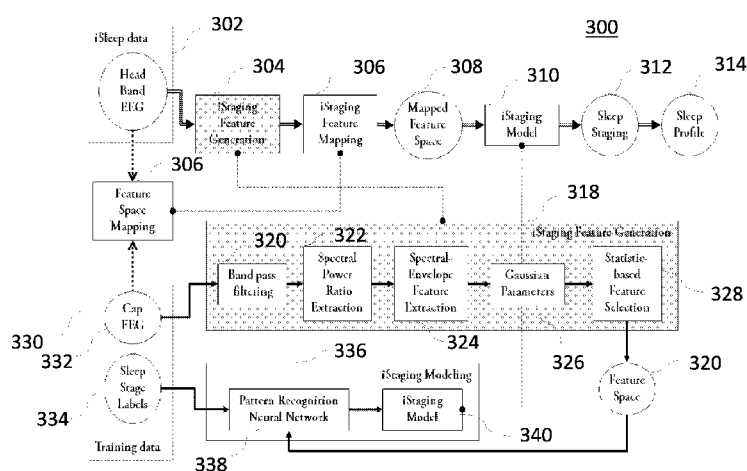
(54) **Title:** SLEEP PROFILING SYSTEM WITH FEATURE GENERATION AND AUTO-MAPPING

FIG 3

(57) **Abstract:** A method for profiling sleep of an individual is provided. The method includes defining a sleep feature space for the individual, measuring a brain wave for the individual during the individual's sleep, and mapping the sleep feature space in response to a comparison of the brain wave and a previous brain wave measurement used to define the sleep feature space. The brain wave may comprise a brain wave spectrum. The sleep feature space may comprise, or be composed of, spectral power and envelope measures. The method also includes modelling the mapped sleep feature space in response to recognized neural network patterns corresponding to each of a plurality of sleep stages derived from recognizing the neural network patterns from the sleep feature space and deriving a sleep profile for the individual from sleep stages determined in response to the modelled mapped sleep feature space and the brain wave of the individual.

