



- (51) **International Patent Classification:**  
*G08G 1/042* (2006.01) *G08G 1/14* (2006.01)
- (21) **International Application Number:**  
PCT/SG2012/000103
- (22) **International Filing Date:**  
26 March 2012 (26.03.2012)
- (25) **Filing Language:** English
- (26) **Publication Language:** English
- (71) **Applicant (for all designated States except US):** **ST ELECTRONICS (SATCOM & SENSOR SYSTEMS) PTE LTD** [SG/SG]; 29 New Industrial Road, ST Electronics Paya Lebar Building, Singapore 536213 (SG).
- (72) **Inventors; and**
- (75) **Inventors/Applicants (for US only):** **SU, Guangming** [SG/SG]; Blk 328, Jurong East Street 31, #11-140, Singapore 600328 (SG). **ROBERT, Ammoni Amutha** [IN/SG]; Blk 166, Hougang Avenue 1, #04-1588, Singapore 530166 (SG).
- (74) **Agent:** **ELLA CHEONG SPRUSON & FERGUSON PTE LTD**; P.O. Box 1531, Robinson Road Post Office, Singapore 903031 (SG).

- (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, 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, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, 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, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, 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, ML, MR, NE, SN, TD, TG).

**Declarations under Rule 4.17:**

— of inventorship (Rule 4.17(iv))

[Continued on next page]

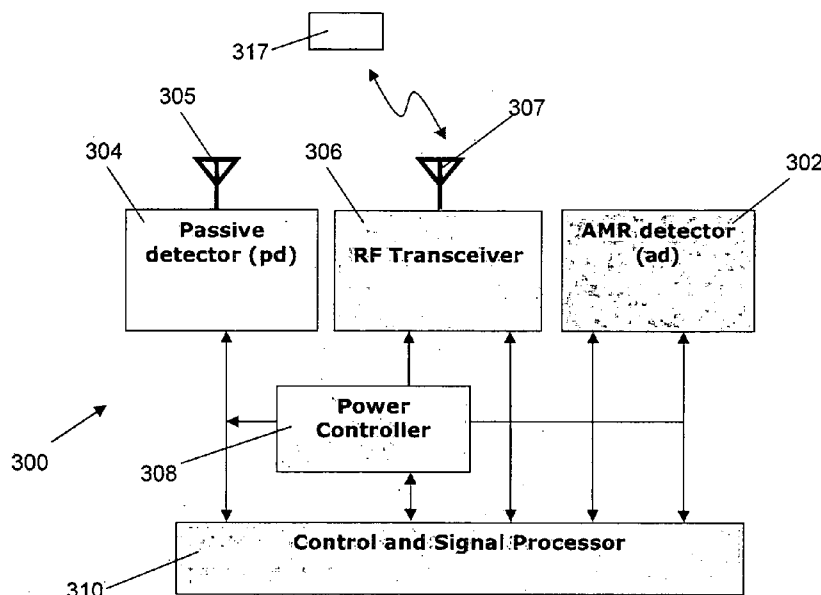
(54) **Title:** SENSOR, SYSTEM AND METHOD FOR VEHICLE DETECTION

Figure 3

(57) **Abstract:** A sensor module, a sensor network, and a system and method for vehicle detection are provided. The sensor module comprises an active detector configured to generate an active detection signal based on earth's magnetic field strength at a spot; and a passive detector configured to generate a passive detection signal based on an energy level of a radio-frequency (RF) signal at the spot; wherein a presence of the vehicle at the spot is determined based on at least the active detection signal.

**WO 2013/147699 A1**



---

**Published:**

— *with international search report (Art. 21(3))*