

Title (en)

METHODS FOR GYRO BIAS ESTIMATION USING GPS

Title (de)

VERFAHREN ZUR KREISELNULLPUNKTABWEICHUNGSSCHÄTZUNG MITTELS GPS

Title (fr)

PROCEDES PERMETTANT D'ESTIMER LE BIAIS D'UN GYROSCOPE AU MOYEN DU GPS

Publication

EP 0934506 A4 20010117 (EN)

Application

EP 98939051 A 19980402

Priority

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Abstract (en)

[origin: WO9849577A2] Augmenting the GPS receiver (30) with some form of Dead Reckoning (DR), such as a gyros (35), fills in the gaps occurring as a result of loss of GPS coverage. The present invention permits reliable and automatic estimation and calibration of the gyro zero rate bias. In particular, three specific methods (FIGs. 2-4) are disclosed whereby one method (FIG. 2) makes use of a "GPS gyro" for detecting vehicle heading change, another (FIG. 3) makes use of a "GPS accelerometer" for detecting stationary periods, and another (FIG. 4) makes use of a Kalman filter model for open loop heading error and is used to extract the contribution of and so estimate the gyro bias.

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CPC (source: EP US)

G01C 21/28 (2013.01 - EP); **G01S 19/396** (2019.07 - EP US); **G01S 19/53** (2013.01 - EP)

Citation (search report)

- [X] US 5424953 A 19950613 - MASUMOTO YUTAKA [JP], et al
- See references of WO 9849577A2

Cited by

CN110045399A; CN106500693A

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