

Title (en)

METHOD FOR INDOOR AND OUTDOOR POSITIONING AND PORTABLE DEVICE IMPLEMENTING SUCH A METHOD

Title (de)

VERFAHREN ZUR INNEN- UND AUSSENPOSITIONIERUNG SOWIE TRAGBARE VORRICHTUNG ZUR DURCHFÜHRUNG DIESES VERFAHRENS

Title (fr)

PROCEDE DE LOCALISATION EN INTERIEUR ET EXTERIEUR ET DISPOSITIF PORTATIF METTANT EN OEUVRE UN TEL PROCEDE.

Publication

EP 3060881 A1 20160831 (FR)

Application

EP 14783636 A 20141013

Priority

- FR 1360384 A 20131024
- EP 2014071839 W 20141013

Abstract (en)

[origin: WO2015058986A1] The invention relates to a device for positioning, suitable for being provided in a mobile body, which comprises at least one inertial measurement unit (1) including a 3D gyrometer and a 3D accelerometer, a calculation unit (2) which receives the measurement results from the gyrometer and from the accelerometer at a sampling rate, and restoration means (4, 5) for positioning the mobile body, the calculation unit performing: in a preliminary step (12) where said mobile body travels a known path, the calculation of a coefficient of proportionality between the distance that was actually traveled and the unprocessed distance obtained by integrating the time derivative of the acceleration along said path; in a subsequent free movement step (13), positioning said mobile body using the dead-reckoning navigation method, said positioning being carried out using, as the distance travelled, the unprocessed distance obtained by integrating the acceleration time derivative, corrected by the coefficient of proportionality. Moreover, a model representing the drift due to the bias in the angular speed measurements output by the gyrometer is calculated by a regression between said measurements and the orientation of said known path (A, B), the measurements taken into consideration in the free movement step (13) being said measurements corrected by subtraction of said model.

IPC 8 full level

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CPC (source: EP US)

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Citation (search report)

See references of WO 2015058986A1

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