

HIGH-ACCURACY AMR POSITIONING SYSTEM WITH HYBRID MULTI-SENSOR FUSION ODOMETRY ESTIMATION AND POSITIONING METHOD THEREOF

ABSTRACT OF THE DISCLOSURE

A high-accuracy AMR positioning system with hybrid multi-sensor fusion odometry estimation and a positioning method thereof are disclosure. The main basic algorithm flow of the positioning method includes phase 1 sensor fusion, phase 2 sensor fusion, sensing landmarks/object and correcting errors. The positioning system includes a hybrid odometry generation module, an object recognition module, a coordinate update module and an odometry correction module, and has the capabilities of 1) Hybrid odometry, 2) Landmark relative pose, 3) Landmark database, and 4) Corrected odometry. By combining different types of sensors for fusion and converting different data into data in the same reference system, continuous update of the odometry estimation can be achieved by continuously iterating the observation model values, thus higher positioning accuracy.

FIG. 1