A Knowledge-Based Mapping and Planning Apparatus for Mobile Vehicle

Abstract

A Knowledge-Based Mapping and Planning Apparatus for Mobile Vehicle

This present invention relates to a knowledge-based mapping and planning apparatus for localization and navigation of a mobile vehicle or robot. The apparatus comprises three functional components: a navigation component comprises with several digital navigation units to collection navigation information from varies trajectories during the movement of a mobile vehicle or robot; a position component comprises with several position units to identify special targets for special tasks; and a micro-processor based digital mapping and planning component comprises with an advanced signal processing unit, which provides the output in numerical format to RS232 or USB ports. The invention is a knowledge-based localization and navigation apparatus to enable a mobile vehicle, such as service robot, to perform a serious of scheduled or specified tasks at different sites in unmanned manner without necessary to re-construction of the current building.

[Fig.1]