Orientation Identification and Path Following of Automated Guided Vehicle

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ABSTRACT

The thesis mainly discuss the path following of the AGV, focusing on the finished AGV as a model for developing a compatible fuzzy logic controller and simulating digitally (with computer) the possible effects of the controller. The device merges electric compass and the encoder in an effort to develop a direction-sensing system suitable for applying to the experiment car. The following steps must be taken to reach the aims stated above and to facilitate the research. 1. Testing the real AGV in motion or motionless: In terms of the real AGV, some numbers have to be measured. The particular features of the AGV system have to be explored and understood, and the digital, electronic components have to be tested thoroughly. 2. Developing a fuzzy logic control system compatible with the system: In terms of the fuzzy logic control system, one has to employ the experts'' experience and principle to define the fuzzy membership function. As soon as the system changes, the fuzzy membership function. Must be redefined and revised. Before any experiment is undertaken, the membership function has to be reconfigured according to the experimental system.

Keywords : AGV ; path following ; Fuzzy Logic Control ; Encoder

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