ABSTRACT

DESIGNING AUTOMATIC GUIDED DEVICE OF BOOKS

There are several methods returning scattered books in library, such as asking visitors to put them back to the bookshelf, recruiting more employees, or creating system that can return the books automatically. But, by using the system, visitors no need to walk to certain bookshelf. The system itself called Automatic Guided Device included of Automatic Guided Vehicle (AGV), RFID tag, scissor-lift, and book thruster. Each book has RFID tag which contains the book database. There are name of books and shelf location inside of the database. Visitors just need scan the book(s) and laid on the device, then the system will begin to operate. After that, this Automatic Guided Device sensor equipped will start its journey and go through to the location of bookshelf by following tracked line on the floor. There're spots in certain distance which indicate their bookshelves location. To show them, it uses ASCII Table in the C Source Code Program. This table is to represent information substitutes which contains certain number, then it will be declared as the bookshelf location spot. After reaching certain distance, scissor-lift lifts as high as the table. Then scissor-lift stops, while the book thruster removing the book from device into bookshelf. So, this system not only returning the books without any manual operation but also can do more things such as lifting and putting the books automatically at once.

Based on several tests, AGD reaches at certain spot within an average 66,42% of successfulness by using ASCII Table numbering format.

Keywords: Automatic Guided Device, Line Follower.