SYSTEM AND METHOD FOR AUTOMATIC DRIVING OF DRIVERLESS VEHICLES

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Abstract

The system for automatic driving of driverless vehicles, comprising; a sensor that senses a exact location of the vehicles, a data storage unit for storing the real time position value, a microcontroller for comparing the real time position with stored value so as to generate command signals, and a method for automatic driving of driverless vehicles, and a motor, and a method comprising the steps of; initially creating a route map using basic information, downloading the obtained route map, converting keyhole language format to comma separated value to extract latitude, sending a channel field request from an Arduino to the cloud server, calculating a degree and a distance required to move a bot on map.

Keywords: vehicle, Arduino, bluetooth, sensor, microcontroller.

1. Introduction

In the today world, technology is increasing from a small scale to a large scale, and road accidents are also increasing on the same scale. Driver error is most common cause of traffic accidents. In order to reduce the human error, there arises a possibilities with which this error can be minimizes so as to make driving as safer as possible. A driverless vehicles is one of the topic where transportation and innovation are considered to be perfectly combined for the safety of pedestrian moving on the roads. Basically, the movement of vehicles are controlled by a person itself. Sometimes while talking on phone the mind of the person is distracted from the driving which leads to chances of the road accidents and also sometimes due to high sound of songs playing inside the car the person is unable to fully focus on the driving. In order to minimize the aforementioned problems there is need to develop a system that automatically controls the movement of vehicle in economical and environment friendly manner. It also helps to generate a map on the basis of source and destination to reach the route.

2. Experiment

The system and method for automatic driving of driverless vehicles, thereby generating a route map using basic information, such as a source and a destination to reach exact location and later comprising the stored data with a real time position data to determine the real time position of vehicles in the terms of latitude and longitude [1]. The sensor is installed in the system for sensing the current location of the vehicles in the terms of longitude and latitude and later the transferring the obtained measurements to a server location [2]. [3][4]. The bluetooth module is connected to the sensor for transferring the correct position information between the cloud server and a user interface [5][6]. The data storage unit is connected to the bluetooth module for storing current position of the vehicles in the terms of longitude and latitude. The microcontroller is connected to the data storage unit for differentiating current position with the previously stored value so as to generate command signals [7]. The motor is connected to the microcontroller for receiving the command signals for the automatic movement of the vehicles from location to another location. It basically converts one form of energy to another form of energy, such as thermal energy to rotational energy that accerlates the vehicles [8].

3. Result and Conclusion

The method is develop to minimize the human efforts to drive the car for short and long interval of time. It is basically develop to reduces the chances of accident occurs due to bad driving of the vehicles. It is used to generate the route map of the exact location where a person want to reach using a specific source.

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