

GPS guided auto sensing system for motor vehicles

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Abstract

Driver errors are the most common cause of traffic accidents. Mobile phones, in-car entertainment systems, traffic volume increases, road systems becoming complicated contribute towards such driver errors. This paper introduces developing a GPS guided auto pilot system for vehicles. This system will be a driverless vehicle system. The user has to give the location of the destination to the system and then the system will automatically navigate to the given destination. These systems are currently used in aircraft, submarines and ships but not used in ground vehicles. Use of such systems in the open street is more complex than use of such systems in air or marine systems. The possible route to the destination must be selected by the vehicle after the destination coordinates are given by the user. Then the vehicle navigates through the open streets without colliding with other moving or non-moving objects. GPS sensor takes real time coordinates of the vehicle and decide the direction to be moved with respect to the given destination coordinates and pass control signals to the motor controller. While navigating, the vehicle keeps appropriate safe distance and speed with the vehicles in front of it. If the lane is not clear, the vehicle applies breaks to avoid collisions. Sonar sensors are used to detect the object in the road as they are more convenient in the outdoor applications. With further developments, this system will be able to assist drivers who drive long trips and play a vital role in minimizing road accidents.

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