SMART CAR-SECURITY SYSTEM USING GLOBAL SYSTEM FOR MOBILE AND GLOBAL POSITIONING SYSTEM

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ABSTRACT

In Malaysia, car stolen cases are considered high even that recent statistic has shown that the percentage has decreased. The percentage of stolen car is decreasing because of the number of cars being registered on the road is high every year. To prevent the cars from being stolen, car manufacturer has equipped each car that they produced with a simple one-way communication alarm system. This factory-equipped system is not enough to prevent the car from being stolen. The objective of this research is to provide a system that can prevent the car from being stolen or relocating the car after it has been hijacked. The proposed system is designed by taking advantage of the Global Positioning System (GPS), and Global System for Mobile Communication (GSM) technology.

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CHAPTER 1

INTRODUCTION

1.1 BACKGROUND OF STUDIES

A car security system is an essential item to have when a car is manufactured for the user. The main point of having a car security system is to ensure that the car is secured and it is safe from car thieves. In Malaysia, car theft cases are very common. Statistic has shown that a car gets stolen every 24 minutes[1]. From the statistic, it can be concluded that it would take only about 3 minutes to get a car stolen and most of the stolen cars are shipped to other countries to be sold at a cheaper price or stripped down for spare parts[2][3].

Most of the car security system that is offered by the car manufacturer has only one-way communication which can only activate and deactivate the car security system. There is also an option to install an aftermarket two-way alarm system where the user can get a feedback about the car. But alarm systems have the same limitation for its range of communicating which is between the remote and alarm module[4].

For the one-way alarm system, the maximum range is 1000m, and for two-way alarm system, the maximum range is 3000m[5]. After the car is outside the range from its transmitter, it cannot interact with each other. This is because the alarm system is using normal radio frequency to interact, and it can easily be duplicated by thieves[4],