

Automated gate barrier using rfid



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Background of the Study

Technology is a quite broad term. It encompasses the entire human-made world. It refers specifically to the knowledge, processes and products of technological activity. Computers are one of the most common sources of technology use to secure and monitor the in and out of the vehicles inside the subdivision. Security is always an important issue to be taken care in any organization especially to a place like Subdivision. There are many people entering this premise and proper security system will ensure that this place is safe for everybody. Good security system will reduce unnecessary incidents such as theft, intruders and etc and due to this automatic identification is necessary. Automatic identification is the broad term given to a host of technologies that used machines to identify objects such as smart cards, voice recognition, optical recognition and RFID tags.

A proposed Automated Subdivision Barrier for Mulawin Heights using RFID with Road Mapping is a system that facilitates the security to ease their work using a RFID as an automated release of barrier. This system will also detect the vehicles that pass thru the subdivision. The Mulawin Heights Subdivision is a residential subdivision developed on March 1999, situated at Brgy Tugatog Orani, Bataan. It is divided in two phase (phase 1 and 2). As of this time, Mulawin heights Subdivision use a manual security system, the guards logged the vehicles and people that pass thru, using a logbook and release the barrier manually thus, it takes time and effort for the guard on duty to open and close the barrier manually. This proposed system aimed to develop a wireless system to detect the in and out of vehicles. The system was based on Radio Frequency Identification (RFID) technology and consists of a RFID

tag. It detects the tag ID and if the tag ID is stored in database then the barrier will up and allow the vehicles to pass thru the subdivision.

Statements of the Problem

General

Problem

How to develop and implement an Automated Subdivision Barrier using RFID for

Mulawin Heights with Road Mapping?

Specific

Problems

How to develop an automated barrier that resolves the manual process of the system. How to improve the security on monitoring the vehicles inside the subdivision. How to know the time and date of in and out of vehicles.

How to detect the vehicles inside the Subdivision.

Objectives

of

the

Study

To develop an Automated Subdivision barrier for Mulawin Heights using RFID with road mapping that can help their daily operations thus to improve the efficiency of their manual process. Specifically, it aimed to:

Design an Automated Subdivision barrier using RFID with road mapping system that is capable of:

- A. Automated barrier
- B. Automatic Log-in/out
- C. Check what time/date
- D. Tracking Vehicles

Create the system using VB. Net, MY SQL server, Windows XP, Adobe Photoshop as software requirements and RFID, GPS, Computer as hardware requirements. Test and improve the developed system in terms of

functionality and efficiency. Evaluate the functionality, reliability, usability, efficiency, maintainability and portability to the developed our system.

Scope and Delimitations of the Study

The Automated barrier system will focus on automatic releasing the barrier and in using GPS we track the vehicle that pass thru inside the subdivision. At first when vehicles enter the subdivision our proposed system detect the RFID tag whether it is resident or not, if it is resident the barrier will release and the vehicle will enter inside the subdivision and track the vehicle. If it is not the visitors will borrow RFID tag from guard and the barrier will release and the vehicle will enter the subdivision and track the vehicle, before the vehicle exit the subdivision the visitor will return the RFID tag to the guard. Upon developing the system we will use software requirements which are Visual Basic 2008, My SQL Server, Windows XP, Adobe Photoshop and hardware requirements RFID Reader, RFID tag. Functionality reliability, usability, efficiency, maintainability and portability.

Significance of the Study

A proposed Automated Subdivision Barrier for Mulawin Heights using RFID with Road Mapping will give a benefit to the following. In terms of individual; for the guard it will ease their work and lessen the burden of using manual release of barrier, to the Home Owner Association it will help the Home Owners to secure their place in tracking vehicle that pass thru inside the subdivision. If this study implemented successfully in Mulawin Heights our country will also take benefits by adapting and implement it in some subdivisions.