****Cairo University

Faculty of Engineering

Electronics and Electrical Communications Engineering Dept.

|  |
| --- |
|  |
| Car Security System |
|  |
| **Prof. Dr. Ibrahim Qamar** |

|  |  |
| --- | --- |
| Student Names | Student E-mail Addresses |
| Ayman Abd Elsalam Ahmed | [thetrax@ymail.com](mailto:thetrax@ymail.com) |
| Dalia Mokhtar El- Fayoumy | [dale\_elf2008@yahoo.com](mailto:dale_elf2008@yahoo.com) |
| Randa Abdel Fatah Mostafa | ro[ny.jason@hotmail.com](mailto:jason@hotmail.com) |

Car Security System

Prof. Dr. Ibrahim Qamar

**Abstract:**

A prototype for our idea and the combination between detecting and controlling, software and hardware project.

At first we should talk about the idea of our project (product) in non-technical

way as will be shown to be easy to know the importance and the main rule of every chapter of the following chapters.

As a product our car security system is a new way that could relate your car to your personal mobile using GPS to be more accurate, in case of theft an alarm SMS will be sent to the user’s personal mobile to inform him .

Then the user can get the location of his car, using either SMS messages or a User Access Program (UAP) developed to facilitate this process. UAP enables user to track his car location and movement on a map, lock the car, and trigger car security siren.

After the user confirms these options that he has chosen, an encoded SMS will be sent for example (act-s\_on-lck) and this message is encoded by a simple coding

that will be shown later in the user access mobile program.

This SMS will be received by the mobile in the car, this mobile will be connected

to microcontroller through a Bluetooth module in the hardware kit and the communication between the microcontroller and the Bluetooth module is

achieved using ASCII commands.

Of course the microcontroller has special connections in the car to be able to do

these operations and all the details of these connections and the PCB will be shown in Hardware chapter.

**CONCLUSION:**

In the future we want to make this project as a true product and also to market

our product, so we will try to solve all problems and to increase the controlled parts in the car as we control now in our prototype project the following:

**The power down**: It means to stop the car via a control message come to our

hardware through serial cable connecting between the controller and our hardware.

**Flash**: Is to flash all lamps in our car via a control message.

**Centre Lock**: Is to lock the lock the doors in the car via a control message. We may

control more than one thing in the car via only one message.

**The glass of the doors**: also we may control the glass of the car via a control

message, but the car should have an electrical glasses and to use external unit to drive the glass using our hardware with the same concepts.

Also there are other things in the car to be controlled in the future and we will

take it into our consideration to develop our product and to solve all problems we

face and can’t solve it in our prototype, also to open this field as a basic concept

in car security systems to benefit the coming generations.

Our hardware may have a lot of improvements in the future to support more

outputs, we may also increase a system to make the stealer to be sleep, so we

have a lot of ideas to improve, develop, increase hardware to our prototype in the future to be a real product.

Finally, concerning what we have learned from this project. We have learned

many important topics in software development like Java programming language, mobile phone (Android) programming and its limited resources challenge,

multithreading, socket and Bluetooth programming.

We have acquired a good experience in hardware design and interfacing, tested

our embedded systems programming in a real challenging project.