

**SMS BASED WIRELESS HOME APPLIANCE CONTROL
SYSTEM AND SECURITY**

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SYSTEM AND SECURITY**

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**This report is submitted in partial fulfillment of the requirement of the
Bachelor of Computer Science (Computer Networking)**

**FACULTY OF INFORMATION AND COMMUNICATION TECHNOLOGY
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DECLARATION

I hereby declare that this project report entitled

**SMS BASED WIRELESS HOME APPLIANCE CONTROL SYSTEM AND
SECURITY**

is written by me and is any own effort and that no part has bees plagiarized without
citations.

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SUPERVISOR :  DATE : 25/6/2010
(NOR AZMAN BIN MAT ARIFF)

DEDICATION

To my God , ALLAH SWT...

To my greatest idol, Rasulullah SAW...

To my beloved parents, Mastor Bin Suratman and Siti Zainab Binti Sungip...

To my brother, Hazril Faizil Bin Mastor...

To my sisters, Farah Amira, Farah Nazirah and Farah Azwin...

To my supervisor, En. Nor Azman Bin Mat Ariff...

ACKNOWLEDGEMENT

In the name of Allah and most Merciful and the Creator of this Universe

Firstly, I would like to express my gratitude to Mr. Nor Azman Mat Ariff, my PSM supervisor for guiding and give me a lot of knowledge in the process of undergoing my Projek Sarjana Muda I (PSM I). I also would like to thank to all my lecturers for aiding me with a valuable and strong academics and technical knowledge during a period time to finish my PSM I and besides giving motivation to gain self-confidence in the process of developing the system.

Special thank to my beloved family because always pray for me and giving me endless support and encouraged me throughout my project.

Lastly, I would like to express a special thanks to my entire friend especially to my BITC classmates for their support and encouragements from the beginning and to the end during fulfilling my project. In addition, to all that have involved directly or indirectly in developing this system is much appreciated and a thousand of thank you from me. May Allah Bless you all and once again thank you.

ABSTRACT

SMS Based Wireless Home Appliance Control System and Security is an application that helps consumer or homeowners to monitor the house from intruders entered. It requires a database that will be used to store the data. Besides that, user can switch on and off function, long distance. The use of mobile phone is also required in this application to determine if the intruder entered the house.

ABSTRAK

SMS Based Wireless Home Appliance Control System and Security adalah sebuah aplikasi yang membantu pengguna atau pemilik rumah untuk mengawasi rumah daripada dimasuki penceroboh. Aplikasi ini mengabungkan beberapa aplikasi yang dimanupulasikan menggunakan fungsi-fungsi peralatan yang digunakan. Ianya memerlukan sebuah pangkalan data yang akan digunakan untuk menyimpan maklumat bagi pengguna atau pemilik rumah. Selain itu, pengguna boleh menghidupkan dan mematikan fungsi peralatan rumah secara jarak jauh. Penggunaan telefon bimbit juga diperlukan dalam aplikasi ini bagi mengetahui sekiranya rumah dimasuki penceroboh dan berfungsi sebagai menghidupkan serta mematikan fungsi peralatan rumah sekiranya keluar dari rumah.

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LIST OF ABBREVIATIONS

HACSS	-	SMS Based Wireless Home Appliance Control System and Security
GSM	-	Global System For Mobile Communication
SMS	-	Short Message Services
PC	-	Personal Computer
RAD	-	Rapid Application Development
SDLC	-	Software Development Life Cycle
ASP	-	Active Server Pages
API	-	Application Programming Interface
VB	-	Visual Basic
GPRS	-	General Packet Radio Services
DFD	-	Physical data flow diagram
ERD	-	Entity Relationship Diagram
DDL	-	Physical database design
GUI	-	graphical user interface

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CHAPTER 1

INTRODUCTION

1.1 Project Background

SMS Based Wireless Home Appliance Control System and Security (HACSS) is a system that focuses on remote control home appliances and home security while the owners leave the house. It uses the GSM network to send messages from users to the system. In addition, the system will use wireless technology to detect intruder that entering the house. Thus, this system is focus on homeowners as a user.

The project proposes two sub-systems in one system. The first system to control home appliances with switch on or off automatically using SMS and the second subsystem is monitoring safety around the house to automatically detect the disorder. However, for this project the use of wireless technology will be implementing by simulated using the HyperTerminal to transmit data as an intruder.

1.2 Problem Statement

Today, often read and heard many crimes happen everywhere especially at house. House often was most popular places where crime happens. It including stealing, raping, killing, kidnapping and other crime activity that could happen. The problem with current traditional system is there is no a mechanism that provide a notification to prevent any crime activity to the owner.

There a lot of security system, that offers their client a fast and good security mechanism. It including more secure lock system, more complicated authentication to prevent fraud user and many other feature. Nowadays there were not a security system that applies the Short Messaging Services (SMS) in informing or notifying the owner for security propose and wireless has not being using widely.

1.3 Objectives

After some research and analysis in all aspects, SMS Based Wireless Home Appliances Control System and Security (HACSS) is developed to create solution and overcome the problems associated with the system. The objectives are:

- a) To check the home equipment using SMS application. The user will check all the status of home appliances via SMS.

- b) To control home appliances remotely with using SMS applications. Appliances control tested at air conditioner, alarm and garden light. User will send messages to the system to turn on or off the equipment. Then, system will simulate the button to green color for (on) and white color to (off). The system also will automatically send message successfully activate or deactivate to the user.
- c) To provides the remote security monitoring. The security located at the main gate, entrance door and living room windows. Message will be send to the user when the system detects interference. Serial port used to connect two (2) computers where to send data from HyperTerminal to the system. The system will simulate the button to black color when the system detects interference.

1.4 Scopes

The scope of the project is divided into four sections. The sections are user, intruder, home appliances and SMS application.

- a) User. The user will control of home appliances remotely and monitoring of security when users leave the house.
- b) Intruder. The HyperTerminal will send data to the system via the serial port as a intruder in which simulated use of wireless technology.
- c) Home appliances. User will switch on or off the equipment and the actual situation; the system connects to the home to activate equipment called Motion Detection, which is outside the scope of the project.

Appliances control in the home is air conditional, alarm and garden light while security located at the main gate, entrance door and living room windows.

- d) SMS application. SMS is use to send and receive from the users and to the system.

1.5 Project Significance

SMS and Wireless are two of most used technology now day, but still rare applications that combining both communication technologies in a single application especially for security propose. Here, SMS Based Wireless Home Appliance Control System and Security (HACSS) will make the project by combining both communication technologies for security and controlling propose. Besides that, the system will give more benefit to the user or owner when the system automatically generated SMS to inform the user about the security risk.

1.6 Expected Output

After completion of this project, HACSS is expected help the user especially for the owner in improving their safety. The project will differentiate between the user and the intruder. The user will to check status of home appliance and switch on or off the equipment via SMS. Besides that, the intruder will send intrusion on the system and SMS alert received by the user.

Further more, the application expected to exploit the normal two mechanism used by user nowadays that are the SMS application and Wireless technology.

1.7 Conclusion

SMS Based Wireless Home Appliance Control System and Security (HACSS) is a computerized system and used some hardware to manage and control home appliance. Generally there are five modules in the system which is appliance control module, simulate incoming SMS module, security module, test intrusion module and report module. This system is focus on homeowners as a user.

As the conclusion in the chapter, this project will apply and combining several technologies in a single project. Those technologies often used and applied in many propose. The problem that arises is mention in the problem statement and will be solve through the project objective. Scopes defines what will develop in this project to make sure the expected result successfully fills the requirements. The project significance will be applying the technology in future.

According the result of chapter one, this system will proceed with chapter two. Next chapter will discuss the details of project literature and methodology approach. This is including the details description of fact and finding process, project methodology, and project hardware and software requirements include schedule and project milestones.