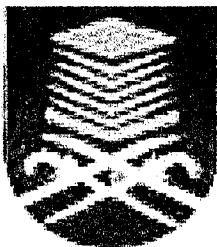


**A SHORT MESSAGE SERVICE FOR CAMPUS WIDE  
INFORMATION DELIVERY**

**A Project Paper Submitted To The UNIVERSITI TEKNOLOGI MARA  
In Partial Fulfillment Of The Requirement For The  
Bachelor Of Electrical Engineering (Hons)**



**MOHAMMAD BIN MAT ARIFFIN  
Faculty Of Electrical Engineering  
UNIVERSITI TEKNOLOGI MARA  
40450 Shah Alam  
Selangor**

## **ACKNOWLEDGEMENT**

In the name of Allah, The Most Gracious, Most Merciful and him alone is worthy of all praises.

Firstly, I would like to express my gratitude and most sincere appreciation to my supervisor, Prof. Madya Norhayati Ahmad for her guidance, counsels and for putting much effort in providing useful advice to improve this project. She is the greatest inspiration. I would also like to thank Encik Jaafar Abu Bakar from Ericsson Malaysia for contributing much through a lot of useful discussions and to provide much help in the early part of the project.

My deepest gratitude goes to my beloved family, for their boundless supports and encouragement towards the completion of this dissertation.

Last but not least, I wish to convey my thanks to the Faculty of Electrical Engineering and special thanks to all my friends for their understanding and contribution to this project.

The kindness, corporation and supports from all of the above-mentioned people would always be remembered.

## **ABSTRACT**

This project is about software development that is based on Short Messaging Service (SMS) system for delivering messages to students with mobile phones. The students' information is held in a database that can be accessed through Graphical User Interface (GUI). This software allows the lecturer to maintain a list of students on each course with their respective mobile phone numbers. Upon selection of a send function, an individual may be sent with results or notices from their lecturer.

The steps and ways taken to key in the student information via GUI and also how to send the message using the software are indicated. The software is developed using Visual Basic 6.0 with Query based on Structured Query Language (SQL) and ActiveX Data Object 2.0 Library (ADO). Database is held in Microsoft Access 97.

The interface between Simplewire's Wireless Message Protocol servers and an External Messaging Entity is designed. Using this interface, an external entity can submit, cancel, register, check, lookup, and query Simplewire's network. It is done using Simplewire's Wireless Message Protocol (WMP) Software Development Kit (SDK) SDK 2.0 and Simplewire™ ActiveX SMS (SDK) 2.4.2 for Visual Basic.

# TABLE OF CONTENTS

<b>CHAPTER DESCRIPTION</b>	<b>PAGE</b>
DECLARATION	i
ACKNOWLEDGEMENT	ii
ABSTRACT	iii
TABLE OF CONTENT	iv
LIST OF FIGURES	vii
LIST OF TABLES	ix
LIST OF ABBREVIATIONS	x
<b>CHAPTER 1</b>	
<b>INTRODUCTION</b>	
1.1 Introduction	1
1.2 Wireless Messaging	2
1.2.1 History of the Text-Message	2
1.2.2 Proliferation of the Text-Message	2
1.3 Short Message Service (SMS)	3
1.4 Simplewire's Wireless Messaging Protocol	4
1.4.1 Functional Overview	6
1.4.2 Interface Specification	6
1.5 Scope of Work	6
1.6 Organization of the Project Report	7
<b>CHAPTER 2</b>	
<b>SOFTWARE DEVELOPMENT KIT AND     TECHNOLOGY OVERVIEW</b>	
2.1 Introduction	8
2.2 Visual Basic 6.0 with Query based on SQL and ActiveX Data Object 2.0 Library	8
2.2.1 Query based on SQL	9
2.2.2 ActiveX Data Object 2.0 Library	10

2.2.2.1	Installing and Creating a Reference to ADO in Visual Basic Application	11
2.3	Simplewire™ ActiveX SMS Software Development Kit 2.4.2	12
2.4	Database	14
2.4.1	Introduction to Microsoft Access	15
2.4.2	Database development	16
2.5	TCP/IP	17
2.5.1	TCP/IP and the Internet	17
2.5.2	TCP/IP Model	18
2.5.3	The Socket Interface	19
2.5.4	WINSOCK	20

## **CHAPTER 3**

### **DESIGN METHODOLOGY**

3.1	Introduction	21
3.2	Software Development	21
3.2.1	Software design	22
3.3	Database and Table Design	26
3.3.1	Database Window	26
3.3.2	Table	27
3.3.2.1	Table 1: Categories	29
3.3.2.2	Table 2: Contacts	30
3.3.2.3	Table 3: Links	31
3.3.2.4	Table 4: Reminders	32
3.3.2.5	Table 5: Users	32
3.4	Messaging System Design	34
3.5	Socket Design	35

## **CHAPTER 4**

### **RESULT AND DISCUSSION**

4.1	Introduction	37
-----	--------------	----