BORANG PENGESAHAN STATUS TESIS

JUDUL: **FTMK STUDENT MOBILE CHATTING SYSTEM VIA BLUETOOTH**

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FTMK STUDENT MOBILE CHATTING SYSTEM VIA BLUETOOTH

MUHD FAHIMI BIN ISMAIL

This Report is submitted in partial fulfillment of the requirements for the
Bachelor of Computer Science (Computer Networking)

FACULTY OF INFORMATION AND COMMUNICATION TECHNOLOGY
UNIVERSITI TEKNIKAL MALAYSIA MELAKA
2010

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DECLARATION

I hereby declare that this project report entitled

FTMK STUDENT MOBILE CHATTING SYSTEM VIA BLUETOOTH

is written by me and is my own effort and that no part has been plagiarized without citations.

STUDENT : _____ Date: 25/06/2010

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SUPERVISOR: _____ Date: 25/6/2010

(DR ABDUL SAMAD BIN SHIBGHATULLAH)

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DEDICATION

To my dear supervisor
Dr. Abdul Samad Bin Shibghatullah

To my beloved parents
Mr. Ismail Bin Mat Daud and Mrs. Zaharah Binti Mat Hassan

To my siblings
Nurul Atiah bt. Ismail
Noorilinadiah bt. Ismail
Muhammad Fahizi b. Ismail

To my beloved best friend
Mohd Rashdan b. Abdul Rahman
Mohd Bazli b. Hairirizaman
Khairul Farhan b. Hussein

And

Fellow Friends

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Last but not least, thank you for all my beloved friends that give me endless support during making this project.

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ABSTRACT

FTMK Student Mobile Chatting System via Bluetooth is a system that develops to help user to communicate each other without pay anything. Generally, this system is target for user that spent a lot of money to sending message to each other in short ranges especially students that sending a lot of messages via their mobile phone in learning progress. User can use this system in some range that Bluetooth support and depend on how good their mobile phone' Bluetooth receive the signal from the other user. The project methodology selected in develop this system is Rapid Application Development (RAD) and was design to make it user friendly.

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ABSTRAK

FTMK Student Mobile Chatting System via Bluetooth adalah sistem yang dibangunkan untuk membantu pengguna untuk berkomunikasi antara satu sama lain tanpa melibatkan pembayaran. Secara umum, sistem ini adalah target untuk pengguna yang menghabiskan banyak wang mereka untuk menghantar mesej ke satu sama lain dalam jarak pendek terutama pelajar yang menghantar banyak mesej melalui telefon mereka dalam pembelajaran mereka. Pengguna boleh menggunakan sistem ini dalam jarak beberapa yang menyokong Bluetooth dan bergantung pada seberapa baik telefon mereka 'Bluetooth menerima isyarat dari pengguna lain. Metodologi projek yang dipilih dalam membangunkan sistem ini adalah Rapid Application Development (RAD) dan direka bentuk untuk lebih mesra pengguna.

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LIST OF ABBREVIATIONS

CLDC	-	Connected Limited Device Configuration
J2ME	-	Java 2 Platform Micro Edition
JAD	-	Java Application Descriptor
JAR	-	Java Archive
MIDP	-	Mobile Interface Device Profile
PDA	-	Personal Digital Assistant
PSM	-	Project Sarjana Muda
RAD	-	Rapid Application Design
USB	-	Universal Serial Bus
UTeM	-	Universiti Teknikal Malaysia Melaka

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CHAPTER I

INTRODUCTION

1.1 Project Background

The application will be develop is a new module for Bluetooth devices. It is usable for university student, lecturer that used mobile phone with built-in Bluetooth. Since Bluetooth feature has its own constraint in term of distance limits, so it will be suitable to be used in a limited range of distance. User may used this function especially when they are shy to ask their lecturer about the topic, in classroom/ hall that content of hundred students, there some student that shy to ask question. That student can send a chat message to lecturer during the class. Means there is an opportunity for shy student to ask question to their lecturer even if they had no prepaid credits.

In other situation, a student can make a discussion through mobile when they are in the library. They can be separated to find reference book and still letting the other

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friend to know the points in the book while that's friend is in the other section. The current system that already exists, but it still not widens yet to cover variety of file type and the system also open source.

1.2 Problem Statement

Nowadays user of mobile devices especially students send a lot of SMS among them every day. Even if they sit nearly, they still sending SMS for each other. This condition will consume too much cost for the user. Especially when they are using the different kind of network operator. Besides, they do not have privacy due to the network operator kept the data of SMS that they sent.

1.3 Objectives

The objectives of developing Chatting System for Mobile Devices using Bluetooth are:

- **To develop application for chatting between two mobile device**

  The application will allow its users to communicate with multiple users with simple chat metaphor.

- **To use Bluetooth environment as a medium of application**

  Bluetooth as the protocol that need to be expand for sending and receiving a chat message. Only mobile with Bluetooth feature be able to install and use chatting application.

- **To develop a free chatting system**

  The application is totally free as it uses the Bluetooth to communicate with other devices.

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1.4 Scope

The scope of the project is to develop a FTMK Student Chatting System for Mobile Device using Bluetooth. The target user for this project is FTMK student and lecturer as this group of people sending the most SMS a day. The system level is suitable for beginner and intermediate level. This project consists of four modules which are:

- Sending Messages
    - User can send the messages through this system to another device that connected with the system.

- Receiving Messages
    - User can receive messages from other device that connect with the system.

- Displaying Messages
    - User can view the messages at their device through the system

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1.5 Project Significance

This project will bring the benefits to the user which can allow them to communicate among them without paying any cost. This will helps the user especially students and will give them a comfortable learning environment. They do not need to think about the cost anymore.

1.6 Expected Output

The expected output for this project is to have application that cans chatting with other mobile devices using Bluetooth environment. The application that is free to use and hopefully it can helps students to improve their learning styles by implement the Bluetooth technology in their daily lives.

1.7 Conclusion

This chapter discusses about the background and overview of the project. In order to make this project successful, it still needs a lot of research about the current system and structure of the system that will develop. In the next chapter will discuss about literature review and project methodology.

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CHAPTER II

LITERATURE REVIEW AND PROJECT METHODOLOGY

2.1 Introduction

In this chapter, it will discuss about the previous or existing system which is related to this project and the approach that going to be used in order to collect appropriate information. Research will be conduct and information gained will be analyzed to prefer the greatest among others.

Literature review also focuses on domain that related with the project. The keyword that being used in this project also been explained. This topic also discuss about the previous research and makes the comparison between of them. In project methodology, it will discuss in detail about what type of methodology and description in each stages of the selected methodology.

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2.2 Literature Review

2.2.1 Domain

This project is based on ICT in education and training. The domain of this project is to develop a mobile application for FTMK students use for chatting via Bluetooth. Nowadays, the rapid development in mobile technologies has brought a new trend to people especially the young users. If we see now, our society is becoming more and more depend on wireless technology as a new area of uses is introduced.

The Bluetooth is a completely different way to form connections between electronic devices in close proximity. It might be thought of as a cable-replacement technology, but its applications are limited only by our imaginations. The Bluetooth wireless technology is also spreading rapidly. The Bluetooth technology will therefore spread because of the general need for mobile device.

This work basically focused on programming an application that will be enable users on at least two different mobile devices with Bluetooth to chat. Furthermore, the using chatting system via Bluetooth is totally free because of the Bluetooth application did not connect with any operator and it also easy to use.

2.2.2 Keyword

Keyword is a few words that important in this project. Here is a description for every keyword listed in this project.

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Bluetooth

Bluetooth's Logo

Figure 2.1: Bluetooth Logo

Bluetooth is an industrial specification for wireless Personal Area Network (PAN). Bluetooth provides a way to connect and exchange information between devices such as mobile phones, laptops, PC's, printers, digital cameras, and video game consoles over a secure, globally unlicensed short-range radio frequency. It is a new technology that is now becoming commercially available. It promises to change significantly the way we use machines. The Bluetooth specifications are developed and licensed by the Bluetooth Special Interest Group.

Table 2.1: Specification of Bluetooth Class.

Class	Maximum Permitted Power (mW/dBm)	Range (approximate)
Class 1	100 mW (20 dBm)	~100 meters
Class 2	2.5 mW (4 dBm)	~10 meters
Class 3	1 mW (0 dBm)	~1 meters

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Mobile Device

Mobile device is a pocket-size computing device. Basically, this device has small screen and miniature keyboard to make interact with the user. Mobile device can be separated into a few types such as mobile computer, game consoles and communication device. In this project, the mobile device that been focus is communication device such as mobile phone.

Chatting

Chat is one type of human interaction with another. In general, chatting basically consists of voice and language that can be understood between people who are chatting. In computer term, chatting is a system that allow user to communicate with each other by typing the message and the other user can read and reply the message instantly.

2.2.3 Previous Research

There are several existing application that using the same Bluetooth concept. Most of them need license to use and some are free. Each application has their own advantages and disadvantages.

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