BORANG PENGESAHAN STATUS TESIS*

JUDUL: MOBILE CAMPUS ALERT NOTIFICATION SYSTEM

SESI PENGAJIAN : 2009/2010

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MOBILE CAMPUS ALERT NOTIFICATION SYSTEM

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Bachelor of Computer Science (Software Development)

FACULTY OF INFORMATION AND COMMUNICATION TECHNOLOGY
UNIVERSITI TEKNIKAL MALAYSIA MELAKA
2009

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DECLARATION

I hereby declare that this project report entitled

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

STUDENT : _____ Date : 11/07/2009

(ABDUL HAKIM MASOD)

SUPERVISOR : _____ Date : 13/7/09.

(MISS MASTURA BAHARUDIN)

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DEDICATION

To my beloved parents,
Masod bin Mohd Amin and Rashidah bte Sudiran@Chotiran,
my brothers and sister,
I am in your debt.

To my lecturers, my friends and my love,
thank you for given me the excitement of student lives.

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ABSTRACT

Nowadays, with an increasing emphasis of criminal cases happen frequently near and inside the university area can be an offending to enhance the education level in university. Therefore, the Security Department of Universiti Teknikal Malaysia Melaka should enhance their security level in the campus to be more effective in order to manage this situation well. An alternative way should be introduce to support the security system in Universiti Teknikal Malaysia Melaka. This project in develop to help the security department to gain the usage of Information Technology. The project is Mobile Campus Alert Notification System or Campus Alert. The system will send the notification via SMS to the people inside the campus in order to aware the emergency happen. In order to fulfill this capability, the distributed application development is implemented. The sending process will be divided to several terminals in order to send SMS to thousands of people in a short time. A web-based system is developed as an essential part of a well-planned emergency preparedness plan as well as an ideal communications tool that the authority can rely on everyday. The user will register their mobile number in order to allow them to receive notification. The methodology use Campus Alert is Object Oriented Analysis and Design using Rational Unified Process (RUP) and Unified Modeling Language (UML).

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ABSTRAK

Peningkatan kes-kes jenayah masa kini lebih-lebih lagi sering berlaku berhampiran kawasan universiti dan di dalam universiti boleh menyebabkan usaha meningkatkan taraf pendidikan di universiti terganggu. Oleh itu, Jabatan Keselamatan Universiti Teknikal Malaysia Melaka perlu meningkatkan tahap keselamatan di dalam kampus dengan cara yang lebih efektif dan berkesan untuk menangani situasi ini. Universiti perlu mencari alternatif yang mampan yang mampu digunakan untuk membantu sistem keselamatan. Projek ini dibangunkan untuk membantu Jabatan Keselamatan dengan memanfaatkan teknologi maklumat. Projek ini merupakan Sistem Pemberitahuan Amaran Kampus Mudah Alih atau disebut Campus Alert. Dengan menggunakan teknologi Sistem Pesanan Ringkas(SMS), ia berupaya untuk mencapai seberapa banyak pengguna telefon mudah alih dalam usaha menyebarkan maklumat kecemasan yang berlaku di dalam kampus. Untuk mencapai usaha itu, senibina sistem telah digunakan untuk membangunkan sistem ini ialah aplikasi teragih. Ia bertujuan membahagikan penghantaran SMS kepada beberapa terminal supaya ia dapat dihantar dengan cepat dalam masa yang singkat. Sebuah laman web dibangunkan bertujuan untuk memudah usaha mentadbir sistem oleh Pentadbir. Pengguna juga boleh mendaftarkan telefon mudah alih mereka untuk membolehkan mereka menerima SMS. Metodologi yang digunakan di dalam sistem Campus Alert ini ialah Analisa dan Rekabentuk berdasarkan Objek yang diterangkan menggunakan RUP (Rational Unified Process) dengan UML (Unified Modeling Language).

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LIST OF ABBREVIATION

1. Campus Alert	Mobile Campus Alert Notification System
2. CDC	Connected Device Configuration
3. CLDC	Connected, Limited Device Configuration
4. GPRS	General Packet Radio Service
5. MIDP	Mobile Information Device Profile
6. KVM	K Virtual Machine
7. JSF	Java Server Faces
8. WAP	Wireless Application Protocol
9. WWW	World Wide Web
10. SMS	Short Message Service
11. MMS	Multimedia Messaging Service
12. VPN	Virtual Private Network

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CHAPTER 1

INTRODUCTION

1.1 Overview

With an increasing emphasis on safety in our nation's colleges and universities, such as robbery happen at UKM, it has become a necessity to implement effective communications procedures among both faculty and student to ensure the safety and awareness of our future leaders and their mentors. With Campus Alert, it can simplify contact faculty, staff, and the entire student body in the time is takes to read this message. As a mass notification system, Campus Alert has the capacity to trigger mass warnings and notifications in an emergency. It allows the authority to send thousands of SMS with a single click. The web-based system develop is an essential part of a well-planned emergency preparedness plan as well as an ideal communications tool that the authority can rely on everyday. This system will be develop for UTeM's authority to alert, create awareness and send notification to student and staff, only in emergency such as robbery, imminent threats to the safety or security of the campus community. This system is continuing efforts to improve communications at UTeM and to help keep the community as safe as possible. This kind of system has been implemented overseas such as at Rutgers, The State

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University of New Jersey. So, as UTeM become one of the top universities, the security system should be enhance.

The system will use the SMS technology to achieve the student, staff and authorized contractor to have any notification. As we do know now, the SMS technology is the fastest way to achieve the people. Therefore, the emergency notification can be send as soon as possible. It will help the UTeM's authority to take early precaution action to keep the community safety. The notification will be send by the Safety Department of UTeM via a web-based system. They can achieve the web-based online so that the notification can be sent anytime and anywhere by the authorized people.

1.2 Problem Statement

The university is a place for future leadership and mentors to develop their skills and experiences in order to manage the country well in the future. Therefore, the safety aspect is one of the top priority things needed to consider. The university must provide a good and efficient security system.

One of the security system provide by the university now is outdoor alert system such as alarm. The alarm will buzz the campus resident if any emergency happen. The problem is there is still a possibility for people not aware with alarm. The alarm sound may be misheard across the university campus. Therefore, the notification still doesn't reach the target people.

There are some cases false alarm been activate. This is because the alarm can be activated by anyone in the university. The consequences of the false alarm will bring panic to the whole university and people simply reject the precaution action need to be taken by them because of the frequently false alarm.

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There are security procedures to avoid alarm usage when a dangerous emergency happen such as robbery. It is better to keep the public indoor and calm in order to avoid the criminal taken any hostage. Therefore, the authority will do their job smoothly without worrying any hostage taken.

This project develops a system to alert student and staff to be aware any emergency and unexpected things happen in campus area. To be one of the top universities in the world a computerized system is needed to compete with others. The system will use SMS technology in order to reach target people as fast as possible. The web-based develops to give only authorized people can activate the alarm anytime and anywhere.

1.3 Objectives

The system that will be developed is due to the objective to enhance the security of UTeM. The objectives of developing this system are:

1. To provide a computerized system to alert student and staff if emergency happen.
2. To use mobile to reach student and staff.
3. To make fast notification to the staff and student.
4. To develop a web-based system to send notification.

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1.4 Scope

The scope of the project is only applied on three areas: Specific Users, specific platform and specific functional. Each area is describes as below.

1.4.1 Specific User

- Student and Staff of UTeM.
  This system will be use by the student and staff of UTeM. They will receive the notification from the system if any emergency things happen. They are some staff in this system will be certify the authorization to send the notification.

- UTeM's Authorized Contractor.
  There are many contractors in UTeM doing their job. Therefore, their safety also will be the responsibility of the UTeM's Safety Department. They need to register their availability before they can receive any notification.

1.4.2 Specific System Platform

- Use network GSM 900/1800.
  The system will be use sms to send notification. In Malaysia, the GSM 900 and GSM 1800 is the largest and most popular use to send

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sms. Therefore, this network chooses in order to achieve as many as possible people.

- Web-based system.
  The web-based system use in order to enable the authorized people to send notification anytime and anywhere.

1.4.3 Specific Functionality

This system function to alert target people in the campus area if any emergency or unexpected things happen. It will allows only the authorized people to send the notification.

1.5 Project Significant

This system application will help the UTeM's Safety Department to keep the safeties of UTeM. With Campus Alert, it can simplify contact faculty, staff, and the entire student body in the time is takes to read this message. As a mass notification system, Campus Alert has the capacity to trigger mass warnings and notifications in an emergency. It allows the authority to send thousands of SMS or email with a single click. The web-based system develop is an essential part of a well-planned emergency preparedness plan as well as an ideal communications tool that the authority can rely on everyday. This system will be develop for UTeM's authority to alert, create awareness and send notification to student and staff, only in emergency such as robbery, imminent threats to the safety or

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security of the campus community. This system is continuing efforts to improve communications at UTeM and to help keep the community as safe as possible.

1.6 Expected Output

This project is expected to send notification and allow only authorizes people to send the notification. The notification will be send via SMS and e-mail. This system also will provide a web-based system in order to able the notification will be send anytime and anywhere. This system hopefully will help the UTeM's authority to keep the safeties of UTeM's community.

1.7 Conclusion

Overall, this chapter have captured the project background, problem statement, objective, scope, project significance and expected output. This group decision support system can be considered as an alternative for engineers to have one final decision from a group of decision that been made.

In the next chapter, literature review and project methodology will be discussed. Literature review will describe all the research and findings related to this project and the methodology will cover on the selected approach to develop this project.

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CHAPTER II

LITERATURE REVIEW AND PROJECT METHODOLOGY

2.1 INTRODUCTION

Literature Review is done to review the critical points of current knowledge on SMS system. The chapter will provide references and supporting facts for the system to be developed. It will discuss the analysis and existing or similar application that is related to the project. Literature review will focus on the research of the existing and future application. Literature review is a process of searching, collecting, analyzing and drawing conclusion from all debates and issue raised in relevant body of literature of Campus Alert. It describes all the analysis and findings which are related research, case study and other findings that are related to this project. In addition, it also consist the knowledge of the project elements such as domain specification, techniques and how these elements related and combined to each other.

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