

**UTeM's EVENT ALERT SYSTEM  
(UTeMEAS)**

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JUDUL: UTeM's EVENT ALERT SYSTEM

SESI PENGAJIAN: \_\_\_\_\_ 2010 \_\_\_\_\_

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UTeM's EVENT ALERT SYSTEM  
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This report is submitted in partial fulfillment of the requirements for the  
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## DEDICATION

I dedicate special thanks to my parents who giving me support and motivation throughout my PSM. This dedication are also to my PSM supervisor, Dr. Samad Hasan Basari for the consultation, advices, comments and support just to make sure that I can finish this PSM successfully. I also want to thanks to my all my friends that always<sup>s</sup> are by my side as I working on this project.

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## ABSTRACT

UTeM's Event Alert System (UTeMEAS) is develop especially for an online application system for Universiti Teknikal Malaysia Melaka (UTeM).It is develop to ease the management process to alert all staff about the becoming event they need to attend. The purpose of this system is to develop a system that can manage a faster and efficient way to alert about the becoming event. The system will be used by administrator of this system and all the staffs. This system is applying with AI technique which is Genetic Algorithm to make decision on the level of priority for each event. This system also using SMS application where the message will be sent to the staffs via SMS service.

## ABSTRAK

UTeM's Event Alert System (UTeMEAS) dibangunkan terutama untuk sistem aplikasi dalam talian untuk Universiti Teknikal Malaysia Melaka (UTeM). Ia dibangunkan untuk memberitahu semua kakitangan tentang program yang akan dijalankan dimana mereka perlu menghadiri dengan cara berkesan dengan mudah. Tujuan utama sistem ini adalah untuk membangunkan sistem yang boleh menguruskan dengan lebih cepat dan berkesan untuk memberitahu tentang program yang akan dijalankan. Sistem ini akan digunakan oleh pentadbir sistem ini dan semua kakitangan. Sistem ini mengaplikasikan teknik Kepintaran Buatan iaitu Algoritma Genetik untuk membuat keputusan pada berkaitan keutamaan untuk setiap program. Sistem ini juga menggunakan sistem aplikasi SMS yang akan menghantar mesej peringatan kepada kakitangan melalui perkhidmatan SMS.



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## CHAPTER 1

### INTRODUCTION

#### 1.1 Project Background

UTeM's event alert system (UTeMEAS) is systems that will be develop as a tool to alert the community especially staffs in UTeM about events that will be held in the campus or outside campus area. As other current alert system exist nowadays, this system will be user friendly system and manage to send message by group such as specific by position, department, faculty, and others. For this UTeM's event alert system, it can alert event by the event's priority. The highest priority will be alert first in the list so the person that get the alert message will easily know which event he/she must choose to attend.

To develop this alert system that can decide by itself or automatically the events list it have to be built by applying one of artificial intelligence technique. So, the best or the suitable artificial intelligence technique should be used is the genetic algorithm. By using genetic algorithm technique the system can decide intelligently which event is more important. Each event will be set with priority weight, and by this weight the genetic algorithm technique will scheduling back the list of event by the highest to lowest priority. And more importantly the alert system will be intelligently decide the must attend event for specific person by position department, faculty, and so on. This system also used GSM modem so all the alert system will send via SMS (Short Messaging Service). This system chooses SMS because with SMS the process is more

interactive and easy to use. It is also because this technology is very popular and many people used it nowadays.

## 1.2 Problem Statement

UTeM's event alert system (UTeMEAS) is being developed to complement the existing system that also to reduce the problem that have been faced by the system's administrations. There are some problems that have been capture and identified such as below

### (i)None Systematic Management

- Previous system, which using UTeM portal's popup to alert staffs are depend on administration to update it by upload the details about all events will be held in one month in one page.
- This method of management is not systematic because it is taking such a long time to update and need regularly update by the administration or in other way this system is not automatically update. This system also not schedule or sorts all the events in order by its date.
- By UTeM's event alert system via SMS, it will include all the related functions. Through this system a systematic approaches in management process is materialized and will schedule all the events automatically.

### (ii)Hard to be notice.

- The previous system are using website to alert the staffs, it's hard to notice staffs about the event by or before the event be held.

- If the staff has notice the event, they probably will forget about it if they not be reminded about it regularly.
- By using UTeM's event alert system these problem will be solved because staffs will be regularly reminded about the events by send them message or SMS trough their mobile phone.
- This system used SMS technology as the tools and this is the most efficiently, easiest and faster way to get noticed by every single staff about the event held in UTeM or outside of UTeM.

(iii) Redundant events.

- In UTeM, there are numbers of events will be held in the same day or in the same date. The worse case is some of the event need to be attended by the same person.
- Even UTeM have its own portal that have pop up to alert the staff about the event, the pop up system cannot help the staffs to notice the staff which one is more importantly to be attended.
- UTeM need intelligent alert system that can make UTeM's staffs life easier. This may help them make decision which event is more important to be attended.

### 1.3 Objective

- (i) To explore the delivery system of an organization.
- (ii) To develop a computerized delivery system.
- (iii) To apply Genetic Algorithm to the proposed system.

### 1.3 Scope

The scope for this system is:

- (i) Used only by administrator in UTeM or supervised by them.
- (ii) Used only to send alert message to UTeM's staffs.

### 1.4 Project Significance

This UTeM's event alert system (UTeMEAS) is an intelligent system that can decide by itself and can reschedule automatically the event's list. One of artificial intelligence technique will be applied in this system namely genetic algorithm (GA). By using GA the system can decide intelligently which event is more important. Each event will be set with priority weight, and by this weight GA will schedule back the list of event by the highest to lowest priority. Even more important is the alert system will be intelligently decide the must attend event for specific person by position department, faculty, and so on.

### 1.5 Expected Output

The expected output for this project is to built system that can intelligently alert the event with priority by specific staff. The UTeM's event alert system (UTeMEAS) should be able to list where the event from highest priority to lowest priority. The system will send the alert system via SMS and should be in the simple list so it is easier for the staff to understand. The administrator that manage the event to be key in the event data can set the priority of each event so all the event can be scheduled automatically by the alert system. So, this UTeM's event alert system (UTeMEAS) should be the intelligent system that can decide by itself and can reschedule that event's list automatically.

## 1.6 Conclusion

UTeM's staff always have difficulties to make decision which event he/she have go when there are redundant event are held in the same day or same date. To solve this problem a system called UTeM's event alert system (UTeMEAS)is developed. This system is developed as a tool to alert every single staffs in this community about all events in UTeM held in the campus or outside campus area. This system will be developed by using decisions tree technique in it so it will be intelligently decide the priority event to be attended for specific person by position, department, faculty, and so on. This system also used GSM modem to ensure all the alert system will send via SMS (Short Messaging Service). The project hopes that these systems will easily be used and intelligently solved the related problem.

## CHAPTER II

### LITERATURE REVIEW AND PROJECT METHODOLOGY

#### 2.1 Introduction

A literature review is a summary of previous research on a topic. Literature reviews can be either a part of a larger report of a research project, or it can be a bibliographic essay that is published separately in a scholarly journal. Either way, the purpose is the same, to review the scholarly literature relevant to the topic you are studying. This review will help in designing methodology and help others to interpret research area.

In this chapter, the literature review is focus on the research of the current system and the new system. The purpose of a literature review is to explain how the question to be investigated fits into the larger picture and why this approached the topic. This section of a scholarly report allows the reader to be brought up to date regarding the state of research in the field and familiarizes to any contrasting perspectives and viewpoints on the topic. This section also will do some literature review on genetic algorithm and do the comparison between techniques in the genetic algorithm.

## **2.2 Fact and Findings**

### **2.2.1 Domain**

The domain of this application is intelligent information system and alert system. This system can benefit the administrator of UTeM and especially to the UTeM's staffs. This application will be designed to fulfill the all the needs to develop efficient event alert system. It is important to well understand about the concept of event alert system before this project can be developed. Some research about related system must be done to understand the need and how to fulfill all the need in event alert system. Overall, this chapter focuses more on research from related or passed case study that involve event alert system. There are several examples of pages that have event alert system that we can see in internet. Then the comparisons between existing systems will be developing to understand more about event alert system.

### **2.2.2 Existing System**

#### **2.2.2.1 The official website of UTeM**

##### **(i) System**

From Figure2.1, the official page of UTeM (Universiti Teknikal Malaysia Melaka) lists the entire upcoming event by using scroll down menu. When users visit this main page, this scroll down menu will automatically list out the upcoming event. The scroll down menu has limited space so it will only display the title of the events and for further information, the user need to click on the particular title. When users click on the title, they will automatically link to other page which has all the information about the event.

The pop up page can be seen from the main page of the official page of UTeM. Beside user will be notice by scroll down menu, this main page also used pop up page as other initiatives to alert the community about upcoming

event of UTeM. This pop up page will display interactive poster of upcoming event and user can click on particular event to see the poster in large pop up.

## (ii) Technique

The technique used to alert the events is by using website. The website alert users about the events by using scroll down menu and pop up approach. The scroll down menu is automatically scrolled down the entire events. The pop up page display the interactive poster of the entire events. The scroll down menu is only display the title of the events and not interactive compare to the pop up page which display the poster of the events which contain the details about the events.

This website alert both UTeM's students and staffs about the entire events for UTeM. All the events been list down in scroll down menu and popup page are not orderly divided by its group of users. Staff's upcoming events and student's upcoming events are listed down together in the same page. The users of this page have to notice by themselves which is the upcoming event for them. The probability the redundant events in the university especially university's staffs are high, so this website also display all the entire redundant events without noticed the users which event more important.

The website is managed by administrators of UTeM. Admin need to always update the events when want to key in new data and delete events. This website did not applying any intelligent technique or algorithm in it.