FCSIT ANNOUNCEMENT SUPPORTING SYSTEM (FASS)

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This project is submitted in partial fulfillment of the requirements for the degree of Bachelor of Computer Science with Honours

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Statement of Originality

The work described in this Final Year Project, entitled

“FCSIT Announcement Supporting System (FASS)”

Is the best of the author’s knowledge that of the author except

Where due reference is made.

19 May 2006

Thavamani d/o Muniandy

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ABSTRAK

Pada asasnya, projek individu ini melibatkan kajian ke atas sistem pengumuman (announcement) yang terdapat di Fakulti Sains Komputer dan Teknologi Maklumat (FSKTM), UNIMAS bagi membina dan melaksanakan sistem pengumuman yang berasaskan web atau secara online untuk menyokong sistem yang sedia ada. Kelemahan yang wujud pada sistem pengumuman manual (paper based) telah dikaji semasa fasa analisis. Perbandingan telah dilakukan di antara pelbagai jenis sistem pengumuman yang dipraktikkan oleh universiti-universiti di luar negara melalui laporan kajian (literature review). Ini dapat memberi jalan untuk menangani masalah semasa dan menemui beberapa idea baru yang boleh digabungkan ke dalam sistem sokongan pengumuman (announcement supporting system). Berdasarkan kajian ini, satu sistem sokongan pengumuman telah dibina sebagai inovasi baru bagi menambahkan kapasiti dan fungsi sistem pengumuman yang sedia wujud, iaitu pensyarah dapat membuat pengumuman dengan lebih berkesan iaitu secara online. Empat jenis perisian (software) utama telah digunakan bagi membina sistem ini. Objektif utama projek ini adalah untuk membina sistem sokongan pengumuman secara online dan pada masa yang sama kajian juga dilakukan ke atas sistem pengumuman yang berasaskan email dan SMS untuk dilaksanakan pada masa akan datang. Beberapa jenis ujian (testing) telah dilakukan semasa fasa sistem reka bentuk bagi memastikan sistem yang dibina berjalan dengan lancar. Beberapa cadangan untuk kerja masa hadapan juga telah dinyatakan pada bahagian akhir laporan.
ABSTRACT

This individual project essentially involved a study into the existing announcement system at Faculty Computer Science of Information Technology (FCSIT) of University Malaysia Sarawak (UNIMAS) in order to design and implement a web-based announcement supporting system to support the existing system. The weaknesses of the existing manual/paper based announcement system had been studied carefully during the analysis phase. The comparisons have also been made between different types of announcement system widely practiced in the some overseas universities through literature reviews. These enabled to solve the current problems and also to discover some new ideas that can be incorporated into the supporting announcement system. Based on this study, a supporting announcement system had been developed as a new innovation to enhance the capacity and functionality of the existing announcement system by providing an alternative way to the lecturers to do announcements via online FCSIT Announcement Supporting System (FASS). Four main softwares were used to develop the system; WINDOWS as an Operating System, PHP as a main scripting tool for coding the system and the Graphical User Interface (GUI), Mysql for database as well as Apache a robust and secure web server had been selected. Therefore, the main objective of this project was to develop an online announcement supporting system and also to study about email and SMS approaches for future enhancements of the system. A few types of testing had been conducted during the system design phase to ensure that the system working properly. Finally, several recommendations for future works had been stated at the end of the report.
CHAPTER 1: INTRODUCTION

1.1 Project Description

Nowadays, universities play a crucial role as manufacturers of professional workforces and quality post-graduated students. Apart from implementing the best education approaches in order to achieve that goal, universities need to have a systematic infrastructure and accommodation managerial.

Towards the development of information technology, an interactive and effective approach should be applied in the infrastructure and accommodation managerial. Therefore, it is obvious that the existing Faculty of Computer Science and Information Technology (FCSIT) announcement system needs to have a supporting system that is built by using the Web-based approach to manage their important task, which is to convey the announcements.

In this research project, an Announcement Supporting System using Web-based approach was designed and developed to enable lecturers in the Faculty of Computer Science and Information Technology (FCSIT), UNIMAS to deliver the announcements to their students via online service, meanwhile Email- and SMS-based approaches were studied for the future enhancements of the system.

The FCSIT Announcement Supporting System (FASS) was developed to make announcement such as cancellation of a class, replacement class, meeting, or quizzes.
This system was not proposed to replace a traditional method, which is using the notice boards as a tool for making announcements, but to support and improve its implementation. It can help the lecturers to make the announcements to their students in a more effective way.

1.2 Problem Statement

The existing system implemented at FCSIT for delivering announcements is an approach that mainly needs maximum people (administrative staffs, lecturers and students) effort in order to manually send/receive the announcements. Through our experience, there are many problems arising by using the manual approach and it seems not the efficient and effective ways to improve the existing announcement system. The administrators, lecturers, and/or students are facing many difficulties in making and/or receiving announcements. Every time, they need to visit all notice boards to look for the new announcements and it takes about five to ten minutes to read all new and old notices. Furthermore, something should be done in order to make the notice board more attractive with up-to-date information.

1.3 Objectives

The objectives of developing this system were as below:

a) Provide a systematic announcement system

One of the project objectives is to design and develop a web-based system that can be used to help the students to update themselves with the latest announcements even if they are not in the campus. On the other hand, the lecturers are able to send their messages
easily online without coming to the faculty. By implementing email- and SMS-based approaches (discussed briefly in Appendix C) in future, the system can be improved more efficiently.

b) Enhance the speed of the system process from the manual system

The proposed system can reduce the time for students to get the announcements. This is because they do not need to check all the notice boards at the faculty, looking for the latest announcements.

c) Other objectives were:

- Paper-based system will be supported with computerized system
- Ensure the data accuracy, integrity and reliability
- Ensure the data can be retrieved for future use
- Ensure authorized user can access the data at any time

1.4 Scope

The proposed system first was suggested to be implemented at faculty level, preferably at FCSIT, to test and evaluate the effectiveness and how successful is the system to be implemented at a higher level is. All users (students/lecturers) of the system have to register manually as a member with the administrator whereby their details will be stored in a database. The lecturer will upload the announcement to the online system. So the students whom registered themselves under this system can view all the announcements when they access to the system. Once successful, this system will be implemented at a
university level for all students and lecturers. All details of the users will be stored in a centralized database and managed by a system server.

1.5 Significant of Research

The FCSIT Announcement Supporting System (FASS) project is beneficial especially to certain people like:

- **Lecturers**
  
  This project contains the developing of a web based system for making announcements. The proposed system can help the lecturers to send their announcements immediately from anywhere at anytime to the students. For example to make announcement of “a cancellation of a class TMT2013”, they don’t have to come to the class or faculty’s notice board to do the announcement.

- **Students**
  
  The proposed system can enable the students to receive any announcements immediately from anywhere at anytime from their lecturers. They also don’t have to depend to the notice boards or ask their friends for any announcements.

- **Administrative Staffs**
  
  The proposed system can also benefit the faculty administrative staffs. By implementing this proposed system, they can overcome the existing problems of the current announcement system. Overall, it can help them to manage the faculty’s announcement system systematically.
1.6 Project Planning and Scheduling

Project planning and scheduling involved determining the order in which project activities will be performed and setting the duration of starting and ending (finish) dates for each activity. There are varieties of techniques available for depicting and documenting project plans among which can be represented through Gantt chart, Pert Chart, and other research methods.

The proposed system was developed in a few series as shown in the Gantt chart (refer to Appendix A). A Gantt chart is a bar chart that shows each task activity, as a horizontal bar in which its length is proportional to its time of completion. Steps involved in constructing Gantt chart are:

- Identify each activity to be completed.
- Determine time estimation and calculate the expected completion time for each activity or task.

1.7 Outline of Project Report

Summary of chapter layout gives an overview of the major phases involved in this project development. There are five major chapters listed below.

Chapter 1: Introduction

This chapter illustrates the introduction of this project. This includes the project description, the problem statements, objectives, scope, significance of research and project planning and scheduling. Project description gives a picture of how FASS
functions in a brief description. The problem statement states the reason why FASS is worth implementing after reviewing the problems at hand. The objectives clearly state the target that needs to be reached in order to serve the purpose of this system. The scope dwells on the functions FASS and users on the FASS are allowed to do and also the scope of implementation. The problem statement includes how the project should be done by in the schedule and plan.

Chapter 2: Literature Review and Research Methodology

This chapter is on literature review which consists of survey and research done to associate with the problem context. It presents the background to the area of investigation and establishing the context of the problem. Review of the problem area comprises referencing to journals, conference papers, available systems and appropriate textbooks to identify the area of analysis. Also explained are the techniques and approaches to develop the survey and analyzing the systems. Review on the existing systems, development and implementation tools and other related software are done in this chapter. In this chapter, the development and flow of the process was explained under the research methodology of System Development Life Cycle (SDLC). It includes the understanding of how and what the steps involved in the completion of the system are.

Chapter 3: Requirement Analysis and Design

This chapter mentions about the requirement specifications of the proposed system such as user, software and hardware requirements. This chapter also covers the design of the system according to the user requirements. This part covers the description regarding the
design of the proposed system using data flow diagram (DFD) or other charts, and database design. This chapter also concerns on system architecture and functional aspect of the design.

Chapter 4: Implementation and Testing

The first part of this chapter describes the implementation of the system. Then the second part shows and analyzes findings on the testing and evaluation phase. The aspect discussed includes software and hardware used, database connection and the coding. Testing was done almost throughout the implementation to ensure that the system is error free and less unexpected bugs arise. This chapter also describes about the verification and validation of the system meeting the specified requirement and explains the different stages of testing involved.

Chapter 5: Conclusion and Further Work

This chapter finally concludes the project and provides recommendation for future enhancement. It represents the summary of the project and outlines the further work that need to be done. Ideas and feedback are collected and further analyzed to consider adding in this project. It also re-outlines what has been done in the investigation and the lessons learned from the overall project to be overcome in the future.
1.8 Achieved Outcome

The outcome of this project is to provide a supporting system that would fulfill the requirements and facilitate the faculty students, lecturers and the management in various ways. The users (lecturers and students) can handle the system easily and gain satisfaction through increased speed of sending and/or receiving announcements. In conclusion, the purpose of this supporting system is to ensure an important notice reaches to the respective users on the time.
CHAPTER 2: LITERATURE REVIEW AND RESEARCH METHODOLOGY

2.1 An overview

Literature Review is important, as it is a study of materials and sources that will help to support the foundation of the project. The author starts of by knowing very little of the project in hand. The author is able to have a better understanding and awareness through research on electronic and printed materials. The research is can also be conducted through distribution of questionnaires and observation. Literature review generally helps to:

- Identify user needs
- Evaluate the system concept for feasibility
- Create a system definition

This chapter reviews on FCSIT conventional announcement system to identify the problems that are currently occurring. At the same time, similar existing systems also have been compared to the proposed system; FCSIT Announcement Supporting System (FASS). Ideas were gained based on literature review and these ideas help in the system development. Then, review on the development and implementation tools and other related software are done in this chapter.

This chapter also concentrates on the methodology used to develop the system. The System Development Life Cycle (SDLC) is included as the model of reference in this project.
2.2 Reviews on FCSIT Conventional Announcement System

The review on existing announcement system was done at the Faculty of Computer Science and Information Technology (FCSIT) on old UNIMAS campus, which was a manual based system and conducted by the faculty’s assistant registrar (Hadijah Hj. Morni) with the support of her administrative assistants. According to her, all the announcements that need to be attached to the notice boards should have their due date and an approval from the dean, deputy deans, or herself. Figure 2.1 shows the list of the existing notice boards (19) in the Faculty of Computer Science and Information Technology (FCSIT). However, the figure shows the layout of the previous office in old UNIMAS campus and the implementation of notice boards at current office in new UNIMAS campus is not properly set yet.