

0000037701 E-multimedia community / Mohamad Hasrin Asham Mohamad Kombali.

## **E-MULTIMEDIA COMMUNITY**

## MOHAMAD HASRIN ASHAM BIN MOHAMAD KOMBALI

This report is submitted in partial fulfillment of the requirements for the Bachelor of Information and Communication Technology (Interactive Media)

FACULTY OF INFORMATION AND COMMUNICATION TECHNOLOGY KOLEJ UNIVERSITI TEKNIKAL KEBANGSAAN MALAYSIA 2004

# **TESIS\* APPROVAL STATUS FORM**

JUDUL: E-MULTIMEDIA COMMUNITY			
ESI PENGAJIAN: 1/2004-2005			
Saya <u>MOHAMAD HASRIN ASHAM BIN MOHAMAD KOMBALI</u> (HURUF BESAR)			
mengaku membenarkan tesis (PSM/Sarjana/Doktor Falsafah) ini disimpan di Perpustakaan Fakulti Teknologi Maklumat dan Komunikasi dengan syarat-syarat kegunaan seperti berikut:			
<ol> <li>Tesis adalah hakmilik Kolej Universiti Teknikal Kebangsaan Malaysia.</li> <li>Perpustakaan Fakulti Teknologi Maklumat dan Komunikasi dibenarkan membuat salinan untuk tujuan pengajian sahaja.</li> <li>Perpustakaan Fakulti Teknologi Maklumat dan Komunikasi dibenarkan membuat salinan tesis ini sebagai bahan pertukaran antara institusi pengajian tinggi.</li> <li>** Sila tandakan (/)</li> </ol>			
SULIT (Mengandungi maklumat yang berdarjah keselamatan atau kepentingan Malaysia seperti yang termaktub di dalam AKTA RAHSIA RASMI 1972)			
TERHAD (Mengandungi maklumat TERHAD yang telah ditentukan oleh organisasi/badan di mana penyelidikan dijalankan)			
TIDAK TERHAD  SINTANDATANGAN PENULIS)  TANDATANGAN PENULIS)  TANDATANGAN PENYELIA)			
lamat tetap : LOT PT4804 BT8 SIJANGKANG AHMAD SHAARIZAN SHAARANI			
2500 TELOK PANGLIMA GARANG Nama Penyelia  Tarikh: 4/3/2005			
CATATAN: ** Jika tesis ini SULIT atau TERHAD, sila lampirkan surat daripada pihak berkuasa.  ^ Tesis dimaksudkan sebagai Laporan Projek Sarjana Muda (PSM)			

## **ADMISSION**

I admitted that this project title name of

## **E-MULTIMEDIA COMMUNITY**

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

		, 1
STUDENT	: Chin	_ Date: 4 3 2005
(MOHA	AMAD HASRIN ASHAM BIN MOHAMAD K	OMBALI)
SUPERVISOR	: Of Slinzan 5	Date: 4/3/2005
	(EN.AHMAD SHAARIZAN B. SHAARAN	D

## DEDICATION

I would like to dedicate my final year project and this thesis to the lecturers who had without any hesitation and as they are filled with precious knowledge, spirit and initiative to thought me about the ICT (Information and Communication Technology) knowledge and practiced me with lots of practical concept and application oriented elements. It is also my honor to appreciate and present this thesis to the continuously used, for further reference, whether by other students or for research work and presentation by KUTKM.

My parents is the other reason why I keep doing and implementing the good practices of learning and excepting any ideas to be implemented and to be used throughout my whole duration of study. Their support has given me the courage to keep on moving although it took time to implement all the phases.

Lastly, I would like to thank for each individuals and organizations that has contribute time, resources either directly or in indirect way, my colleagues toward the completion of this thesis and the whole project itself.

## ACKNOWLEDGEMENT

Alhamdulillah, thanks to the Almighty with his permission I have finally finished my Projek Sarjana Muda II in a whole semester's time. The report is the outcome of the project and it has been submitted following the due date time.

The completion of this Projek Sarjana Muda (PSM)II report is successfully done as a result of the contribution of many parties. Here I would like to express my greatest gratitude to those who had helped me, directly or indirectly, in accomplishing this report.

First of all, I would like to appreciate En. Ahmad Shaarizan Shaarani, my supervisor of the PSM II. He had helped me without ceasing in guiding me through the documentation needs and also updates me about the information on this. He had shown me plenty of skills and knowledge in how to develop an online application. With her advice, comments and guidance, I am able to accomplish the report within the given time.

I would like to thank my family and members that had offered unlimited support during the time that I had to do this research and report. They had shown understanding and also morale support to me. Last but not least I wish to thank all my colleagues from KUTKM and also others that may not have been mentioned here. Without any of these supports, I would not have completed my training program successfully.

## **ABSTRACT**

Media serve an important role in communities by allowing community members to keep in touch with other community members. Mass communication and sociological scholarship on the function of media in communities have focused primarily on the role of community newspapers in traditional geographic communities. However, as communication and transportation technology has grown, so have people's worlds expanded past their own residential communities.

Most people are members of communities of process which focus on a common interest, occupation, or some other common ground. One important way that people in all types of communities communicate is through the community media, including newspapers, magazines, new media, and other media.

This study uses community ties in a new way by applying the concept to a nongeographic community; the multimedia community online in KUTKM gives a way to communicate to student and non member who interest to multimedia development. This project make for Multimedia member and Students University, where people can find information about Multimedia example exhibition work of art, Forums where Multimedia fan can discuss about everything, shout box like chat room, free SMS from web and tutorial. Also user can find software multimedia inside e-multimedia community

#### **ABSTRAK**

Media memainkan peranan penting dalam komuniti dengan membolehkan ahli komuniti saling berhubungan antara satu sama lain. Komunikasi global dan sosiologi ke atas fungsi media dalam komuniti memberi keutamaan dalam menfokuskan peranan media komuniti secara tradisional.

Kebanyakan anggota komuniti lebih menfokuskan kepada minat yang umum, pekerjaan, atau lain-lain kepentingan. Salah satu cara dalam pelbagai jenis komuniti berhubung melalui medium komuniti termasuk surat khabar, majalah, media baru dan medium yang lain.

Kajian ini melibatkan perhubungan komuniti dalam cara yang baru dengan mengaplikasikan konsep bukan geografik komuniti; komuniti multimedia secara atas talian dalam KUTKM memberikan cara perhubungan antara pelajar dan bukan ahli yang berminat dalam pembangunan multimedia. Projek ini dibangunkan untuk pelajar multimedia dan pelajar universiti yang membolehkan pelajar mendapatkan maklumat tentang multimedia, contohnya mempameran hasil kerja seni dan forum di mana peminat multimedia boleh berbincang mengenainya, "shout box" seperti bilik sembang, SMS percuma daripada halaman web dan tutorial. Pengguna juga boleh mencari perisian multimedia dalam "e-multimedia community".

# TABLE OF CONTENTS

PROJECT TITLE	i
TESIS APPROVAL STATUS FORM	ii
ADMISSION	iii
DEDICATION	iv
ACKNOWLEDGEMENTS	v
ABSTRACT	vi
ABSTRAK	vii
TABLE OF CONTENTS	viii-x
LIST OF FIGURES	xi-xii
LIST OF ABBREVIATIONS	xiii
INTRODUCTION	
Project Overview	1-3
1.1 Problem Statement	3
1.2 Project Methodology	4
1.3 Project Objective	5
1.4 Scope Project	6
1.5 Project Significant	7
LITERATURE REVIEW	
2. Introduction	8-9
2.1 Introduction of Literature Review	9-10
2.2 Case Study	10-11
2.2.1 Portal	11-14
2.2.2. The Color Usage	14-15

		ix
2.2.	3 Layout Arrangements and Interface	15
2.2.	4 Functionality of the Portal	16
2.2.:	5 Themes of the portal	17
2.3	Literature Research Summary	18
PLA	ANNING AND PROJECT METHODO	DLOGY
3.	Planning	
3.1	Introduction	19
3.1.	Project Planning	20-21
3.2	Project Methodology	22
3.2.	Phases and Activities	23-26
3.3	Methodology Justification	27
3.4	Hardware and Software Requirements	28-31
3.5	Problem Solving suggestion	31
3.6	Activities Planning	32
RES	SEARCH ANALYSIS	
4.1	Introduction	33-34
4.2	Business Research	34-35
4.3	Problem Analysis	35-37
4.4	Requirement Analysis	37-42
PRO	OTOTYPING AND DESIGN	
5.1	Introduction	43
5.2	Draw Data/Pilot Studies	44
5.3	Application Processing	44-45
5.4	System Design	45
5.5	Portal Architecture	46-49
5.6	Portal Design Planning	49

5.7	Data Flow Diagram	49-52
5.8	Introduction Interface Design	53-55
5.9	Prototype and Design Summary	56
IMI	PLEMENTATION	
6.1	Introduction	57-58
6.2	Design and functional implementation for General Module	58-63
6.3	Design and functional implementation for User (registered) Module	63-71
6.4	Design and functional implementation for Administrator Module	71-72
6.5	Process of Integration	73
6.6	Implementation Summary	74
TES	TING	
7.1	Introduction	75
7.2	Testing Plan	76-77
7.3	Test Strategy	77-79
7.4	Test Design	80-81
7.5	Testing Summary.	82
CON	NCLUSION	
8.1	Introduction	92
8.2	Observation on weaknesses and strength	83
8.3	Proposition for improvement	84
8.4	Conclusion	85
0.1		86
BIBI	LIOGRAPHY	
Bibli	ography	87
APP	ENDIX	
GAN GAN	RYBOARD TT CHART FOR PSM I TT CHART FOR PSM II	

LIST OF FIGURES	PAGE
Figure 3.1: Iterative Models	2′
Figure 5.1: The diagram below outlines how the information	23
Is passed from the server to the browser	45
Figure 5.2: Portal Architecture for The e-multimedia Portal	47
Figure 5.3: Portal Architecture for User Module	48
Figure 5.4: Portal Architecture for Administrator Module	48
Figure 5.5: Portal Architecture for General Module	49
Figure 5.6: Data Flow Diagram Model Symbols	50
Figure 5.7: Figure show e-community data flow diagram (DFD)	51
Figure 5.8: Zero Level Data Flow Diagram (Administrator)	51
Figure 5.9: User Data flow Diagram (DFD)	52
Figure 6.1: Index page for visitors	59
Figure 6.2: The Centre content News section	59
Figure 6.3: The Centre content display when user clicks the News section	60
Figure 6.4: The Centre content Newsflash	60
Figure 6.5: Centre Content display when user click on the listed	
Newsflash topics	60
Figure 6.6: Centre Content display when user click on the menu listed	
Radio. Blog	61
Figure 6.7: Centre Content display when user click on Web Links Section	61
Figure 6.8: Centre Content display when user click on Sms link	62
Figure 6.9: Centre Content display when user click on picture on Game gallery	62
Figure 6.10: User needs to enter the username and email address in	
Order to retrieve password	62
Figure 6.11: The registration form for the user to register a new account	63
Figure 6.12: Complete registration notification, email will be sent to	
The registered user once they complete this process	63
Figure 6.13: Left and Right Menu display of the registered user	63

	xi
Figure 6.14: Centre Content when user click on the Forum Section	64
Figure 6.15: Centre Content display when user click on Topic list	64
Figure 6.16: Centre Content display when user click on Forum Topic	65
Figure 6.17: Centre Content display when user click on Post reply	65
Figure 6.18: Centre Content display when user click on My Profile	65
Figure 6.19: Centre Content when user click on the Tutorial Section	66
Figure 6.20: Centre Content when user click on the Tutorial Folder	66
Figure 6.21: When user click on the name of topic the file	
Will be downloading	66
Figure 6.22: Left module display random gallery	67
Figure 6.23: Centre Content when user click on the gallery	67
Figure 6.24: Centre Content display list of picture in Exhibition Gallery	68
Figure 6.25: User can give comment	68
Figure 6.26: User can give vote	68
Figure 6.28: User who wan sent the picture can send into admin email after	69
Figure 6.29: Centre Content display non register member	70
Figure 6.30: Centre Content display register member	70
Figure 6.31: Left Menu display for administrator that differs	71
From normal user	
Figure 6.32: Centre Content display intro text new	72
Figure 6.33: Centre Content display full text new	72

## LIST OF ABBREVIATIONS

**ACRONYM** WORDS

**KUTKM** Kolej Universiti Teknikal Kebangsaan Malaysia

PHP Hypertext Preprocessor

**ODBC** Open Database Connectivity

**ASP** Active Server Pages

IIS Internet Information Services

Kbps Kilo bytes per second

**ADSL** Asymmetric Digital Subscriber Line

**SDSL** Symmetrical Digital Subscriber Line

LAN Local Area Network

PC Personal Computer

**RAM** Random Access Memory

SQL Structured Query Language

SRS System Requirement Specification

**FTMK** Fakulti Teknologi Maklumat dan Komunikasi

IT Information Technology

**ISDN** Integrated Services Digital Network

 $\mathbf{IP}$ Internet Protocol

HTTP Hypertext Transfer Protocol

## CHAPTER 1

#### INTRODUCTION

## 1. Project Overview

The term community refers to an event where people with common interests gather to share experiences, ask questions, or collaborate. As they are present in the same locality, members can meet easily to learn from each other by sharing their explicit knowledge and revealing information about their successes and failures. Also people who share a common interest, such as members of a profession, can join to form a wider community. Such communities have a deeper reservoir of knowledge, but they meet only occasionally at periodic events like conferences and seminars which serve as forums for exchanging knowledge and ideas.

Professional communities offer obvious advantages. Members benefit from asking questions and sharing their explicit knowledge with one another. This knowledge sharing provides a more effective way of learning because it avoids duplicating the current or past efforts of other members. Similarly, emultimedia community provide the advantage of connecting geographically disparate groups. These communities use Web technology as a vehicle for disseminating knowledge and information more quickly and inexpensively as well as for global communication and collaboration.

Like traditional communities, e-multimedia community act as knowledge repositories for their members, but the real value lies in the fact that e-multimedia community can store a larger amount of vital information and data.

The e-multimedia community has been extended to cyberspace, as the extension of contact across time and space made possible by information technologies, and perhaps as an expectation or possibility of an improved alternative set of relationships that is an alternative to person-to-person, physical contact and a form of contact that is open, democratic, and equal. This e-multimedia community will create cyber-spaces where students can post messages, a live auto-refresh shout box, announce events, display their art project and share files.

The project e-multimedia community as mentioned in the above title is one of a common community portal. This community portal will be developed for the use of multimedia students that can be part of alternative way to communicate, involve and contribute any material that related to multimedia. E-multimedia community means involve "a group of people in 'social interaction'", where a group connotation, communication, more than two, multiple forms of contact, multiple commonalities and common action, where students can exchange and share information and knowledge.

The project is developed for multimedia students, where student multimedia can find information for related multimedia such as exhibition work of art, forum where students or another multimedia students can discuss about

subject or project, shout box, SMS from web and tutorial submitted by administration or by student themselves which will be filtered first by the admin.

## 1.1 Problem Statement

Eftmk (www.eftmk.kutkm.edu.my) portal was a sample of community web and e-learning, and the portal is be used as a reference for students and lecturers to communicate and deliver information to students such as notes, assignments and so on. The portal also contains a forum that used to discuss about educational and related topics. This portal included the entire department IT.

The E-multimedia community is different from Eftmk portal because it is developed for multimedia students. It is possess of a multimedia portal which consist of animated interfaces that combine with PHP and flash that could attract the student. The community portal also will provide a shout box to only a registered account. The live shout box will support emoticons which will be developed using PHP platform and it also shows online users and other users can be notify to it. Online users can have an avatar to represent their user name. The advantages of the portal is that students can show-off their art work in this e-multimedia community and can also using SMS after log-in to the portal.

#### 1.2 **Project Methodology**

The waterfall Model has been choosing as the methodology for this portal. It is because this methodology is simple and suitable with this project. The Waterfall Model easier to understand and follow. The Waterfall Model which considered the process as progressing through a series of stages from requirement analysis through specification, design, coding, testing to documentation and maintenance. Each stage was completed before the next was started. The absence of any significant iteration between the different stages has had led to the abandonment of this model.

## 1.3 Project Objective

For the purpose of developing and completing this project, some objectives have been gathered and will be a guideline during the structuring of the project itself. The objectives include:

- i. A platform for multimedia students to communicate over internet using web based applications. For example multimedia students can exchange or allowing them to share useful information and knowledge beyond national borders.
- ii. As an exhibition for multimedia students work of art which consist of digital and traditional abstract art, 3D or fantasy that was created using adobe or other graphic editors.
- iii. The admin will provide tutorials such as Photoshop, 3Ds Max, Flash, illustrator and Dream weaver. Users can also submit their own tutorials into the e-multimedia community which will be filtered first by the admin
- iv. To create a portal that will become to solve a problem and become reference for student multimedia or user.

## **Project Scope**

The E-multimedia community will be developed for multimedia students and with a purpose of communication, involvement, activities and participation that related to multimedia over internet. Hope that the portal will help multimedia students to be more creative and innovative throughout the activities, competition, tutorial and forums provide in the portal.

The portal also will be provided with live shout box that will autorefresh upon certain period, instant messaging that required user to be online, forum for discussion, tutorial submitted by administration and students, and periodically event such as digital art competition and news.

## 1.5 Project Significant

This project is to provide the solutions to the problems faced by Eftmk portal currently. By aligning the goals which had been set for the project to be achieved, it helps the user to solve their problems with the appropriate ways that would not affect the user interest. It means the new portal would helps to solve the problems, and at the same time the portal would be protected in a more secure way.

The new portal will be designed with user friendly interface to be more friendly appearance and behaviors with easy button and it make user or multimedia students KUTKM can reach their needed information at their finger tips. In this portal user can send his art work to community for exhibitions. User can also send his tutorial to admin for reference to another user.

In E-multimedia community have simple language to secure login script using PHP. User can sign up and there information info is automatically being saved in a database the portal have 3 level admin, member and guest. Admin can modify all data and account member in emultimedia community portal. Where the member who was register can chat online but, forum for discussion can download art work and submit tutorial. If a person didn't register, they only peer the portal but can download anything from the portal.

#### **CHAPTER 2**

## LITERATURE REVIEW

## Introduction

Information to develop the project was obtained from internet and website of e-multimedia community. Other essential for the project is obtained from websites related to e-multimedia community project, design principles and development. Most of the researches are about e-multimedia community portal design and applications. The research is concern about user acceptance and assessment to e-multimedia community portal design.

The research will extend the design principles to address evolving layout, color and interface that will provide a more friendly appearance and behavior. The layout to create balanced or dynamic layouts of the portal depending on the mood of the user. Balance gives a feeling of authority, solidity and permanence.

Research and data collection has the same importance and in fact it can be seen as the most practical method in literature review to gather various type of information needed for the project. Elements for the portal and the project can be found from research are done. Practically, there are some theories that will be used

inside the developing the web application process of the order to allow research findings to be implemented. This by the end will conclude in creating a portal that function perfectly and automatically compose a good research finding for future use. Below are some explanations on the terms and comparison with another portal that will be implemented on the e-multimedia community project.

#### Introduction of Literature Review

Literature review of this project is a basic factor that was continuously followed throughout the development process and an important aspect that detailed and reviewed critically, ensuring the success of this project. Inside the introduction of literature research, the discussion about how the information and facts related to this project was gathered. There are explanations about Hypertext Preprocessor (PHP), the web development language that will be used throughout the development of the portal itself.

PHP is the web development language written by and for web developers. The product was originally named Personal Home Page Tools. PHP is a server side scripting language, which can be embedded in HTML or used as standalone binary. Proprietary products in this niche are Microsoft's Active Server Pages, Macromedia's Cold Fusion and Sun's Java Server Pages. Some developer used to call PHP 'the open source ASP', because its functionality is similar to that Microsoft product and concept. PHP is an official module of apache HTTP Server, the free web server. This means that the PHP scripting engine can be built into the

web server itself, leading to faster data and manipulation. Like Apache Server PHP is fully cross platform, meaning it runs native on several flavors of Unix, as well as on Mac OS X. All projects under the aegis of the Apache Software Server Foundation, including PHP are open source software.

Past research has uncovered the concealed facts about the development of web elements generally. It has a series of revolution on web development techniques and process. It also changes how a certain web elements should be, the do's and don'ts and other criteria that should not be forgotten during the development process. Past research also changed the perspective of designers, especially on the involvement and contribution of ideas by young designers and the existence of multimedia and interactive media, and the creation of faster and powerful machine. In short, past research has evolved even a new and better road for other idea to contribute in the making and development of web element itself (Converse Tim, PHP Bible; 2001 Wiley Inc).

## Case Study

Practically, there are some theories that was used during the development process of the portal itself in order to allow research findings to be implemented. Four elements will be taken into consideration, that is functionality, colors used, interface arrangements and the themes for the portal itself. The case study itself has been taken into consideration on explaining what the portal is all about and the title that will be used, where the meanings on terms will be explained in this section.

This by the end will conclude in creating a portal that function perfectly and automatically compose a good research finding for future use. Below are some explanations on the terms and theories that will be implemented on the portal.

#### .1 Portal

Portal products continue to be one of the hottest technologies of the Internet. These tools, frequently called Enterprise Information Portals (EIP), are used to deploy vertical and business-to-business portals, but primarily are deployed as enterprise portals. The portal has become the most desired user interface in Global 2000 enterprises. More recently, government entities at all levels have been deploying portals for both external audiences of the public and internal user of government employees.

Unfortunately, the term 'portal' means different things to different people. To many, a simple web site aimed at their employees is a portal. Gartner defines a portal as 'access to and interaction with relevant information, applications and business processes, by selecting targeted audiences, in a highly personalized manner.' Future portals will evolve beyond this access to information assets, and to access knowledge and human assets.

While the pace of vendors entering this market has slowed, they continue to trickle in. The vast majority of vendors in the portal product market are small 'pure