

TESIS^ APPROVAL STATUS FORM

JUDUL: E - CINEMA SERVICES PORTAL

SESI PENGAJIAN: 2004/2005

Saya LEE ZI SENG

(HURUF BESAR)

mengaku membenarkan tesis (PSM/Sarjana/Doktor Falsafah) ini disimpan di Perpustakaan Fakulti Teknologi Maklumat dan Komunikasi dengan syarat-syarat kegunaan seperti berikut:

1. Tesis adalah hakmilik Kolej Universiti Teknikal Kebangsaan Malaysia.
2. Perpustakaan Fakulti Teknologi Maklumat dan Komunikasi dibenarkan membuat salinan untuk tujuan pengajian sahaja.
3. Perpustakaan Fakulti Teknologi Maklumat dan Komunikasi dibenarkan membuat salinan tesis ini sebagai bahan pertukaran antara institusi pengajian tinggi.
4. ** Sila tandakan (/)

_____ 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

A.
(TANDATANGAN PENULIS)

M. Fuad
(TANDATANGAN PENYELIA)

Alamat tetap: 216, Tmn Sri Anggerik,

MOHD FUAD AHMAD

71200 RANTAU, NSDK

Nama Penyelia

Tarikh: 19/10/2004

Tarikh: 19/10/04

CATATAN: ** Jika tesis ini SULIT atau TERHAD, sila lampirkan surat daripada pihak berkuasa.

^ Tesis dimaksudkan sebagai Laporan Projek Sarjana Muda (PSM)

E-CINEMA SERVICES PORTAL

LEE ZI SENG

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

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

ADMISSION

I admitted that this project title name of

E-CINEMA SERVICES PORTAL

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

STUDENT

:



(LEE ZI SENG)

Date : 19/10/04

SUPERVISOR

:



(MOHD FUAD AHMAD)

Date : 19/10/04

DEDICATION

*Specially dedicated to
My beloved family members who have
encouraged, guided and inspired me throughout my journey of education*

ACKNOWLEDGEMENTS

I would like to express my appreciation to the many people who have contributed to the successfully completion of my Project Sarjana Muda (PSM). First, My gratitude also goes to my PSM Supervisor, Encik Mohd Fuad Ahmad for evaluate my work, provide me with further guidance, and for providing me with the necessary information to complete my PSM reports.

In particular, I would like to mention the many contributions and technical insights added by my colleagues and friends. They help me a lot by sharing their invaluable knowledge and experience.

Finally yet importantly, my sincere thanks also go out to my lovely family members for their care, patient and their financial support.

ABSTRAK

Sistem perisian yang dicadangkan untuk Projek Sarjana Muda ialah E-Cinema Services (ECS). ECS merupakan satu laman web yang membekalkan maklumat terkini mengenai wayang kepada pengguna. Selain itu, ECS juga membekalkan perkhidmatan menghantar mesej kepada ahli ECS melalui telefon bimbit. Sasaran utama bagi sistem ini adalah kepada mereka yang berminat untuk mengetahui maklumat terkini tentang wayang dan mereka yang sanggup menerima mesej menggunakan telefon bimbit. Perkhidmatan ini hanya terhad di Malaysia sahaja. Kajian literatur yang dilaksanakan dapat memberikan gambaran keseluruhan tentang laman web yang bakal dibangunkan. Selain itu, kajian literatur ini juga dapat membekalkan peluang kepada pembangun tentang idea baru untuk menghasilkan laman web yang berkualiti. *Unifield Software development Process* (USDP) dipilih sebagai methodologi untuk membangunkan aplikasi web. Pemilihan methodologi merupakan satu kriteria yang penting, supaya aplikasi yang dibangunkan dapat memenuhi kehendak pengguna. ECS melibatkan rekabentuk pelanggan-pelayan. Kajian dan pembangunan bagi ECS telah menjurus kepada lanjutan pemahaman terhadap sifat-sifat dan prosedur untuk pembekal maklumat masa kini.

ABSTRACT

The proposed software system called E-Cinema Services (ECS) as the final project for PSM. ECS is a portal that provides the latest movie information for the user and using SMS to sending message to the cinema members. The target user of this system is the public who like to know the latest movie information and willing to receive free SMS for the latest movie update. The cinema services only offer in Malaysia. Literature research gives a clearly picture for us about the portal that we going to develop. Besides, literature research also provides opportunities to customize the new features and suggested several additional ideas for the portal that going to develop. The methodology to be applying in developing this system is called Unified Software development Process (USDP). The correct choice of methodology plays a crucial role for the delivery of reliable and correct software products. The ECS involves the client-server architecture. The importance of the ECS research and development enable further understanding on the features and procedures of the information provider today.

TABLE OF CONTENT

TOPIC	PAGE
TITLE PAGE	i
ADMISSION	ii
DEDICATION	iii
ACKNOWLEDGEMENTS	iv
ABSTRAK	v
ABSTRACT	vi
TABLE CONTENT	vii
LIST OF TABLES	xii
LIST OF FIGURES	xiv
LIST OF ABBREVIATIONS	xv
LIST OF APPENDICES	xvi
CHAPTER I INTRODUCTION	1
1.1 Preamble/Overview	1
1.2 Problem Statement (s)	2
1.3 Objectives	3
1.4 Scopes	3
1.5 Contributions	5
1.6 Expected Output	6
1.7 Summary	6

CHAPTER II LITERATURE REVIEW	7
2.1 Introduction	7
2.2 Fact and Finding	8
2.2.1 Concept and Theory	8
2.2.1.1 SMS	8
2.2.1.2 SMPP	10
2.2.2 Existing System Research	10
2.2.2.1 Case Study 1 - www.gsc.com.my	11
2.2.2.2 Case Study 2 – www.tgv.com.my	12
2.2.2.3 Case Study 3 – ww.megapavilion.com.my	14
2.3 Conclusion	14
 CHAPTER III PROJECT PLANNING AND METHODOLOGY	 16
3.1 Introduction	16
3.2 High-Level Project Requirements	17
3.2.1 Project Facilities Requirement	17
3.2.2 Software Requirement	18
3.2.2.1 Active Server Pages (ASP)	18
3.2.2.2 SQL Server	19
3.2.3 Hardware Requirement	19
3.3 System Development Approach	20
3.4 Project Schedule and Milestones	23
3.5 Conclusion	26
 CHAPTER IV ANALYSIS	 27
4.1 Introduction	27
4.2 Analysis of Current System	28
4.2.1 Business Process	28
4.2.2 Problem Analysis	31
4.2.3 Problem Statement	32
4.3 Analysis of To Be System	33

4.3.1	Functional Requirement	33
4.3.2	Technical Requirement	34
4.3.2.1	Software Requirement	34
4.3.2.2	Hardware Requirement	35
4.3.2.3	Network Requirement	36
4.3.2.4	Implementation/Deployment Requirement	36
4.4	Summary	37
CHAPTER V DESIGN		38
5.1	Introduction	38
5.2	Preliminary/High-Level Design	39
5.2.1	Raw input/data	39
5.2.2	System Architecture	40
5.2.2.1	Login Module	40
5.2.2.2	Member Registration module	41
5.2.2.3	Update Member Profile	41
5.2.2.4	Password Retrieval module	42
5.2.2.5	View Movie Details module	42
5.2.2.6	View Movie Show Time module	42
5.2.2.7	Feedback module	42
5.2.2.8	Movie Contest module	43
5.2.2.9	Download module	43
5.2.2.10	Administrative Management module	43
5.2.2.11	SMS module	44
5.2.3	User Interface Design	44
5.2.3.1	Navigation Design	44
5.2.3.2	Input Design	47
5.2.3.3	Output Design	47
5.2.4	Database Design	48
5.2.4.1	Conceptual Database Design	48
5.2.4.2	Physical Database Design	48

5.3	Detailed Design	49
5.3.1	Software Specification	49
5.3.1.1	Class Detail	49
	a. Class Entity	49
	b. Class Boundary	50
	c. Class Controller	52
5.3.1.2	Methods/Operations Detail for Interface	53
5.3.2	Physical Database Design	64
5.4	Summary	64
CHAPTER VI IMPLEMENTATION		66
6.1	Introduction	66
6.2	Software Development Environment Setup	67
6.2.1	System Implementation	68
6.3	Software Configuration Management	69
6.3.1	Configuration Environment Setup	69
6.3.1.1	Install Internet Information Services (IIS)	69
6.3.1.2	Install Microsoft SQL Server	69
6.3.1.3	Set Server IP Port Number	70
6.3.1.4	Upload ECS portal into Server Root Directory	70
6.3.2	Version Control Procedure	70
6.4	Implementation Status	71
6.5	Conclusion	73
CHAPTER VII TESTING		74
7.1	Introduction	74
7.2	Test Plan	76
7.2.1	Test Organization	76
7.2.2	Test Environment	76
7.2.3	Test Schedule	77

7.3	Test Strategies	78
	7.3.1 Classes of Tests	79
7.4	Test Design	80
	7.4.1 Test Description	80
	7.4.2 Test Data	92
7.5	Test Case Results	95
	7.5.1 Test Result for Login	95
	7.5.2 Test Result for Register	96
	7.5.3 Test Result for Password Retrieval	96
	7.5.4 Test Result for Edit user	97
	7.5.5 Test Result for Feedback	98
	7.5.6 Test Result for Movie management	98
	7.5.7 Test Result for Movie show time management	98
	7.5.8 Test Result for Cinema management	99
	7.5.9 Test Result for Contest management	99
	7.5.10 Test Result for Sending SMS	100
7.6	Summary	100
CHAPTER VIII PROJECT CONCLUSION		102
8.1	Observation on Weaknesses and Strengths	102
8.2	Propositions for Improvement	103
8.3	Conclusion	104
BIBLIOGRAFI		105
ATTACHMENT		108
APPENDIX A		122
APPENDIX B		164
APPENDIX C		171

LIST OF TABLES

NO	TOPIC	PAGE
3.1	Project Facilities Requirement	17
3.2	Hardware Requirement for ECS	19
3.3	Phases for Development Cycle in USDP	21
3.4	Systems Development Process Activities	21
3.5	List of Activities for Project Planning	23
4.1	Software Requirement	34
4.2	Hardware Requirements	35
6.1	Implementation status	72
6.2	Unit Testing	72
7.1	Testing schedule	77
7.2	User Login unit testing	81
7.3	Admin Login unit testing	82
7.4	Registration unit testing	82
7.5	Retrieve password unit testing	83
7.6	Edit user profile unit testing	84
7.7	Feedback unit testing	84
7.8	Movie management unit testing	85
7.9	Movie show time management unit testing	85
7.10	Cinema management unit testing	86
7.11	Contest management unit testing	87

7.12	SMS notification	88
7.13	Module testing (I)	88
7.14	Module testing (II)	90
7.15	System integration testing	91
7.16	Test summary report	92
7.17	Test data (User)	93
7.18	Test data (Admin)	94

LIST OF FIGURES

NO	TOPIC	PAGE
4.1	Flow of business by using portal advertising	29
4.2	Flow of business by using the ordinary way of advertising (Paper)	29
4.3	Flow of business by using the ordinary way of advertising (Electronic)	29
4.4	Flow of business by using the ECS advertising	30
5.1	Navigation Design for ECS portal (User)	45
5.2	Navigation Design for ECS portal (Administrator)	46
6.1	System Implementation	68

LIST OF ABBREVIATIONS

ASP	-	Active Server Pages
AUT	-	Application Under Testing
CCSB	-	Cathay Cinemas Sdn Bhd
ECS	-	E-Cinema Services
ERD	-	Entity Relationship Diagram
GCM	-	Golden Communications (M) Sdn Bhd
GSC	-	Golden Screen Cinemas
GSM	-	Global System for Mobile
GUI	-	Graphical User Interface
IM	-	Instant Messenger
IIS	-	Internet Information Server
ITM	-	Information Technology Architecture
PSM	-	Projek Sarjana Muda
POP3	-	Post Office Protocol 3
SMTP	-	Simple Mail Transfer Protocol
SMPP	-	Short Message Peer to Peer Protocol
SMS	-	Short Message Services
TGV	-	Tanjong Golden Village
UML	-	Unified Modeling Language
USDP	-	Unified Software development Process

LIST OF APPENDICES

APPENDIX	TOPIC	PAGE
A	ECS UML DESIGN DIAGRAM, USER INTERFACE DESIGN, CLASS ENTITY	122
B	TABLES	164
C	GANTT CHART	171

CHAPTER I

INTRODUCTION

1.1 Preamble/Overview

It is compulsory for a Kolej Universiti Teknikal Kebangsaan Malaysia Bachelor Information Technology System course' student to pass the PSM before awarded the degree. In my PSM, I have decided to develop a web application which is called E-Cinema Services portal (ECS).

ECS is a web portal especially develops to help the cinema to advertise the movie and send the latest movie update for their members. All the latest movie and it details will be show in the Cinemas' web page. The members of the cinema will receive a list of the latest on show movie through Short Message Service (SMS). To be a member of the Cinema, the user needs to fill up a registration form. Members only will receive a message when the latest movie nearly on show. Besides, the member also can join the movie contest and win the great prizes once they register as cinema members. Moreover, the user can download the free latest movie wallpaper from the portal. User

can post their suggestion or comment about the cinema portal to allow the portal administrator to enhance the portal from time to time.

1.2 Problems Statement

The widespread adoption of mobile devices is occurring, in large part, because these devices fit the way we wish to live. Nowadays, most of us have our own mobile phone. We can use our mobile phone to booking the movie ticket for the certain participation company like Golden Screen Cinemas (GSC) and Tanjong Golden Village (TGV). Those cinemas have their own portal to allow user to view the details of the on show and coming soon movies. Besides, they also provide the cinema phone number for each participate cinema to the user to make their ticket reservation. Online ticket booking is another new feature for the public to booking their movie tickets. The analysis revealed opportunities to customize the new features and suggested several additional ideas.

Nevertheless, the current portal not provides the latest movie news to inform the user before it show by using SMS. ECS is a portal to help the cinema to advertise the movie and send the newer movie on show for their members. As an advertising medium, the mobile phone complements other forms of advertising such as TV, direct mail, and web advertising. It also adds some unique characteristics that no other medium can effectively match. Existing advertising media are targeted at undifferentiated, mass audiences, and they rely predominantly on one-way mass communication. Because of its ability to efficiently identify the user, mobile advertising could be tailored to highly selective customer groups. Furthermore, most of the cinema portal not allows the user to download the latest movie wallpaper.

1.3 Objective

The objective for developing the ECS portal is to allow the cinema to advertise their movies through Internet and SMS. These new alternatives for advertising help the cinema to finding, keeping, and growing their customers.

The ECS portal will be developing based on the following objectives:

- a. Develop an internet-based portal that results in significant competitive advantage for the cinema in a highly competitive market.
- b. Provides latest movie information to the cinemas' members
- c. Ensure cinemas' member receive the latest movie list before the movie on show
- d. Promote the company products in more effective way by using new technology called "SMS"
- e. To create a stable and easy retrieve database and data manipulation

1.4 Scope

The ECS portal that going to develop here is to manipulate the movie details, movie show time, contest, feedback, download wallpaper, member registration and sending the text advertisement through mobile phone. ESC portal operates such modules as following:

a. Movie Details View

This module provides users with the details about the movie. The details include the movie title, date, time and venue, actors and movie description.

b. Member registration

Member registration module allow user to register as a member of the cinema.

The user name, address, mobile phone number and others related information is required in order to complete the registration. After register as a cinema

member, he/she will receive a list of the latest movie before the movie on show.

Besides, he/she will gain the privilege to join the movie contest with the greatest prizes.

c. Join Feedback

This module allows user to make their comment on the cinema portal. The form is required user to key in they name, email address and their comment.

d. Movie Contest

Members of the cinema portal are allowing to joining the cinema movie contest to win the prizes. Totally, there are three objective questions that need to be answer by the member in order to complete the contest.

e. Back-Office

This module allows the administrator of the cinema portal to add, update or delete the cinema, movie or contest information. Only administrators that get a password are gained the authority to view the page and make the modification.

f. SMS

This module is responsible to send a list of the latest movie to the subscribed users through SMS to their mobile phone. The list contents all the latest coming soon on show movies. It is purposely design to alert the member with the latest movies.

1.5 Contributions

With the growing trend towards mobile advertising across the industry, SMS advertising are increasing dramatically. Therefore, the ECS portal is important for the cinema to stay ahead of their competitors in e-commerce.

With mobile users depending more heavily on receiving alerts and other notifications via SMS, an extremely effective ad medium has emerged for advertisers. The effectiveness of SMS messaging lies in its ability to deliver highly targeted, time-sensitive messages to captive audiences; basically, the ability to deliver SMS wherever the users is and whenever its demanded. In addition, sponsorship opportunities can effectively leverage recognized events and activities to enhance brand awareness.

Wireless offers advertisers a unique means of delivering value and growth that is driven, in part, by advertisers who quickly learn and understand consumer wireless behaviors. At this critical juncture, advertisers have the opportunity to add value and interest in wireless messaging and can therefore shape its use and become a catalyst for widespread wireless Web adoption. Advertising for wireless are inevitable; they will play a vital role in the evolution of the wireless environment.

Customers are receptive to advertising messages delivered to them via SMS to their mobile phones; they remember the brand messages and respond to them as well.

1.6 Expected Output

The purpose of designing ECS portal is to help the cinema to enhance their services. After ECS portal is fully developed, it will be able to manipulate on members' details such as storing all the members' information systematically, manipulate on all the movie details and movie contest. Besides that ECS also able to provide SMS function which allow perform effective and low cost communication to inform the members' with the latest movie update.

1.7 Summary

ECS is a web portal especially developed for the cinema. ECS is responsible on advertise the movie and send the latest movie update for their members.

The scopes for the ECS that are going to develop are member registration, movie details, feedback, download wallpaper, and join contest and administrative management (Back-Office). One of the special features provided in ECS is sending short message service (SMS) to members' mobile phone to notice them with the latest movie update.

CHAPTER II

LITERATURE REVIEW

2.1 Introduction

E-Cinema Services (ECS) is a portal that helps the cinema to advertise the movie through Internet and mobile services. The ECS portal provides functions such as movie information, member registration and sending message through SMS to subscriber mobile phone.

To get the related existing portal, technology, methodology and protocols to develop the portal, I have using the Google search engine through Internet. Some of the ideas and information's are provide by University colleague. All the gathered information is useful for me to develop an effective portal.

Literature research gives a clearly picture for us about the portal that we going to develop. It also clearly state out the advantages and disadvantages of the existing portals