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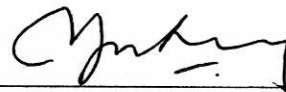
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KUTKM INTERACTIVE KIOSK SYSTEM

NOORAZAM SHAH BIN SENIN

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

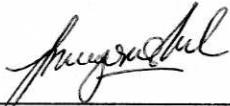
FACULTY OF INFORMATION AND COMMUNICATION TECHNOLOGY
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ADMISSION

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DEDICATION

Praise to Allah the gracious and the merciful, with his guidance and love, I have completed this project on time with the help of individuals, team effort and supportive elements by my colleagues in Interactive Media course, through the guidance and excellence of knowledge from my supervisor Ms Choo Yun Huoy, and not forgetting my other lecturers.

It is an honour to finish this task as it not only takes a frame of time to complete it but the knowledge I gained from it is very valuable.

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IN THE NAME OF ALLAH, (AL MIGHTY) THE GRACIOUS, THE MOST MERCIFUL.

Peace and blessings of Allah Al Mighty be our beloved, final Prophet and Messenger of Allah, his relatives and all his companions and those who have followed. Alhamdulillah, all praise and thankfulness to Allah S.W.T, the most Glorious and Omnipotent, with His willing has allowed me to complete this Projek Sarjana Muda II.

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ABSTRACT

Multimedia has proven to be effective in the development of kiosk system. Arguments mingled around the usefulness of multimedia in kiosk system, the worthiness of its implementation with curriculum created around it, and extra training needed in introducing it into kiosk system. The purpose of this project was to build an interactive kiosk system as a one-stop information center for Kolej Universiti Teknikal Kebangsaan Malaysia (KUTKM) in Ayer Keroh, Melaka. This one-stop information kiosk system provides interactive, useful, and up-to-date information of education in KUTKM. Its concept was a combination of being informative that offers high-quality content and also value-added services to KUTKM. The important element in this project was to help and assist users (especially students) to search for the information about KUTKM. The scope for this interactive kiosk system covers the information related to administrations, lecturers, students and visitors. It is believed that this interactive kiosk system will have a good potential and market value in the future. Galeria Sri Perdana Information Kiosk and Engineering Division (RTM) Kiosk Center was involved in literature review which has been studied earlier. The Waterfall Model was chosen as the technique or model of SDLC to develop this project. Each step in Waterfall Model fits into the overall development process in a defined way, both by what it is supposed to accomplish and by its relative position with other steps that follows. Each of the elements shown in this project even though successfully finished, it still has some limitation and weaknesses that needed to be given further studies and research in order to convert them into an element of strength for this project. The major strength of this project is the coordination between intro and the main menu interface arrangements are structured in a very well manner. Weaknesses that appear in this project are mismatched between other elements. For future work, the intro and the main menu interface might be expanded its usage and usability and spread its availability to other applications.

ABSTRAK

Elemen multimedia telah membuktikan keberkesanannya dalam pembangunan sistem kiosk. Persoalan tentang kepentingan elemen multimedia dalam sistem kiosk dan mempraktikkannya bersama-sama dengan rangkuman ko-kurikulum dan latihan yang diperlukan dalam memperkenalkan sistem kiosk. Tujuan projek ini adalah untuk membangunkan sistem kiosk interaktif sebagai sumber maklumat sepusat untuk Kolej Universiti Teknikal Kebangsaan Malaysia (KUTKM) di Ayer Keroh, Melaka. Sistem ini menyediakan maklumat dalam bentuk interaktif, berguna dan maklumat berkenaan akademik di KUTKM yang sentiasa dikemaskini. Ia mengabungkan konsep maklumat yang berkualiti tinggi dan secara tidak langsung menambah nilai perkhidmatan KUTKM. Elemen yang penting dalam projek ini adalah untuk membantu pengguna terutamanya pelajar mendapatkan maklumat berkenaan KUTKM. Skop untuk sistem kiosk interaktif ini meliputi Pentadbiran, Pensyarah, Pelajar dan Pelawat. Adalah dipercayai bahawa sistem ini memiliki potensi dan nilai pasaran yang tinggi di masa hadapan. Kajian literatur telah dijalankan ke atas Kiosk Maklumat Galeria Sri Perdana dan Kiosk Jabatan Kejuruteraan (RTM) sebelum projek ini dibangunkan. *Waterfall Model* telah dipilih sebagai teknik pembangunan projek bersama dengan *SDLC*. Setiap tahap dalam *Waterfall Model* menepati keseluruhan proses pembangunan projek ini, dimana ia termasuklah untuk mencapai matlamat dan perkaitannya dengan tahap-tahap yang wujud. Walaupun elemen dalam projek ini telah dapat disiapkan dengan jayanya, ia tetap memiliki beberapa kekangan dan kelemahan yang memerlukan kajian dan olahan lebih lanjut dimasa hadapan, supaya kelak ia dapat dijadikan kekuatan untuk projek ini. Kekuatan utama projek ini adalah koordinasi antara Intro dan antaramuka utama telah disusun dengan baik. Kelemahan yang wujud pula adalah ketidaksesuaian antara elemen-elemen lain. Intro dan antaramuka utama boleh diperluaskan penggunaan dan kegunaannya untuk aplikasi lain adalah merupakan kajian projek ini dimasa hadapan.

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LIST OF ABBREVIATION

Short form	Text
AVI	Audio Video Interface.
BMP	Bit Map.
CD	Compact Disc
CD-ROM Burner	Compact Disc Read Only Memory Burner.
CDRW	Compact Disc Read Write.
CPU	Central Processing Unit.
DPI	Dot Per Image.
FLA	Flash file.
GB	Giga Byte.
HCI	Human Computer Interface.
ICT	Information Communication Technology.
IT	Information Technology.
KUTKM	Kolej Universiti Kebangsaan Malaysia.
LAN	Local Area Network.
Macs	Macintosh.
MB	Mega Byte.
MDP	Multimedia Development Process
PCs	Personnel Computer.
RAM	Random Access Memory.
RTM	Radio Television Malaysia.
SDLC	System Development Life Cycle
WAN	Wide Area Network.
WAV	Wave.
WWW	World Wide Web.

CHAPTER I

INTRODUCTION

1.1 Introduction of the Project.

With the invention of technology, computers have played an increasingly important role in human life. The significant of computers have brought a new era where every home have their own PCs. Individuals and organizations both, have recognized the value of computer as a tool for managing data or information effectively and efficiently.

The rapid growth of information technology and multimedia in Malaysia has revealed the use of Internet as a medium to distribute the information direct to the users. Besides that, the Internet has been used as a new tool in education and to help in learning process and to make the information distribution between ministries, universities, schools, teachers, parents and students easier.

The purpose of this project or research was to build an interactive kiosk system function as one-stop information center for Kolej Universiti Teknikal Kebangsaan Malaysia (KUTKM) in Ayer Keroh, Melaka. Other purpose was to bring a new era of traditional kiosk system with more functionality and provide interactive environment with the agent to attract the user. An interactive kiosk system is a one center place that has all the information about education such as directory of lecturers, students and the information about Kolej Universiti Teknikal Kebangsaan Malaysia (KUTKM) such as background, academic information and latest news or activities. The development of this interactive kiosk system is a first step or early exposure to the staff members,

lecturers, students, parents with the new approach of promoting KUTKM as the first university ever in Malaysia to conduct technical studies based on “hands on” with emphasis on experiential learning skills.

This one-stop information kiosk system provides interactive, useful, and up-to-date information of education in KUTKM. It's concept is a combination of information that offers high-quality content and also value-added services to KUTKM. The development of this interactive kiosk system indirectly can encourage the better understanding and usage of the Internet and ICT among target group generally. The problem with the current scenario is there is no one interactive kiosk system that contains all the information of education in KUTKM. For that reason, it is difficult for the university administration to inform the latest information to the users especially students.

In order to develop a kiosk system, research should be done not just in matters that only relates with the project itself, but should include how to enhance the presentation of the kiosk system. This kiosk system was at first is just a medium of implementing theories and experimental, but it still needed to be gain usage from the public. Other problems that need attention are to find the solution on the business perspective, such as commercializing this kiosk system into market.

A project was a temporary endeavor undertaken to accomplish a unique purpose and it requires resources, often from various areas include people, hardware, software, or other assets. A project life cycle is a collection of project phases and a project must successfully complete each phase before moving on to the next. Most information technology professionals are familiar with the concept of a Systems Development Life Cycle (SDLC), which is a framework for describing the phases involved in developing and maintaining information systems. Common names for these general phases are information system planning, analysis, design, implementation, and support.

The Waterfall Model was chosen as the technique or model of SDLC to develop this project. Waterfall model is a common mechanism used in developing software.

This common mechanism is divided into subdivisions. The waterfall model in each step fits into the overall development process in a defined way, both by what it is supposed to accomplish and by its relative position in time with respect to the other steps. This approach provides project management with milestones and positive feedback during the project. The methodology that also applied in this system was multimedia development process which define several process that has been applied in this system.

1.2 Project Objectives.

For the purpose of developing and completing this interactive kiosk system, some objectives has been gathered and discussed which will be a guideline during the structuring of the project itself. The objectives include:

- To be an one-stop information center that provides the details and up-to-date information of KUTKM.
- To help and assist users (especially students) to search the information about KUTKM.
- As one optional gateway or new medium to distribute the information beside the ordinary and existing techniques.

1.3 Project Scope.

In general the scope of certain project comprises of the field of the application being distributed, which means it shows how much and how wide the application will be used among the users. Basically the scope of the project for this information kiosk system consist of five main field. The five fields are General Information, Administrator, Academic, Student and Departments.

General Information will include information regarding the basic idea of what KUTKM is all about. Information such as History, Mission, Vision, Logo, Structure and Curriculum will be added inside the general information which will be most likely search by respective users.

Administrative Department in a certain institution especially academic institution such as KUTKM are one of vital department that had to be given serious attention. For that purpose, Administrator will be the another section added into this interactive kiosk system. This section comprises information about Board of Directors, Committee Executive, Senior Officer and Senate.

All the information inside this interactive kiosk system are closely related to the Academic field. In general, Academic is an essential practice inside a certain university since university is a place to create a better educational community. For that purpose an Academic section will be build inside the interactive kiosk system which will have information about Faculties available, Institute Technology Management and Entrepreneurship.

The interactive kiosk system will be used mainly inside the campus only for the usage of the students to search information about themselves. A section entitled students and departments will be deployed inside the interactive kiosk system to give the students of KUTKM information about Student Representative Council, Chancellery, Registrar Office, Student Affairs Office, Bursar Office, Library, University Industry Centre, Development Office and Computer Centre.

1.4 The Importance of the Project.

Basically the interactive kiosk system has several significance of importance which follows into the development of the kiosk itself. This section will explain why the interactive kiosk system has to be develop to create other way to obtain a better

academic environment, not just for the student but also for the whole college community.

This interactive kiosk system will help KUTKM administration to put all the information in one place that can be retrieved easily from anywhere, anytime inside the campus and by many users with less cost, time and effort. Since this interactive kiosk system will apply simplicity inside its function, students who wants to search the information about KUTKM and education, can directly access here without spending much time and effort in navigation.

Regarding the importance of existance of this interactive kiosk system, a well organized and good manageable environment is created to encourage the sharing of information and communication or relationship among administration, lecturers and students. By adding some new features for this kiosk, it will lead to the usage of new method for interactive kiosk system rather than traditional one.

1.5 Introduction Summary.

In brief, this chapter tries to invoke the purpose and introduction of this project. There are four subsections in this chapter that explains the significance of doing the project, including the status of the objective and the project together with the scope of the project and the importance of the project. This chapter can also be recognized as the introductory chapter for the whole report that relates to the core research element for the whole project itself.

CHAPTER II

LITERATURE REVIEW

2.1 Introduction of Literature Review.

This chapter presents literature review related to this subject area. It includes methodologies and approaches, which deal with related problems. Besides, it also presents other similar or on-going projects and other issues related to the interactive kiosk system. A literature review is an up-to-date, comprehensive, critical discussion of research and other material to a particular topic. A wide coverage of studies has been done to clearly understand the related literature that has been produced in this project matter.

Many interactive kiosk system on this topic have been studied and there are some similarities and differences between them. But, mostly the researches focus on the categorized information and the interesting features of the interactive kiosk system. These studies provide a broad overview of the project that will be pursued for the research project.

Many interactive kiosk systems that have been studied have at least one of the unique features or interesting ideas offered by the interactive kiosk system. After lots of research on good interactive kiosk system structures, there are some criteria that can be used to identify which is a good interactive kiosk system.

The other important criteria of a good interactive kiosk system is the consistency. The consistence format, navigation, diagram, style, button menu, images, fonts, colour,

layout and display size resolution shows the professionalism of the interactive kiosk system that can attract users to stay long at the kiosk. But, the interactive kiosk system can be different or unique between each other from different category.

2.2 Case Study.

The new technology in computing and communication has contributed more efficiency in the world of IT. It can be implemented in various areas of life. In the learning and education area, the computer technology can be implemented. In the following sections the terms that are used in this projects are discussed. For this purpose a fully functional kiosk system has been taken as the case study. The kiosk that involve in this study are Galeria Sri Perdana Information Kiosk and Engineering Division (RTM) Kiosk Center.

Interactive kiosk system via multimedia is an information resource that is designed using a concept of multimedia that is the integration of two or more different media with the computer and also allows user to control how and when the information can be access. Basically, all the interactive kiosk system studied categorized its contents into several categories of information for instances history or division. One of the good examples of the interactive kiosk system is Galeria Sri Perdana Information Kiosk and Engineering Division (RTM) Kiosk Center.

2.2.1 Engineering Division (RTM) Kiosk Center.

Engineering Division (RTM) Kiosk Center is the way of introducing the background and functionality of this division in Radio Television Malaysia (RTM). The contents of this Kiosk Center include the Objectives, Functions, Vision and Mission, Clients Charter, Pakej Club and others.

In Objectives, it has everything regarding the objective of Engineering Division. While functions explains about the main activity of this division and the works that

involve the Engineering Division in Radio Television Malaysia (RTM). Vision and mission, it contains the target that needs to be fulfilled in the future for this division. Clients Charter is focusing on giving the best quality especially services to the customer and viewers in Malaysia generally.

The most important criteria is to have an attractive interfaces and layout design. The presentation style of the interactive kiosk system can determine the number of users access to the kiosk. The layout design includes the structure of the kiosk, the arrangement of items and the customized appearance of the graphics, animation or text. The other criteria is the interactive kiosk system which have the largest repository of data and information, reliable and up-to-date information, user tour guide and contact or email of the kiosk developer. In contrast of that, there are bad elements of the interactive kiosk center that should be avoided such as unnecessary graphics and animation, unorganized pages and inappropriate colours.

After detailed observation and considering some arguments, there has been some areas inside this two kiosk system that need some attention about their information availability, accessibility and functionality.

2.2.2 Galeria Seri Perdana Information Kiosk.

Galeria Seri Perdana Information Kiosk offers more interactive features on its system which may create better understanding and long lasting information among users. This is because interactivity inside a kiosk system is found out to be more likely attractive and fun to be used. Galeria Seri Perdana Information Kiosk also applies some simplicity features on its human computer interaction such as by using memorable icons and basic navigation that will lead towards better accessibility among users.

Although it has been seen that Galeria Seri Perdana Information Kiosk offers more attractive features than Engineering Division (RTM) Kiosk Center, it requires good hardware performance in order to stabilize the usability of the kiosk. In other way Galeria Seri Perdana Information Kiosk needs a good execution environment in order to