ESDC KIOSK INTERACTIVE

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DEDICATION

I would like to dedicate my final project and this thesis to all lectures who had thought me about the ICT (Information Communication Technology) world. It is my honor to appreciate them for what they have given me since the first day I step my feet in KUTKM (Kolej Universiti Teknikal Kebangsaan Malaysia). Without them, this project and thesis might not been published as there are a lot of researches needed in developing a perfect project that contains all the multimedia elements.

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ABSTRAK

Tesis projek 'ESDC (Evertronics Skill Development Center) adalah disediakan untuk Projek Sarjana Muda 2 (PSM 2). Ia mengandungi kombinasi keseluruhan aktiviti, kajian dan kemajuan projek yang digabungkan dalam satu laporan akhir. Tesis ini meliputi pengenalan projek, kajian literatur, perancangan dan metodologi projek, kajian analisa, rekebentuk, perlaksanaan, pengujian serta kesimpulan bagi keseluruhan projek. Pelajar telah membuat kajian mengenai sistem kiosk interaktif dan juga penggunaan *virtual reality (VR)* bagi tujuan projek ini. Kajian adalah berkaitan dengan keperluan yang diperlukan serta kajian terhadap contoh-contoh projek yang sudah sedia ada bagi tujuan rujukan pelajar dalam membangunkan projek ini. Skop bagi projek ini adalah lebih tertumpu kepada plan peredaran sistem kiosk interaktif. Metodologi yang digunakan adalah seperti *Multimedia Design Methodology.* Sepanjang pembangunan projek yang dilakukan, pelajar telah memperolehi pelbagai pengalaman dan pengetahuan daripadanya. Sebagai kesimpulan, tesis ini akan memaparkan keseluruhan kajian dan pembangunan yang telah dilaksanakan oleh pelajar sepanjang PSM 2.

ABSTRACT

This ESDC (*Evertronics Skill Development Center*) project thesis was made for the "Projek Sarjana Muda 2" (PSM 2). It contained the student project progress where all activities and researches were combined together as one final thesis. This thesis concluded the introduction of the project, the literature research, project planning and methodology, the analysis research, design, implementation, testing and lastly the project conclusion. For this project, student had done a research on the kiosk flow system and virtual reality (VR). It concludes research on the requirement and on the available project that was used as a guide for the student to develop the project. The scope for this project focuses on ESDC kiosk interactive itself. Methodology that was used in this project is such as the also the Multimedia Design Methodology. Throughout the development of the project, students have achieved many experiences and knowledge from it. As a conclusion, this final thesis showed what the student has achieved from the research and development that was made within the PSM 2 project.

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LIST OF ABBREVIATION

SHORT FORM   **TEXT**

ESDC   Evertronics Skill Development Center

MLVK   Majlis Latihan Vokasional Kebangsaan

CD   Compact Disc

CD – ROM   Compact Disc Read Only Memory

MDP   Multimedia Development Process

QTVR   Quick Time Virtual Reality

SDLC   System Development Life Cycle

VR   Virtual Reality

VRML   Virtual Reality Markup Language

PCs   Personnel Computer.

ICT   Information Communication Technology.

IT   Information Technology.

CPU   Central Processing Unit.

WWW   World Wide Web.

BMP   Bit Map.

WAV   Wave.

AVI   Audio Video Interface.

HCI   Human Computer Interface.

RAM   Random Access Memory.

CDRW   Compact Disc Read Write.

CD-ROM Burner   Compact Disc Read Only Memory Burner.

MDP   Multimedia Development Process

SDLC   System Development Life Cycle

MB   Mega Byte.

CHAPTER I

INTRODUCTION

1.1   Project Introduction

The project that will develop is the Kiosk for the private collage. It is connected with information about the company that main majoring in education institution. In this kiosk, there will also include all information that has such as ther criteria and activities that use in that private collage. Besides that also, having this kiosk will be easier to user especially student that come here for the information. The kiosk will be develop using the elements of multimedia such as text, ,graphics , audio ,video and animation. This kiosk also will be developing using the software such as the Macromedia Director, Flash, Swish and also that match for the animation and graphical picture.It is also to clear and define the function for the institution. This kiosk must have the criteria to attract the user by its own way. The main criteria that must have in develop the kiosk is the 'Virtual Reality' (VR). In this criteria method, user can see and feel the environment around this institution.

The environment that can be do in the Virtual Reality is the student computer lab, class, office, institute or collage building, and counter for student. This Virtual Reality user can see the 360° view for all that enviroment. Using this Virtual Reality, user are seems like exploring all the place around this institute. User that use this kiosk can know the all places that include in it. And the place that can be seen also is the department for each place that fix by the management. For easier, plan for the location are also attached as guide for user.

Using this plan also, user will focus about the place where the institute is placed.using the variety colour for each place and department and for every lab, class and library .Besides that also this kiosk are attached with the snapshot.

1.2 Problem Statement

There are some problems in ESDC product operation, which can be state in the documentation. There are: -

i)   Not Fully Efficient Data

When redundant data will exist in sire root, still use the old kind of data record and still uses the manual process, totally the record functions is not fully efficient.

ii)   Promotion Strategy

The ESDC marketing strategy had the redundant information and data record as input for the same information that will use. It can interrupt the fitting the process in the selection information.

iii)   Information Process

The ESDC Admin Department has to save all the important data to the old kind of method such as data record. The process is taken big risk for saving all the important record. Its can be lost and hard to find the specific data. The admin must take a long time to find the specific data record for any transaction process. If any accident or phenomenon had been happen, the record maybe lost or

damage. Then, the admin should search and enter the data record again and they lost more time to do the same work.

iv)   Simple Design for Brochures.

The Marketing Department had design some brochures and pamphlets with a simple design and not creative ways. Every session of month, they had design the same layouts and not interactive for attract the client. They had designed the brochures and pamphlets with Microsoft PowerPoint and not touch up the graphic very well. So that the design of brochures and pamphlets for marketing issue are not attract the clients. It is necessary to use the suitable application to design the graphics with more interactive.

v)   Manual Control

Company Admin Department still uses the manual process to conduct ,control and promote all the important information in the department. It is not systematic and full strategic in all conducting for the controlling. It is can take a long time. It is can waste more time in doing the same transaction for the same strategy.

1.3   Objective

The main objective of this project is to create an interactive environment that can be use as a platform to introduce the company to the public. This will enhance the company reputation in the business sector in Malaysia. The other objective is to provide a material to public that also can be use as a training method on how to educate people to use interactive kiosk elements.

There are many benefit by making this kiosk as a medium to attract students from another places besides using pamphlet or newspaper as a medium to transport information. This kiosk is easy to use as it is user-friendly. It use English language as for it national language. It can be use by all type of ages especially students. This kiosk was built to introduce Evetronics (M) Sdn Bhd as one of the institution for education that state in Ipoh, Perak. It is suitable for the students from everywhere to have information. By increasing the amount of the information by this application, Malaysia economic especially this company development will be more secure and stronger.

This usage of multimedia element in this kiosk will attract the user and also give more comprehensive information from the real world view using graphical, text, audio, video and animation. This kind of element is use so that user will get familiar with this kind of interactive media.By using this multimedia application, this improve that Malaysia people also can manage to create Malaysian own Interactive kiosk and in the same time manage to competitive with other develop country. This project is one way of transporting information and as for this, it will make easier for the users to get information since many computer are used nowadays.

1.4 Scope

Base on early research, several problem arises such as not enough information about the company on the whole and short period of time for interview sesion.The intention of the project is to overcome the kiosk of Evertronics (M) Sdn. Bhd. problems such as the lack of information in the current portfolio. This project may solve this problem as the content of teh kiosk is more expandable and easy to upgrade rather than using a paper or pamplet. This kiosk will cover every inch of the company profiles and information that is needed in introduce the company. If this kiosk project is successful, the kiosk

will first be distributed to state government local authorities to give more view about the company and the technology that the company have.

Several boarder projects that must be consider especially for the software that will be use to develope this project. The main software is Macromedia Director and Macromedia Flash. This software will be used to create the main interface and interactivity of the kiosk. The graphical content such as pictures, buttons, backgrounds will be developed using Adobe Photoshop or Paint Shop Pro. The process for recording, mixing and editing of audio will be conducted using Sonic Foundry Sound Forge. Software such as Adobe Primiere and Panorama Factory will be use as platform for video editing, effects and develop the Virtual Reality. There will be some 3D aspects in this projects and this will be done using 3D's Studio MAX.

There are a several aspect that must be do for the research for. And the main aspect that can be done is the flow of the project. This can be shown in the way of the interface that will use the 3D platform and also the structure of the organization. Beside that, other aspects is the content of the information. And for the conducting of the use of the software that suitable for the projects.

1.5   Contributions

The main importance of this research is for to develop the system that use in produce the company in worldwide industry especially to the education institution. Besides that also, it is for the preparation to develop and generate main skill for the benefit to the technology that been use. It is also help to expose the importance pojects research with experience in real work enviroment in the Information and Communication Technology (ICT).

The projects also are the guideline that will provide guidance to the organization to prepare themselves to face these new challenges and to ensure that they can do anything using the new environment technology by guiding the research information. The benefit for this research is to prepare temselves and to develop and generate main skill for the benefit to all organization and the company.

Besides that is also for them to be more effectively and the best ability while can be able maintaning the company reputation. Besides that, it is also expose the organization with experience in real tehcnology enviroment in the Information and Communication Technology (ICT). This research benefit also can upgrade the skill and experience in all types through the achivement.

It can make the organization to try to use the knowledge that they had through all time before especially that are connected with the industry that they involve. This research also using the methodology to make sure all the problems that they facing in the ICT industry and while develop the project can be handle well by the research that it done.

CHAPTER II

LITERATURE RESEARCH

2.1 Introduction

To develop the project, information such as the organization management, structure, course and other such as academic can be find by do the research and search in the internet. Using this kind of techmology are more like easier and faster than find it by manual method. Besides using that method, the other way is the face to face method such as an interview with the company. For the interview session, the question must be prepare and suitable for the development of the project. Besides that, students need to search ini the internet for the samples of the project and develop for combining different software before starting the projects.

Research was done on other available project. The available project was taken as reference for the student to study it and try to upgrade it up in order to suite the requirement needed for the company before it can ready be used in the future.The System Development Life (SDLC) is a common methodology for

system development in many organizations, featuring several phases that mark the progress of the system analysis and design effort. It is used in an organization is an orderly set the activities conducted and planned for each development project. Prototyping is an iterative process of system development in which requirements are converted to a working system that continually revised through close work between analyst and users. In the other word, Prototyping involves the user in analysis and its ability to capture requirements in concrete, rather than verbal or abstract form.

2.2 Fact And Finding

Student will used a simple theory before implement the real project. The theory is to create a 3D and virtual Tour and the same time tried to let user to feel the real enviroment of the education institution and interact with it in interactive way. The project must be entering and responsive so that user will enjoy while using it. Today, user still did not realize that virtual tour existed. The available project research showed that virtual tour has already been used in other country. In Malaysia especially, the used of virtual tour are not been explored widely. Panorama was also been used to create a virtual enviroment where user can navigate throught it. In past time, Quick Time or Virtual Reality was used as platform to view 2-D realistic image of the 360 degrees panorama. This showed that the text is still a primary way of convey information to the user. Research showed that there are 3 way of technique for building 3D models. The first technique is by usingVr authoring tools that usually come with it own modeler and browser that support VRML the second technique is by using the scripting language for example VRML to create collection of object by combining nodes. And the ;ast technique is by using conversion programs such as CAD or Computer Aided Design. This can be use in creating a Virtual enviroment where its output file format is capable on conversion to all VR packages.The new technology in computer and communication has contributed more efficiency in the world. It can be implemented in various areas of life. In