BORANG PENGESAHAN STATUS TESIS^

JUDUL: APPLICATION OF 3D ANIMATION FOR ADVERTISING PURPOSE

SESI PENGAJIAN: 2005 / 2006

Sava ZURINA BINTI ALIAS

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	(/)
4.		ona	tanuakan	1/

pihak berkuasa.

SULIT	(Mengandungi maklu	mat yang berdarjah keselamatan atau
	kepentingan Malaysia	a seperti yang termaktub di dalam
	AKTA RAHSIA RAS	SMI 1972)
TERHAD	(Mengandungi maklu	mat TERHAD yang telah ditentukan
	oleh organisasi/badan	di mana penyelidikan dijalankan)
/ TIDAK TERHAD		
Julenter	_	few .
(TANDATANGAN PENUL	IS)	(TAMDATANGAN PENYELIA)
Alamat tetap: PARIT SATU.	, KG. API-API,	PN. RUSNIDA BINTI ROMLI
82000 PONTIAN, JOHOR.		Nama Penyelia
Tarikh: 23 NOVEMBER 200)5	Tarikh: 30/4/05

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

APPLICATION OF 3D ANIMATION FOR ADVERTISING PURPOSE – DUTCH LADY BASE LIQUID MILK

ZURINA BINTI ALIAS

This report is submitted in partial fulfillment of the requirements for the Bachelor of Computer Science (Interactive Media)

FACULTY OF INFORMATION AND COMMUNICATIONS TECHNOLOGY
KOLEJ UNIVERSITI TEKNIKAL KEBANGSAAN MALAYSIA
2005

DECLARATION

I hereby declare that this project report entitled APPLICATION OF 3D ANIMATION FOR ADVERTISING PURPOSE – DUTCH LADY BASE LIQUID MILK

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

STUDENT:	Juntarle	Date: 23 NOV 2005
	(ZURINA BINTI ALIAS)	
SUPERVISOR:		Date:
	(MISS RUSNIDA BINTI ROMLI)	

DEDICATION

To my beloved parents who has filled my life to the brim with love and joy...

ACKNOWLEDGEMENTS

Firstly, I would like to say Syukur Alhamdulillah to Allah S.W.T for the strength that given to me to go through this Projek Sarjana Muda.

In this opportunity, I would like to thank to my supervisor, Miss Rusnida Binti Romli who have guided me, gave me an encouragement and advice me until this stage of my Projek Sarjana Muda.

I would also like to thank to some of my friends who are also under the same supervisor for their cooperation, knowledge and support during this report development.

Last but not least, I also would like to say thanks to my parent Mr. Alias Bin Tarmidi and and Mrs Chempaka Binti Jani for their love and care which give a spirit and support to me in everything good that I do.

ABSTRACT

As everyone already know, the advertising field is very important to promote any kind of products that produce by any industry. The advertising through television is very effective one if compared with any kind of advertisement that delivered by using other mediums such as newspaper, posters and so on. However, television advertisement that exist in Malaysia nowadays only use the digital video technique and sometimes also add the two dimensional (2D) element inside the advertisement. The main objective of this project are to do some research of the application of 3 dimensional animation for advertising purpose to produce an advertisement that more informative, high quality, and can attract viewers attention to buy the product or services. This project consists of combination of 3D animation and also digital video element which will take about 40 seconds of duration. This project also uses the routine methodology of multimedia project development so that the best result can be produce. Information gathering method that use in this project development is by distributing questionnaires and also from surfing the internet. Findings of the research and analysis are also presented in this report. From the research that have been done, the result is that the 3D animation is very suitable to apply on advertisement to produce advertisements that more informative. high quality, and can attract viewers attention to buy the product or services.

ABSTRAK

Seperti semua orang sedia maklum, bidang pengiklanan adalah amat penting dalam mempromosikan sesuatu product yang dihasilkan oleh mana-mana industri. Pengiklanan melalui televisyen adalah sangat berkesan jika dibandingkan dengan pengiklanan melalui medium-medium lain seperti surat kabar, poster dan sebagainya. Walaubagaimanapun, iklan television yang ada di Malaysia sekarang ini, hanya menggunakan teknik video digital dan kadangkala memasukkan elemen animasi dua dimensi (2D) sahaja. Objektif utama projek ini dibangunkan adalah untuk mengkaji aplikasi animasi 3 dimensi (3D) dalam bidang pengiklanan bagi menghasilkan iklan yang lebih bermaklumat, berkualiti dan mampu menarik perhatian penonton supaya membeli atau melanggar servis yang diiklankan tersebut. Projek ini terdiri daripada kombinasi antara animasi 3D dan juga digital video yang akan mengambil masa lebih kurang 40 saat. Projek ini telah menggunapakai metodologi rutin bagi membangunkan projek multimedia supaya hasil yang terbaik dapat dihasilkan. Kaedah pengumpulan maklumat yang dijalankan ialah penyebaran soalan kaji selidik di samping mencari maklumat di dalam Internet. Hasil kajian dan analisis daripada pencarian data ini juga dipersembahkan dalam laporan ini. Daripada kajian yang dijalankan hasil yang didapati dapati ialah animasi 3D boleh dan sesuai untuk diaplikasikan bagi tujuan menghasilkan iklan-iklan di Malaysia yang lebih berkualiti, berinformasi dan juga dapat menarik perhatian penonton terhadap produk yang diiklankan tersebut.

TABLE OF CONTENTS

CHAPTER	SUB	JECT	PAGE
	DEC	LARATION	ii
	DED	ICATION	iii
	ACK	NOWLEDGEMENT	iv
	ABS	TRACT	v
	ABS	TRAK	vi
	TAB	LE OF CONTENTS	vii
	LIST	OF TABLES	xii
	LIST	OF FIGURES	xiii
	LIST	OF SYMBOLS	xiv
	LIST	OF ATTACHMENTS	xv
CHAPTER I	INT	RODUCTION	
	1.1	PROJECT BACKGROUND	1
	1.2	PROBLEM STATEMENTS	2
	1.3	OBJECTIVES	3
	1.4	SCOPES	4
	1.5	PROJECT SIGNIFICANTS	5
	1.6	EXPECTED OUTPUT	6
	1.7	CONCLUSION	6
CHAPTER II	LIT	ERATURE REVIEW AND PROJECT	
	ME	THODOLOGY	
	2.1	INTRODUCTION	8

	2.2	FACT	S AND FINDING	9
		2.2.1	3D Animation	9
		2.2.2	Advertising	10
		2.2.3	3D Animation in Advertising Field	12
			2.2.3.1 Animation Tricks	13
	2.3	PROJ	ECT METHODOLOGY	14
		2.3.1	Analysis Phase	16
		2.3.2	Pre-Production Phase	16
		2.3.3	Production Phase	16
		2.3.4	Post-Production Phase	17
	2.4	PROJ	ECT REQUIREMENTS	17
		2.4.1	Software Requirement	17
		2.4.2	Hardware Requirement	18
		2.4.3	Other Requirement	19
	2.5	PROJ	ECT SCHEDULE AND MILESTONE	19
		2.5.1	PSM I Project Schedule	19
		2.5.2	PSM II Project Schedule	21
	2.6	CON	CLUSION	22
CHAPTER III	ANA	LYSIS		
	3.1	INTR	ODUCTION	23
	3.2	PROF	BLEM ANALYSIS	24
		3.2.1	Current Advertisement	24
	3.3	REQU	JIREMENT ANALYSIS	28
		3.3.1	Need Assessment	28
			3.3.1.1 Surveys	28
			3.3.1.2 Observation	30
		3.3.2	Content Analysis	31
			3.3.2.1 Functional Requirement	31
			3.3.2.2 Non-Functional Requirement	32
		3.3.3	Resources	32
			2.2.2.1 Handroom Dansinsmant	33
			3.3.3.1 Hardware Requirement	33

			3.3.3.2 Authoring Tools Requirement	34
			3.3.3.3 Software Platform Requirement	35
		3.3.4	Delivery Platform	36
	3.4	CONC	CLUSION	36
CHAPTER IV	DES	IGN		
	4.1	INTRO	ODUCTION	37
	4.2	RAW	DATA	38
		4.2.1	Products Labels	44
	4.3	SYST	EM ARCHITECHTURE	45
		4.3.1	Information Types and Format	45
			4.3.1.1 Text	45
			4.3.1.2 Graphic	45
			4.3.1.3 Audio	46
			4.3.1.4 Video	46
			4.3.1.5 Animation	47
	4.4	PREL	IMINARY DESIGN	47
		4.4.1	Storyboard Design	48
	4.5	USER	INTERFACE DESIGN	48
		4.5.1	Products and Character Interface Design	48
		4.5.2	Storyline	51
		4.5.3	Output Design	53
			4.5.3.1 PAL System	53
	4.6	CON	CLUSION	54
CHAPTER V	IMP	LEMEN	TATION	
	5.1	INTR	ODUCTION	55
	5.2	PROD	DUCTION AND IMPLEMENTATION	56
		5.2.1	Production of Texts	56
		5.2.2	Production of Graphic	58
		5.2.3	Production of Audio	60
		5.2.4	Production of Video	61
		5.2.5	Production of animation	62

		5.2.6 Process of Integration	63
	5.3	SOFTWARE CONFIGURATION MANAGEMENT	64
		5.3.1 Configuration Environment Setup	64
		5.3.1.1 Installing 3D Studio Max	64
		5.3.1.2 Installing Adobe Photoshop	64
		5.3.1.3 Installing Adobe Image Ready	65
		5.3.1.4 Installing Adobe Premier	65
		5.3.1.5 Installing Sonic Foundry Sound Forge	65
	5.4	IMPLEMENTATION STATUS	66
	5.5	CONCLUSION	67
CHAPTER VI	TEST	ING	
	6.1	INTRODUCTION	68
	6.2	TEST PLAN	69
		6.2.1 Test Organization	69
		6.2.2 Test Environment	70
		6.2.3 Test Schedule	70
	6.3	TEST STRATEGY	71
		6.3.1 Alpha Testing	71
		6.3.1 Beta Testing	71
	6.4	TEST DESIGN	72
		6.4.1 Test Description	72
	6.5	Test Result and Analysis	73
	6.6	CONCLUSION	75
CHAPTER VII	PROJ	TECT CONCLUSION	
	7.1	OBSERVATION WEAKNESS AND STRENGHS	76
	7.2	PROPOSITION FOR IMPROVEMENT	77
	7.3	CONTRIBUTION	77
	7.4	CONCLUSION	78
REFERENCES			
APPENDICES			

LIST OF TABLES

TABLE	PAGI		
2.1	PSM I Project Schedule and Milestones		19
2.2	PSM II Project Schedule and Milestones		21
3.1	Questions formulated to obtain publics feedback		29
3.2	Hardware Requirement		33
3.3	Authoring Tools Requirement		34
3.4	Software Platform Requirement		35
4.1	PAL System		53
4.2	Output Format		53
5.1	Description on the Text Production		57
5.2	Description on the Graphic Production		59
5.3	Description on the Audio Production		61
5.4	Description on the Implementation Status		66
6.1	Test Schedule		70
6.2	Technical Test 1		78

LIST OF FIGURES

FIGURE	TITLE	PAGE
2.1	Project Methodology Used	15
3.1	Current advertisement requirements and storyline	26
4.1	Percentage of Advertising technique preferred	40
	by public	
4.2	Percentage of type of animation preferred by public	41
4.3	Percentage of content of Dutch Lady Base Liquid	42
	Milk Advertisement preferred by public	
4.4	The UHT Milk and Pasteurized Milk Front Labels	44
4.5	The Junior UHT Milk Front Labels	44
4.6	The HiLo Milk Front Label	44
4.7	All type of Dutch Lady Base Liquid Milk	48
	Interface Design	
4.8	Interface Design for Dutch Lady UHT Milk	49
4.9	Interface Design for Dutch Lady Sterilized Milk	49
4.10	Interface Design for Dutch Lady Junior	49
4.11	Interface Design for Dutch Lady Pasteurized Milk	50
4.12	Interface Design for Dutch Lady HiLo Milk	50
4.13	Interface Design for Ant Character	51

LIST OF SYMBOLS

3D - Three dimensional

2D - Two dimensional

PAL - Phase Altering Line Video System

LIST OF ATTACHMENTS

ATTACHMENT TITLE 1.0 Gantt Chart 2.0 Questionnaire 3.0 Storyboard

CHAPTER I

INTRODUCTION

1.1 Project Background

The project that will be developed is about a three dimensional (3D) animation advertisement which will be delivering to viewer via television. This 3D animation advertisement will use the Dutch Lady Base Liquid Milk as the products that will be advertise to television viewer. Before developing this project, a research will be done first where the research element is about the application of 3D animation for advertising purpose.

3D animation is a new multimedia technology that can be use to create something that cannot be happen in the real life while advertising is used to advertise products, company or an environment. 3D rendering and 3D modeling is accomplished by taking two dimensional forms and giving them volume. 3D modeling is uses for a variety of multimedia development where it has become truly beneficial for companies that wish to promote or create digital prototypes of their products, buildings and environments. Nowadays, application of 3D modeling concept also can be use for

television advertising purpose.

Today, everyone in Malaysia can see that 3D animation do not use widely for advertisement purpose in this country. Although there are some advertisements in this country that applied this technology, but the number of them is very small and the 3D animations application is not fully applied. However, most of the advertisement in Malaysia uses common technology which is Digital Video Technique and also a small number of 2D animations.

This project will be developed to produce an advertisement for Dutch Lady Base Liquid Milk that can hold the viewers attention on the products so that they will be more interested to buy the product. The specific purpose of developing this project is to find out all the applications of 3D animations for advertising purpose so that it will be use widely in this field and attract more attention from viewer.

1.2 Problems Statements

Dutch Lady Base Liquid Milk is already has an existing advertisement to advertise the product to television viewers. The existing advertisement is using digital video technique alone. This technique is very common in advertising field where it always used by many industries to promote their products. The problems here is when we always use the same technique, viewers will not pay their attention even the story or information is very good one. This is because maybe when watching the advertisement, their mind will think any other things that not related to the advertisement since there are no special element in the advertisement can attract their attention. Besides that,

television viewer also will feel bored with that kind of advertisement since it looks same with any other advertisement that promotes other kinds of products. This is because, by using digital video technique alone, the advertisement will contain only the real things in our life. Digital video technique cannot be used to create something different that cannot happen in our real life to put inside the advertisement to make it more interesting. One more problem that arises when using this digital video technique alone is it is very limited to developer to makes camera effect as it maybe can break the camera. This project is come as an approach or a method of solving all this problems. The project that will be develops will contains 3D animation element inside the advertisement. Since the 3D animation is the latest multimedia technique nowadays, this advertisement can attract more attention from television viewer. This is also because of this new multimedia technology is not used widely in Malaysia yet. Television viewers also cannot feel bored since by using this 3D animation element, the special different element that cannot happen in real life can be created and placed inside the advertisement. This element will make television viewer feel more interested to watch the advertisement from beginning until the end of the advertisement. Besides that, there are also no limited to developer to create camera effects since it is created by using 3D software. The developer will feel free to create effects to 3D element inside the advertisement without feel wonder of video camera damage problems.

1.3 Objectives

The objectives of developing this new advertisement for Dutch Lady Base Liquid Milk products are like below:

 To produce an advertisement for Dutch Lady Base Liquid Milk products that can hold the television viewers attention from the beginning until the end of the advertisement.

- ii. To put some effects that cannot happen in real life to make the television viewers feel more interested to watch the advertisement and they will know deeply about the Dutch Lady Base Liquid Milk products and feel interested to buy and try the products.
- iii. To make the advertisement more informative, beautiful, mysterious, unusual, helpful and have a surprising points of view by applying the research element which is 3D animation into the advertisement.

1.4 Scopes

This project deliverables is an advertisement for Dutch Lady Base Liquid Milk products. This advertisement is develops to advertise all the types of Dutch Lady Base Liquid Milk products.

This project will focus to advertising field where it will be develop for the Dutch Lady Milk Company to advertise the Dutch Lady Base Liquid Milk products. Since this project is an advertisement to promote products, it is very clear that this advertisement will be delivered on television and it is focuses to television viewers. This advertisement will be delivered during the television commercial breaks. The duration of this advertisement will take about 40 seconds. This advertisement is divided into three parts where the first part will take about 25 seconds, the second part will take about 10 seconds and the last part will take about 5 seconds of time. In the first part will be the 3d animation, while in the second part will be the video element and the last part will be the 2d animation element.

The technology that will be use to develop this advertisement is the combination of 3D animation and digital video technique. The 3D software that will be used to create the 3D animation is 3D Studio Max while the digital video file will be creates by using video camera. The output of 3D animation will be in AVI format and it will combine with a digital video file by using Adobe Premier.

1.5 Project Significance

One of the significance of developing this project is it can give benefit to some authority. The first authority that can get benefits from this new advertisement is the Dutch Lady Company itself since this advertisement is develops to advertise their Dutch Lady Base Liquid Milk products. The second authority that can get the benefits from the development of this new advertisement is the television viewers since they can get the information about the Dutch Lady Base Liquid Milk products from just watching the commercial breaks on television.

This new advertisement of Dutch Lady Base Liquid Milk product is very important. This is because of this new advertisement will act as the efficient way to scatting information about the products since this new advertisement will use combination of 3D animation and digital video technique. It is also very important to television viewer to get the right information about the product since the 3D element can hold their attention to the advertisement.

1.6 Expected Output

The expected output of this project is an advertisement of Dutch Lady Base Liquid Milk product. It will contain some special effects on the 3D animation besides also showing the real product by using digital video technique. The function of this project is to advertise the Dutch Lady base Liquid milk product to the television viewer. Besides that, the potential television viewer opinion also will be collect to make sure the advertisement will find with their requirement. The data about some kind of existing advertisements also will be collect to make sure the new version of the advertisement will give the better result then the existing one. The advertisement will be a combination of 3D animation and digital video technique that shows the high quality advertisement that advertises high quality products for high quality company.

1.7 Conclusion

This chapter is discussed about the project that will be develops which is an advertisement for Dutch Lady Base Liquid Milk product. From the problem statement part, the conclusion that can be made is that the existing advertisement for the Dutch Lady Base Liquid Milk products is not very efficient to promote the products to television viewers while from the objectives part, the conclusion that can be made is that this new version advertisement will be produce to make viewer pay more their attention to the product, make them more interested and make the advertisement more informative and interesting. The scope part are also state clearly that this advertisement will take only 40 second of durations. This chapter also conclude that this advertisement will be develop by using both 3D animation and digital video technique since the combination of both technique can produce the more interesting and show the originality of the

product at the same time. This advertisement will be beneficially to both the company and television viewer. The expected output of this project is an advertisement that is very interesting and has the originality value of the product.

The next chapter will discuss about the literature review of the project which is an extensive search of the information available on the application of 3D animation for advertisement purpose topic which results in a list of references to books, periodicals, and other materials on the topic. The next chapter also will describe the project methodology, project requirement and the schedule and milestones of the project.

CHAPTER II

LITERATURE REVIEW AND PROJECT METHODOLOGY

2.1 Introduction

A literature review summarizes, interprets, and evaluates existing literature or published material in order to establish current knowledge of a subject. The purpose for doing so is relates to ongoing research to develop that knowledge. The literature review may resolve a controversy, establish the need for additional research, and define a topic of inquiry.

This literature review might take some portions which are 3D animation, advertising, application of 3D animation in advertising, and the position of camera in 3D animation. The first portion which is 3D animation will discuss about existing knowledge about 3D animation technique. For the second portion which is advertising, will present a review of advertising field. However it will focus to television advertising since the project that will be develops is about a television advertisement. The focus is in on the important factors that make an advertisement efficient to attract viewer.

The third portion of this literature review will discuss about the application of 3D animation for advertising purpose while the last portion will discuss about the 3D effect which is camera placement structure from all its perspective so that it can be applied to the advertisement that will be develop. The purpose of this literature review of camera placement structure is to define the best scene that will produce a very effective advertisement so that viewer will interested and buy the products. Besides that, some review of the products itself also need to study. All the information need to highlight.

Besides the literature review, this chapter also will discuss about the methodology that will be use in developing this advertisement. This methodology will describe the activities that will be done in every stage.

2.2 Fact and finding

2.2.1 3D Animation

According to Cohen,J (1997) computer animation is a sequence of computer generated-images that consists of objects, lights and cameras that maybe moving and changing over time. He also said that computer animation can be used for fully computer generated film (short or feature length) such as entertainment and visualization of simulation data. Special effects also can be added to real camera footage. There are three common approach of computer animation. The three common approaches are including of key frame animation, physically-base simulation, and motion capture. 3D graphic animations including animated 3D models are a great way to being to life an idea or design that is still on the drawing board or just difficult to describe with words.