

3D ANIMATION SHORT STORY
“CINTAILAH SUNGAI KITA”

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UNIVERSITI TEKNIKAL MALAYSIA MELAKA

BORANG PENGESAHAN STATUS TESIS

JUDUL: 3D ANIMATION SHORT STORY “CINTAILAH SUNGAI KITA”

SESI PENGAJIAN: 2007/2008

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3D ANIMATION SHORT STORY
“CINTAILAH SUNGAI KITA”

AL KHAN BIN ABDUL GANI

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


FACULTY OF INFORMATION AND COMMUNICATION TECHNOLOGY
UNIVERSITI TEKNIKAL MALAYSIA MELAKA
2008


DECLARATION

I hereby declare that this project entitled

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“CINTAILAH SUNGAI KITA”**

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

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DEDICATION

This thesis dedicated to my family, without whom what little sanity I have would have long since flittered away. To My Supervisor, Thank you so much for the assist and help, and those whom I am proud to count among my friends. You know who you are.

ACKNOWLEDGEMENTS

Throughout the completing this PSM, a lot of experience had I gained in writing this documentation. Hence, I would like to express my appreciations to everyone that have contributed towards the success my PSM.

I would like to take this opportunity to thank my supervisor, Mr. Muhammad Haziq Lim Abdullah for his patience help, advice, full attention, encouragement and professionalism throughout the time. He is a very kind and patient lecturer who tolerated from the beginning of the document to the completion. Thank you...

It is therefore difficult to name all the people who have directly or indirectly helped me in this effort; an idea here and there may have appeared insignificant at the time but may have had a significant causal effect. However, special thanks must first go to my family, who over the duration has been neglected even ignored, during my deepest concentrations.

ABSTRACT

This thesis was development to achieve “*Cintailah sungai kita*” campaign with a 3D animation story. These 3D animation techniques which will perform by using 3Ds max 9.0 hopefully can manipulate student about the important of rivers to human being. This approach expected to help and aware the audience and to conscious about the importance of river for human requirement. The 3D animation show a story of man made river which was created at the future as a replacement for polluted river. Several techniques of animation used in order to develop the story such as animation technique, lip-sync, camera technique, light technique, composite technique. Multimedia production process is the story main methodology in order to complete the story. This story hopefully can help “*Cintailah sungai kita*” campaign.

ABSTRAK

Kertas kajian ini dibangunkan untuk membantu kempen “*Cintailah sungai kita*” dengan membina satu cerita pendek menggunakan animasi 3D. Keadeh ini menggunakan animasi 3D dengan menggunakan 3Ds Max 9.0 sebagai perisian pembangunan. Penggunaan pendekatan ini diharap dapat membantu kempen ini dengan menyedarkan pelajar betapa pentingnya sungai terhadap keperluan manusia. Jalan cerita yang menggunakan sungai buatan manusia yang dibina pada masa hadapan bagi menggantikan aktiviti riadah seperti memancing diharap dapat menyedarkan pengguna tentang akibat jika sungai ini tidak dicintai. Beberapa teknik digunakan untuk menggunakan projek ini seperti teknik animasi, animasi kamera, animasi cahaya, teknik pertuturan karektor dan banyak lagi. Methodologi yang digunakan adalah Process penghasilan multimedia dimana amat penting dalam pembangunan projek. Diharap dengan menggunakan cerita pendek ini dapat membantu kempen “*Cintailah Sungai kita*”.

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LIST OF ABBREVIATIONS

3D	-	3-Dimension
PSM	-	Projek Sarjana Muda
VCD	-	Video Compact Disc
2D	-	2-Dimension
2D	-	Two-Dimensional
DVD	-	Digital Versatile Disc
MPEG	-	Moving Picture Experts Group
VCD	-	Video Compact Disc
DVD	-	Digital Versatile Disc / Digital Video Disc
TV	-	Television
NTSC	-	National Television System Committee
PAL	-	Phase Alternating Line
JPEG	-	Joint Photographic Experts Group
GIF	-	Graphic Interchange Format
MP3	-	Moving Picture Experts Group Layer-3 Audio

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CHAPTER I

INTRODUCTION

1.1 Project Background

Produce 3D animation short story “*Cintailah Sungai Kita*” as a requirement for PSM. It is hope to enhance the way of 3D animation presenting by creating a 3D animation short story. This 3D animation is about an awareness story, which has its own message from the story to deliver to targeted audience.

Our rivers still polluted even many ways taken by government to ensure our river not become more polluted. The government campaign “*Cintailah sungai kita*” has been told by media are failed since launching within 1993. To tend and protect our river from more damage, it is necessity to aware the society about the importance and roles of river. One of the plans is an awareness campaign for primary school student and society about the precious treasury that we have which is our river. This is why the project develops and the scopes of the project are primary school student.

This 3D animation will be present on VCD and also available for television broadcasting company. The languages that will be use in this animation short story is Malay language and have subtitles in English. To create this project, the main software used is 3DS Max 9 which is for modeling the 3D character and animates it. This short story is fully 3D animation and present around 3 to 5 minutes.

Formerly, there are many 3D animated story has been produced in our country such as *Geng* and *Kacang*. Each story brings a different message. Hence, these animations will give much information and deliver a good message to the target audience and also to remind them about the precious treasury that we have which is our river. At the same time they will learnt how to love our river and manure the spirit nature loving to themselves.

1.2 Problem Statements.

Recently, the government campaign "*Cintailah sungai kita*" has been told by mass media are unsuccessful to keep awareness among Malaysians. The government campaign since 1993 are not successfully even a million ringgit spends to clean river entire Malaysia. According to statistic from Bernama (2007), more than a few tan rubbish take away a day from our main river.

To tend and protect our river from more damage, it be necessity to aware the society about the importance of river and the roles of river. One of the plans of the campaign is to keep awareness to primary school student about the precious treasury on our river. This is a reason the project will develops to help this campaign and the scopes of the project are primary school student.

There is just a fewer of animation producer that emphasize to deliver a good moral value and message via their product. Very critical phenomena, when most of animation producer is much interested to produce a ferocious and violent element in their animation. This is not good for primary school student, especially for their learning process. The messages that will deliver are awareness about the precious treasury we have which is our river. The audience will be able to enjoy themselves while watching the 3D animation and at the same time they will learn to love our river.

Most of conventional animation stories are performed in form of 2 dimension (2D) cartoon. Furthermore, animation producer nowadays are more interested to produce a contemporary cartoon 2D with modern character like Sin Chan, Doremon and many more. 3D animation are very new at Malaysia animation industry, this is a good approach to create a short story using 3D animation as a platform to deliver a message to the audience.

1.3 Objective

The objectives are:

- To create a short 3D animation film length between 3 to 5 minutes. It will focus on story to keep awareness audience on our precious river.
- To apply about the 3D animation basic techniques such as camera animation, lighting, lip-sync, UV-mapping technique and multi-textures technique.
- The projects to be delivered in DVD PAL format and aspect ratio 4:3

1.4 Scope

Primary school student are the target user for this product. At this age, they are still in early learning process, so the messages that delivered can be applied to their real life. Besides, persuade the audience about the precious treasury that we have which is our river. At the same time they will learn moral values and nurture the spirit nature loving to them.

Project can be performed by various type of technique in multimedia such as audio video, 2D animation, and 3D animation. 3D animation was taken as projects technique in order to accomplish the project because several 3D elements can attract viewers and audience.

This animation short story can be also proposed to broadcast corporation in Malaysia and produce on VCD for local market and an edutainment material at school. The language used is Malay language and have subtitles in English. The duration of this story is about 3 to 5 minutes. For broadcasting company output will display in PAL video format and the screen aspect ratio is 4:3.

1.5 Project Significance

The significance of the research was present a new kind of platform which is 3D animation in Malaysia. Currently in Malaysia, not many entertainment and edutainment companies dare to venture in this kind of animation, because it requires training and high cost to upgrade it.

The project performed by using 3D animation technique due to 3D elements can attract viewers and audience. The project will help the campaign “*Cintailah Sungai Kita*” deliver the message while watching this story. Besides, raise the audience awareness to our precious river. It is importance to aware about the importance of our river and it roles.

1.6 Conclusion

To end this chapter, it is a must to summarize this chapter and look backward to its introduction. The project aim is to help the audience to instill a messages values and consciousness of Mother Nature while watching this story and get a good place in the local market because it is very new using 3D animation approach and can be one of edutainment at the school.

For the next activity, it required the literature study about current project and existing project. It is also a need to study the techniques used for specific animation and the best technique will be chosen to be applied to this project.

CHAPTER II

LITERATURE REVIEW AND PROJECT METHODOLOGY

2.1 Introduction

This chapter is focusing on literature review and the project methodology used to develop this project. A literature review is an evaluate report information found in the literature research to the related area of study. The review will describe, summarize, evaluate and clarify the literature. According to Bruce (1994), the review form is important chapter in a thesis where its purpose is to provide the background to and justification for the research undertaken. The author has identified six elements of a literature review which is a list, a search, a survey, a vehicle for learning, a research facilitator and a report.

The methodology is a way to use all available approaches, technique and tools used to achieve predetermined objectives. Many kinds can be approached on multimedia methodology project such as the analysis, pre-production, production, post-production. Therefore the applicable methodology project can help, manage and maintain the project development. This chapter also describe about the project schedule and milestones during the development process of this project. Project schedule is a project progress plan that shows the activities that has been plan throughout this project development. It will provide the guide to implement the progress of the project.

2.2 Domain

The domain of the project is 3D animation on Edutainment. Animation is one of multimedia element and consists of two type animation which is 2D animation and 3D animation. According to Cohen, J. (1997), computer animation is the rapid sequence of computer generated images that consists of objects, lights and cameras.

Computer 3D animation is an evolution from 2D animation where it is more complex than 2D animation. 2D animations consist of produce the object at two axis which is x-axis and y-axis. It will create an object and animation which has height and width. 3D animation is different than 2D animation which create object from 3 dimension; x-axis, y-axis, and z-axis where the object and animation has height, width and depth. These concepts make the 3D animation more realistic because it has a view form several angle. In others word, 3D animation actually bring the 2D animation steps one forward with provide a realistic animation like an object in a real world.

According to Harun, J. and Tasir, Z. (2005), 3D computer graphics are different from 2D computer graphics because three-dimensional representation of geometric data is stored in the computer for the purposes of performing calculations and rendering 2D images. Such images may be for later display or for real-time viewing. Despite these differences, 3D computer graphics rely on many of the same algorithms as 2D computer vector graphics in the wire frame model and 2D computer raster graphics in the final rendered display. In computer graphics software, the distinction between 2D and 3D is occasionally blurred; 2D applications may use 3D techniques to achieve effects such as lighting, and primarily 3D may use 2D rendering techniques.

Opposite to others media such as text and graphic which has static behavior, the animation bring a revolution on live aspect such as education, entertainment, engineering, training and so on. The project domain will touch 3D animation on edutainment which is combination of two live aspect; education and entertainment. On education the animation technology are used at teaching and learning. It is more