BORANG PENGESAHAN STATUS TESIS*

JUDUL: MOBILE TIPS ADVERTISEMENT FOR MOTORCYCLE TYRE SAFETY

SESI PENGAJIAN: 2007 / 2008

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MOBILE TIPS ADVERTISEMENT FOR MOTORCYCLE TYRE SAFETY ON 2D ANIMATION (M-TIPS)

MOHD HANIF BIN MOHD JAMIL

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

FACULTY OF INFORMATION AND COMMUNICATION TECHNOLOGY
UNIVERSITI TEKNIKAL MALAYSIA MELAKA
2007

DECLARATION

I hereby declare that this project report entitled
MOBILE TIPS ADVERTISEMENT FOR MOTOTRCYCLE TIRE SAFETY
ON 2D ANIMATION (M-TIPS)

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

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May ALLAH S.W.T always bless you, Wassalam.

ABSTRACT

Mobile tips advertisement for motorcycle tyre safety on 2D animation is a mobile tips field of study. Hence the focus will be on handheld devices that can help people on learning with the effective way, easy to comprehend and lightweight to be brought anywhere and anytime. The problem arises from the increasing number of death by motorcycle accident in Malaysia where most of them lack on safety knowledge. One of the lack knowledge is how to deal with tyre safety situation. By developing a small size and easy to bring reminder like mobile video, this project could help awaken their alertness of safety on the road. Research that using the Multimedia Production Process methodology can assure the objective for the proposal is achieving. By running the processes of analyzing, designing, implementing and testing, the right tracks for the project will be developed. Frame by frame animation technique is used in developing process of this project. The output of this project would be a small size mobile video with rich animation colour and tyre safety message in .3gp video file format where it was the most popular mobile content in the current time.

ABSTRAK

Animasi 2D untuk iklan rujukan peranti mudah alih keselamatan tayar motosikal ini adalah berada di dalam bidang m-tips. Maka, dengan itu fokus untuk projek ini adalah berkenaan peranti-peranti mudah alih dalam membantu orang ramai untuk menggunakan cara pemahaman dan pembelajaran yang lebih efektik, senang difahami dan juga ringan untuk dibawa ke mana-mana sahaja tidak kira tempat dan masa. Permasalahan yang timbul untuk membuat usulan projek ini adalah daripada peningkatan kadar kematian di kalangan penunggang motosikal di Malaysia saban tahun. Salah satu punca yang dapat disiasat adalah kerana kebanyakan daripada mangsa tidak mempunyai pengetahuan tentang keselamatan di jalanraya yang perlu di beri perhatian. Salah satu faktor keselamatan yang kurang dititik beratkan ialah keselamatan tayar motosikal mereka sendiri. Dengan membuat sebuah video peranti mudah alih yg kecil saiznya dan mudah dibawa, projek ini dapat membantu meningkatkan daya kewaspadaan mereka. Kajian yang dijalankan dengan menggunakan kaedah proses produksi multimedia boleh memastikan projek ini berjalan dengan lancar. Dengan membuat proses analisa, merekabentuk, perlaksanaan dan pengujian dapat memastikan objektif projek tercapai. Teknik animasi *frame by frame* telah digunakan di dalam proses penghasilan projek ini. Hasil projek ini adalah sebuah video peranti mudah alih berformat .3gp dimana ia merupakan teknologi yang sangat popular untuk video pada peranti mudah alih masakini.

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LIST OF ABBREVATIONS

2D	-	Two Dimensional
3D	-	Three Dimensional
3G	-	Third Generation
CDMA	-	Code Division Multiple Access
CNN	-	Cable News Network
DMB	-	Digital Multimedia Broadcasting
DVB-H	-	Digital Video Broadcasting – Handheld
EDGE	-	Enhanced Data rate for GSM Evolution
Edutainment	-	Educational Entertainment
FOMA	-	Freedom of Mobile Multimedia Access
FTMK	-	Fakulti Teknologi Maklumat dan Komunikasi
GPRS	-	General Packet Radio Service
GSM	-	Global System for Mobile Communication
IEEE	-	Institute of Electrical and Electronics Engineers
IMT-2000	-	International Mobile Telecommunication – 2000
ITU	-	International Telecommunication Union
MediaFLO	-	Media Forward-Link-Only
MPEG-4	-	Moving Picture Experts Group – type 4
OS	-	Operating System
PDA	-	Personal Digital Assistant
TVC	-	Television Capsule
UTeM	-	Universiti Teknikal Malaysia Melaka
UIQ	-	User Interface Quartz
UMTS	-	Universal Mobile Telecommunication System
UTRAN	-	UMTS Terrestrial Radio Access Network
Wi-Fi	-	Wireless Fidelity
ISO	-	International Standard Organization
DVD	-	Digital Versatile Disc or Digital Video Disc

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CHAPTER I

INTRODUCTION

1.1   Project Background

Animation is one of multimedia element that can be categories into two types of sub part that is the two-dimensional animation (2D) and the three-dimensional animation (3D). This kind of multimedia element as well can be distinct as "a motion pictures made by taking photograph successive positions of inanimate object (as puppet or mechanical object) or animated cartoon; a motion picture made from a series of drawings simulating motions by means of slight progressive changes". This is a fairy common understanding of the term animation but it reflects a limited exposure into what the art form has to offer (Philling, 1999).

This project is will be specifically develop and use for Mobile Content industry. In fact, the mobile technology has been very popular to the people lately and provides a large area of functional services. Hence, this project is to support more on the technology fast growth. Nowadays, the new technology being introduced massively through the media and dependable such as 3G (Third Generation) technology as part of the GSM (Global System for Mobile Communication) latest mobile networking after EDGE (Enhanced Data rate for GSM Evolution) and GPRS (General Packet Radio Service). It show how mobile technology can be very important to the global world and commercialize opportunity can be gain from the reason itself.

As for commercial specification contained, this project can be used by tyre business oriented company such as Silverstone, Michelin and much more and mobile video provider or operator such as Maxis, Celcom, eBuzz and others. Besides that, there are so many educational advertising or program about road safety and most of it produced by the government and less by private sector for instance Petronas Corporation to be example is their Street Smart program. Yet this project can also be use for government project for the road safety program as well.

However, the road safety for 2D animation on motorcycle tyre conditions is not available yet in Malaysia. By the way, at current time the road safety advertisement was all existed in TV broadcasting content not yet available on mobile video to be as mobile learning production. This kind of module was just not dependable reference but it was easy to carry as well because the output will be developing for mobile content. This project is also for answered the government suggestion for a better living with road safety knowledge and precaution within Malaysian. This project as well can be one of the additions for the road safety precautions use for present and to be.

Throughout the project, the output will be developed for UTeM (Universiti Teknikal Malaysia Melaka) student for their mobile reference on motorcycle tyre safety and this project will benefit a lot for those who ride their motorcycle to the campus. There will be two different episodes for this project, the first one will show the situation on low tyre pressure situation while the other one will illustrate the worn out tyre condition. The video animation will be developing in mobile support output since this project is orientating with m-learning (mobile learning) process.

1.2 Problem Statements

Influence from the problem of UTeM student did not know on how to deal with the cause of their ride's tyre condition, this project to help them improve their alertness for safety on the road especially for their motorcycle's tyre safety. This project helps them for riding steps on what they should do when they met the specific incident. There are two situations normally occur such as low tyre pressure situation and the worn out tyre situation.

There are about 2951 registered motorcycles from student in UTeM in the late 2006 according to Safety Unit of UTeM and they expect the number will growth passing the time in future. The worries come from the statistic from Police Department of Malaysia where it shows that the high statistic accident happening in Malaysia is the motorcycle accident. The charts below show us the statistic between the rider and the passenger on motorcycles accident.

Motorcycle Rider Statistic

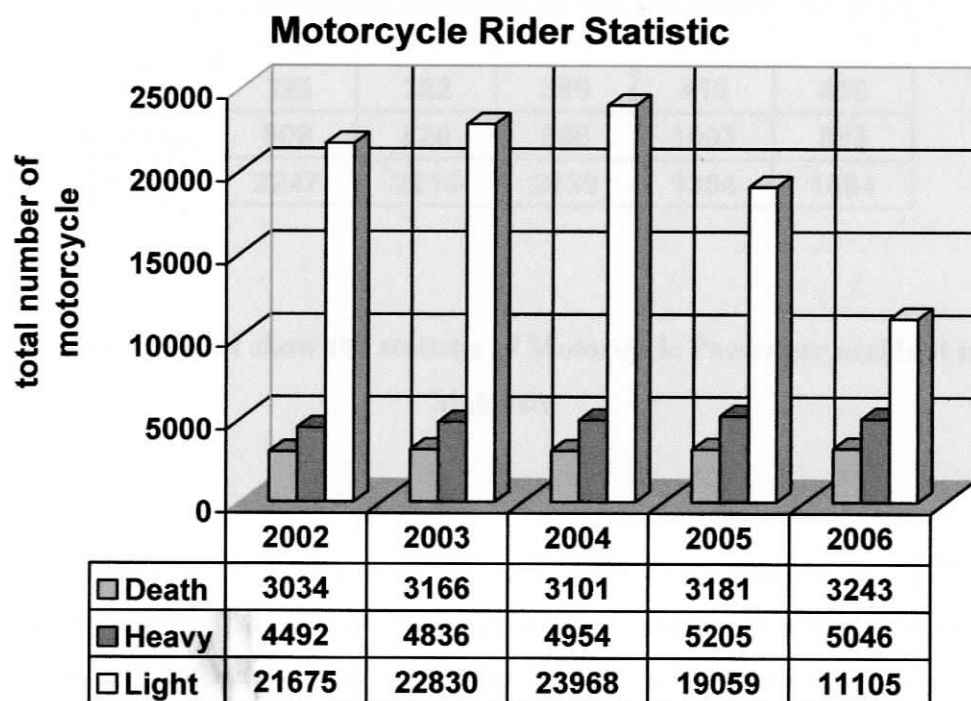|	2002	2003	2004	2005	2006
☐ Death	3034	3166	3101	3181	3243
■ Heavy	4492	4836	4954	5205	5046
☐ Light	21675	22830	23968	19059	11105

Figure 1.1: Statistic Chart of Motorcycle Rider accident in Malaysia

Figure 1.1 above show the statistic of motorcycle accident in Malaysia that referring to the rider since 2002 until 2006 (www.rmp.gov.my, 2007). From the chart we can see that death number steadily increase due to the time being. Not forgotten the heavy and light injuries are increasing follow by the death occurrence. Year 2006 seem very critical for the death even there are so many road safety efforts to avoid the bad possibility.

Motorcycle Passenger Statistic

	2002	2003	2004	2005	2006
☐ Death	395	382	399	410	450
■ Heavy	808	820	866	1003	883
☐ Light	2247	2214	2439	1364	1684
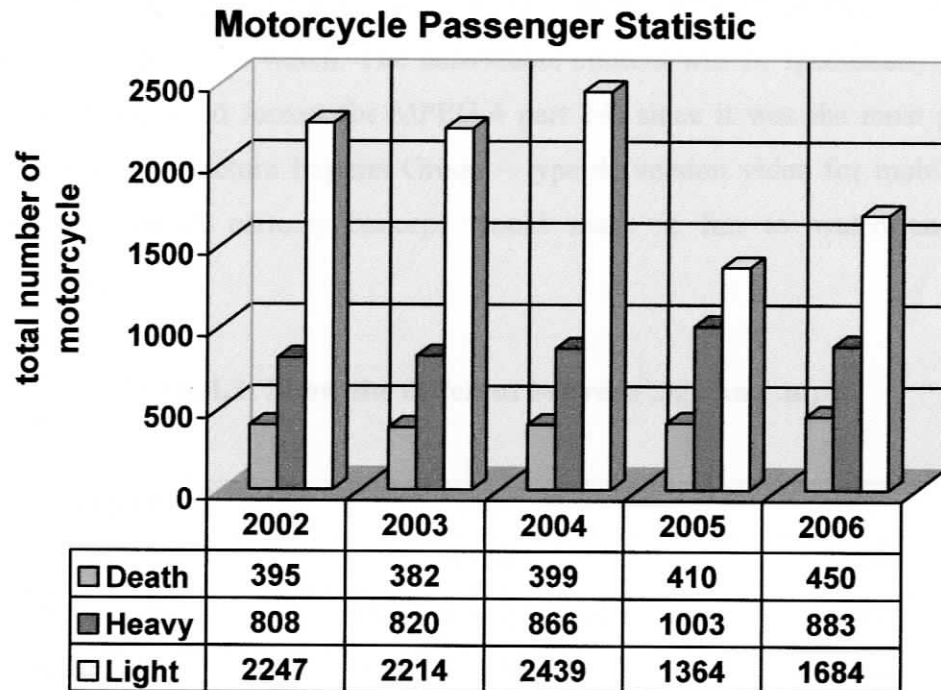
Figure 1.2: Chart show the statistic of Motorcycle Passenger accident in Malaysia

While figure 1.2 shows the statistic of motorcycle accident in Malaysia refers to the passenger at the back since 2002 until 2006 (www.rpm.gov.my, 2007). As same as the rider statistic, the passenger number of death is followed increasing as well. Year 2004 is the most critical numbers for light injuries and again, in 2006 the number of death is the most critical due the time being.

Most of the reason for the accidents is one lack for their safety on the road and that include their tyre safety. While the other reason is increase population made the transport vehicle are in high demand for the needs and the reckless of others on the road helping the increasing for the statistic. Hence, from the statistic above, hope that this project can help lesser the number of the statistic reported by alerting them as a reminder in their own mobile phones anywhere and anytime.

In other part, the output is easy to bring together, little use of space for mobile phones and attractive to watch. The deliverable content will be specifically in .3gp file format (simplified format for MPEG-4 part 14) since it was the most popular MPEG-4 (Moving Picture Experts Group – type 4) version video for mobile. The approach of simple cartoon concept would make it fun to watch and easy understanding.

Table 1.1: Show the different between .3gp and .mp4

Subject	.3gp	.mp4
Size	smaller	small
Video codec	H263, Mpeg4, Xvid	Mpeg4
Audio codec	Amr_nb, Mpeg4aac	Mpeg4aac
Channel (default)	mono	stereo
Bit rate	40	99
Frame rate	11	25

From the table 1.1, it shows that .3gp file format have much more option than .mp4 file format. Even the video and audio codec of .mp4 format can be implemented in .3gp format. Judging from the characteristic of both format .3gp was the selected to make it suitable with the low phone memory situation. Since then, the selected file format for the output is .3gp file format.

1.3   Objective

The proposal of developing this infomercial 2D edutainment animation project is to achieve the objectives:

i.   To make mobile tips 2D animation on motorcycle tyre safety.

Using one of the multimedia elements, 2D animation as a platform to deliver the information message of tyre safety tips for the target audience beside the easy understanding storyline that content 15 second duration time.

ii.   To apply cartoon concept approach on 2D animation for student.

Implement the human psychology research on awareness approach by using multimedia content such as colour, font, graphic and audio that can attract the audience. As for the project the theme of vector graphic cartoon had been choose for the approach.

iii.   To make a specific 2D animation accordingly to mobile video requirement.

Make a research on video content for mobile so it can be transfer to the specific mobile phone that can support the output of .3gp file format. Other than that is to fill the needs for high quality content but in small space of byte. The selected brand for this project is Sony Ericsson 3G phone onward.

1.4 Scope

The scopes for this project are:

i.   There will be two episodes for this full 2D animation edutainment mobile video content will be developing and there are the situations of pump-up the low tyre pressure and checking thus changing worn out tyres.

ii.   The time duration for each episode is 15 seconds respectively as it was a standard duration for commercial production.

iii.   There are 6 scenes for each episode. The animation functionality would be in linear presentation meaning there was no interaction with the audience

iv.   The message for the educational part is using narration on English Language with familiar character's name.

v.   For the audience, it will be specifically focus on UTeM student who was a motorcycle user and owned a video support mobile phone especially Sony Ericsson brand lead by the problem arise to influence the project proposal.

vi.   For more precise data retrieve it will be only focus on FTMK (Faculty of Information Technology and Communication) students where there are 6 divisions inside the faculty. The 6 divisions are BITM (Interactive Media), BITC (Network), BITD (Database), BITS (Software), BITI (Artificial Intelligence) and DIT (Diploma Information Technology). Indirectly it can become a general knowledge for outrange target users.

viii.   The deliverable platform as being notice early will be use for Sony Ericsson mobile OS Symbian 9.2 and UIQ 3 (User Interface Quartz).

1.5   Project Significance

This project can give benefit to the target user mainly as it was not just a reminder to them but also teach them on how to deal with the situation occurs with the motorcycle tyre incident. Meanwhile, the commercial part of the project can benefit the tyre oriented business since they can advertise their product by sponsored the project budget or owning the authorization of the project. Other than that, the project will help the government on advertising infomercial on road safety to the public for a better future.

By inferring the objectives states, these projects need to be running on a single person due to the requirement of the syllabus itself, hence it will be much more challenging to produce a high quality project progress compare to the animation production house project. This project can be a good reference for those who ride their motorcycle and the factor of cartoon make it more interesting to watch. To meet the requirement specification for mobile video type, the research later can be as a reference to the future proposal on mobile content research and development.

1.6   Expected Output

The expected output for this project, refer to the features and storyline driven are the whole complete two series edutainment cartoon animation that combine all sort of multimedia element that deliver on 15 second duration on each series. The file type format will be in .3gp from MPEG-4 format video that will be running on MPEG-4 player that commonly provided by the 3G mobile phone features for small storing space on flash drive with high quality of video compression. The output should be running smoothly on Sony Ericsson 3G phone since the scope for this project had been state for the using the brand for the project requirement.

1.7   Conclusion

The effort to develop this 2D infomercial animation was to achieve the goal to produce an output of simple, fun, easy understanding and easy to carry to the audience. Hence, this introduction phase will predetermine the reason on developing project and the draft of idea on how to develop this project.

On the next chapter, it will focus on what the research that will be done to implement into the progress. Other than that, it will cover the methodology used as a guideline on developing the project. The detail for project requirement also will be discussed in the next chapter such as software requirement and hardware requirement. Brief detail for the project planning schedule and milestones from the beginning task until complete the final task will be included.