UNIVERSITI TEKNOLOGI MARA MALAYSIA

FAKULTI SAINS KOMPUTER DAN MATEMATIK



Treating Disgust Using Augmented Reality

WAN NUR FARRAHIN BINTI WAN ALI

Thesis submitted in fulfilment of the requirements for the Bachelor of Computer Science (Hons) (Multimedia Computing) Faculty of Computer and Mathematical Sciences

July 2012

ACKNOWLEDGEMENT

Alhamdulillah, with a god willingness this proposal was succesfully completed. With that, I would like to take this opportunity to express my gratitude to everyone who has helped and contributed in preparing this proposal doesn't matter that it is either directly or indirectly.

Firstly, I would like to thank to both my parents, Wan Ali bin Wan Yusof and that had raise me and spent so much time and money in order to give me education until now.

Secondly, The most important person that I would like to thank to my supervisor Dr Fakhrul Hazman Yusoff that help me in completing this project. He guide me through completing this project and he also contribute some ideas for my project. I will remember whatever he taught me.

Besides that, I also would like to thank to Mr. Mohd Yunus Mohd Yusof and Madam Suzana Baharudin that always give us tips, guides, explanations and many more in the class session and lab session. Without them, this proposal could not be complete.

Another important person is Paman Gie, a lecturer from Indonesia that have been really be a great help to me since he always had time for me answering my questions and guided me through using the augmented reality software.

I also want to thank to all the reseachers for their journals and articles that I took for my references in this paper. Thank you for the information, figures and diagrams.

Lastly, I would like to thank all of my friends that help me through completing this project. Thanks you for all of your co-operative, kindness, knowledge and many more. Without them, my proposal might not be completed due to its time.

ABSTRACT

Disgust is an example of psychological disorder. It is very universal to human being. Everyone feels disgusted on something such as spider, blood, dirty toilet and others. There are treatments that can reduce the disgust feeling towards something. Some researchers said that psychological disorder can be treated by using augmented reality and it includes this disgust feeling. Since disgust traditional treatment happen on the real situation for example, disgust of wet rubbish with maggots; therapist need to recreate the situation or might even have to take the patients to the location to conduct the treatment. But, by using augmented reality, therapist does not have to create the disgusted object or does not have to take the patients to the location since the treatment using augmented reality can be conducted in a controlled room. Moreover, researchers mentioned that augmented reality can provide a reality presence of the object or the situation and can ensure the patients' safety. This project paper will be discussed on the details of the treatment of disgust using augmented reality.

TABLE OF CONTENTS

SUPERVISOR'S APPROVAL	i
DECLARATION	ii
ACKNOWLEGDEMENT	iii
ABSTRACT	iv
TABLE OF CONTENTS	v
LIST OF FIGURES	viii
LIST OF TABLES	xii
CHAPTER 1	1
INTRODUCTION	1
1.1 BACKGROUND OF STUDY	1
1.2 PROBLEM STATEMENT	3
1.3 OBJECTIVES	3
1.4 PROJECT SCOPE	3
1.5 SIGNIFICANT OF THE STUDY	7
CHAPTER 2	8
LITERATURE REVIEW	8
2.1 OVERVIEW OF DISGUST	8
2.1.1 THE MOST DISGUSTING OBJECTS	10
2.1.2 DISGUST TREATMENT	14
2.1.3 FEAR OR DISGUST?	15

CHAPTER 1

INTRODUCTION

"...pus, vomit, urination, and so on—all substances and acts that, for some reason, many cultures tend to see as repellent and, despite their constant presence in human life, as abnormal."

A.K. Reinhart (1990)

"Augmented reality is useful for treating several psychological problems, including phobias..."

M. Carmen Juan, et al. (2005)

The above statements stated that augmented reality is really a good way to be used on treating psychological problems such as disgusting feeling on vomit, feces, blood and more. This chapter will discuss more on the details of the project, the problem that arises, objective to be achieved, the scope of the project and the significant of study.

1.1 BACKGROUND OF STUDY

Augmented reality (AR) can be used in architectural construction, inspection and renovation. AR also can develop games application whether in computer hardware or in mobile hardware. Moreover, it is useful for treating several psychological disorders, including phobias such as fear of flying, claustrophobia, agoraphobia and fears to small