

**ANALYZING BETA STATE OF BRAINWAVE USING  
ELECTROENCEPHALOGRAPHY (EEG) AND MOTION  
TECHNOLOGY SYSTEM**

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This thesis is presented in partial fulfillment for the award of the  
Bachelor of Engineering (Hons.) Electrical  
**UNIVERSITI TEKNOLOGI MARA**



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## ABSTRACT

The project focuses on analyzing the state of brainwaves using Motion Technology System and Electroencephalography (EEG). There are four types of brainwaves which are Alpha, Beta, Delta and Theta that give four different characteristic and ranges of frequencies.

This project consists of analyzing beta state of brainwaves using EEG and motion technology system. This project involves the sample brainwaves of 32 students during their study periods. This project must be done throughout the whole one semester starting beginning of semester until end of semester. The project also analyzes effect of motion technology on human brain. This effect can be analyzed by using EEG before and after using the motion technology system.

Electroencephalography (EEG) is a study of changing electrical potential of the brain. The apparatus used to measure this electric potential of the brain is called electroencephalography and the tracing or the printout of the measured brainwave form is electroencephalogram.

Motion Technology System is an advanced motion therapy technology designed and developed from high-tech research in neurophysiology. The essence of the system is practical and effective use of horizontal rotational motion and partial temporary sensory deprivation, in controlled process which is engineered to provide highly desirable results.

## TABLE OF CONTENTS

ACKNOWLEDGEMENTS	iv
ABSTRACT	v
TABLE OF CONTENTS	vi
LIST OF FIGURES	ix
LIST OF TABLES	xi
LIST OF ABBREVIATIONS	xii

### CHAPTER 1: PROJECT BACKGROUND

1.0	INTRODUCTION	2
1.1	BACKGROUND OF STUDY	4
1.1.1	BRAIN OPTIMIZATION AND SYNCHRONIZATION SYSTEM (BOSS™)	4
1.2	SCOPE OF THE PROJECT	5
1.3	OBJECTIVE OF PROJECT	5

### CHAPTER 2: LITERATURE REVIEW

2.0	INTRODUCTION	7
2.1	BRAIN	8
2.1.1	BRAIN DOMINANT	10
2.1.2	BRAINWAVE ENTRAINMENT AND SYNCHRONIZATION	13
2.1.3	BRAIN'S FREQUENCIES	15
2.1.4	BETA STATE OF BRAINWAVE	20
2.2	ELECTROENCEPHALOGRAPH (EEG)	21
2.2.1	NEURON POTENTIAL	22
2.2.2	RECORDING TECHNIQUES	22
2.2.3	PLACEMENT ELECTRODE	23
2.2.4	EEG FREQUENCY BAND	23
2.2.5	EEG SYSTEM	24