

# **DEVELOPMENT OF SILAT SCOREBOARD USING LABVIEW**

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



**WAN MOHD AFIQ BIN WAN MOHAMAD ANUAR**

Faculty of Electrical Engineering

UNIVERSITI TEKNOLOGI MARA

40450 SHAH ALAM, SELANGOR

## **ACKNOWLEDGEMENT**

In the name of Allah S.W.T, The most Beneficent, The most Merciful. It is with the deepest sense of the Al-Mighty Allah that gives me the strength and ability to complete this project. All good aspirations, devotions and prayers are due to Allah S.W.T whose blessing and guidance have helped me throughout the entire project

I owe a great many thanks to a great many people who helped and supported me during the process of completing this Final Year Project.

My deep sense of gratitude to my Supervisor, Mrs Zuriati Janin for the guidance and support in this subject. She has gone through a lot of pain by reviewing the project and make corrections at every necessary part.

Many thanks also go to Mr Rahmat, a lecturer from Fakulti Sains Sukan dan Rekreasi. He has given a constructing advice and comments on the work that has been done.

I also would like to express my gratitude to my colleagues, Ahmad Subki Bin Samsudin for his cooperation from the hardware stage that leads into the completion of this project.

Not to forget my family for always encouraging me and supporting me throughout life.

## **ABSTRACT**

This paper presents the development of Silat Scoreboard for scoring system improvement in Silat Olahraga match. The development is comprises of three stages: parameter setting and profile, signal acquisition and score point indicator. The design includes all the appropriate components and facilities that necessary to function properly. The program is written using G-programming language potentialities of LabVIEW<sup>TM</sup> version 2011. It is proved that this type of scoring system gives great improvement in terms of flexibility and accuracy.

## TABLE OF CONTENT

<b>APPROVAL .....</b>	<b>i</b>
<b>DECLARATION.....</b>	<b>ii</b>
<b>ACKNOWLEDGEMENT.....</b>	<b>iii</b>
<b>ABSTRACT.....</b>	<b>iv</b>
<b>TABLE OF CONTENT.....</b>	<b>v</b>
<b>LIST OF FIGURES .....</b>	<b>vii</b>
<b>LIST OF TABLES .....</b>	<b>x</b>
<b>LIST OF ABBREVIATIONS .....</b>	<b>x</b>
<b>CHAPTER 1 .....</b>	<b>1</b>
<b>1.0 Introduction.....</b>	<b>1</b>
<b>1.1 Objectives.....</b>	<b>2</b>
<b>1.2 Scope of work .....</b>	<b>3</b>
<b>1.3 Organization of thesis .....</b>	<b>3</b>
<b>CHAPTER 2 .....</b>	<b>5</b>
<b>2.0 Introduction.....</b>	<b>5</b>
<b>2.1 Silat Scoring System .....</b>	<b>5</b>
<b>2.2 LabVIEW.....</b>	<b>7</b>
2.2.1 LabVIEW Front Panel .....	8
2.2.2 LabVIEW Block Diagram .....	8
<b>2.3 Related Previous Research.....</b>	<b>9</b>
2.3.6 Conclusion .....	17
<b>CHAPTER 3 .....</b>	<b>18</b>
<b>3.0 Introduction.....</b>	<b>18</b>
<b>3.1 System Design and Developments .....</b>	<b>19</b>
3.1.1 Parameter Setting and Profile .....	19
3.1.2 Signal Acquisition .....	21

# **CHAPTER 1**

## **INTRODUCTION**

### **1.0 Introduction**

The Silat Olahraga is recognized as one of the martial arts that could be contested in Sukan Malaysia (SUKMA). In general, the evaluation for the Silat Olahraga would be knockout. There are three rounds for one match and the winner is the contestants that have win two out of the three rounds [1]. For each round, the contestant will try to gather as much points as possible within the duration of two minutes. Normally, the points are given by four judges based on the contestant's performance. This was done manually in which the scoring is based on the judges' observation at close range.

Other than Silat Olahraga, there exists another type of martial arts tournament that also uses body protector within its match. This martial arts is known as taekwondo. Unlike Silat Olahraga, taekwondo has another head protector in their tournament. Points are given for kicks at both head protector and body protector. The judging system for taekwondo is similar to Silat Olahraga, which is through observation. Points given for permitted, accurate and powerful techniques to the legal scoring areas. However, only three judges and one referee is used within taekwondo. The similarity of these two martial sports is that the scoring system accomplished conventionally by observation.

The problem within the current judging system within Silat Olahraga is mostly due to human error. Even though the human that was chose as the judges are Silat expertise, however, each individual has different perception on how are given to the