

UNIVERSITI TEKNOLOGI MARA

EVALUATION OF WEB ACCESSIBILITY ON  
MALAYSIA E-GOVERNMENT WEB SITES

MOHD HANAPI ABDUL LATIF

Independent Study submitted in partial fulfillment of the requirements  
for the degree of  
Master of Science in Information Technology

Faculty of Information Technology and Quantitative Sciences

October 2006

## ABSTRACT

The advent of the WWW has caused a dramatic evolution in getting the information. From the web, most of the people nowadays can get information easily from Internet from anywhere and any time. These Web sites also become an important tool that the government used to market their institution to prospective customers and, to provide government information and services available on-line. To make these web sites more functional, they must be accessible to all users, including those with disabilities. This study tries to provide an overview of the accessibility of the selected Malaysia e-government Web sites. Nine Malaysia e-government Web sites were examined to find out how accessible they are with reference to the Web Content Accessibility Guidelines 1.0 (WCAG) published by the World Wide Web Consortium (W3C). The evaluation of the Web sites had done using automatic validation tool, Bobby. This study also complemented with interview to the webmasters to gain better understanding of reasons that their sites are accessible or inaccessible. The research found that all the Malaysia e-government Web sites failed one or more WC3 web accessibility measures which mean disabled users may have substantial problems when accessing e-government websites. These accessibility problems have a relation with the awareness, skills and competencies of the webmaster regarding web accessibility. From the result, the knowledge of the webmaster on topic web accessibility is low. Several suggestions on how to improve the accessibility of Malaysia e-government websites are then offered.

## **ACKNOWLEDGEMENT**

### **In the name of Allah, The Beneficent and The Merciful**

All praise and thanks are due to Allah, and peace and blessings be upon His Messenger.

I would like to express my deepest gratitude and appreciation to my supervisor, Encik Fauzi Mohd Saman who has patiently guided and advised me through countless discussions during the preparation of this independent study.

Special thankfulness to my course mates in CS 770 Master Science in IT, and my friend especially Muhammad Norman Masrek, lecturer from Library Science of UiTM Shah Alam for his contribution in checking grammatical error, and reconstruction of sentences in developing the flow of the report. May Allah S.W.T Bless Your Kindness.

Finally, special thanks to those respondents who has taken time off to complete a survey. And last but not the least to my beloved family for their support, patience and endurance shown over the accomplishing of this study.

# TAB LE OF CONTENTS

<b>TITLE PAGE</b>	<b>i</b>
<b>ABSTRACT</b>	<b>ii</b>
<b>DECLARATION</b>	<b>iii</b>
<b>ACKNOWLEDGEMENT</b>	<b>iv</b>
<b>TABLE OF CONTENTS</b>	<b>v</b>
<b>LIST OF TABLES</b>	<b>ix</b>
<b>LIST OF FIGURES</b>	<b>x</b>
<b>LIST OF ABBREVIATIONS</b>	<b>xi</b>
<b>CHAPTER 1 INTRODUCTION</b>	
1.1 Background of the Study	1
1.2 Statement of the Problem	2
1.3 Objective of the Study	4
1.4 The Scope of Study	5
1.5 Significance of the Study	5
1.6 Limitation of the Study	5
1.7 Chapter Organization	6
<b>CHAPTER 2 LITERATURE REVIEW</b>	
2.1 Introduction	7
2.2 Definition of Web Accessibility	7

2.3	Web Accessibility and Disability	9
2.4	Web Accessibility for the Visually Impaired	11
2.5	Assistive Technologies (AT)	13
2.5.1	AT For Physical Disabilities	14
2.5.2	AT For Hearing Disabilities	14
2.5.3	AT For Vision Disabilities	15
2.6	Web Accessibility Guidelines Standard	15
2.6.1	WCAG Compliance Audit	16
2.7	Web Accessibility and Government Initiatives	18
2.8	Web Accessibility Evaluation Tools	19
2.9	Web Accessibility Research	20
2.10	Summary	22

### **CHAPTER 3 RESEARCH METHODOLOGY**

3.1	Introduction	23
3.2	Methodology	23
3.2.1	Selection of the Web Site	25
3.2.2	Evaluation Tool	25
3.2.3	Evaluation Procedure	32
3.2.4	Webmasters Interview	33
3.3	Summary	34