

USER INTERFACE FOR MOBILE LEARNING

BY

SYED RAHAZUAN BIN SYED DERAMAN

2000143585

**THESIS SUBMITTED IN PARTIAL FULFILLMENT FOR THE DEGREE OF
BACHELOR OF SCIENCE**

(HONS)

(INFORMATION SYSTEM ENGINEERING)

FACULTY OF INFORMATION TECHNOLOGY AND QUANTITATIVE SCIENCE

MARA UNIVERSITY OF TECHNOLOGY

OCTOBER 2002

DECLARATION

I certify that this thesis, and the research to which it refers, are the product of my own work, and that any ideas or quotations from the work of other people, published or otherwise, are fully acknowledged in accordance with the standard referencing practices of the discipline. I acknowledge the helpful guidance and support of my supervisor, Dr. Nor Laila Md. Noor.

I authorize the University Technology Mara to lend this thesis to other institutions or individuals for the purpose of scholarly research.

I further authorize the University Technology Mara to reproduce the thesis by photocopying or by other means, in total or in part, at the request of other institutions or individuals for the purpose of scholarly research.

AUGUST 30 2002

SYED RAHAZUAN BIN SYED DERAMAN

2000143585

ABSTRACT

USER INTERFACE FOR MOBILE LEARNING

By

Syed Rahazuan Bin Syed Deraman

October 2002

This paper issues the user interface design for the new implementation of learning – through mobile devices. Mobile learning is now growing rapidly in today world and the presentation of learning content through mobile devices makes the developer surrounds with limitations. First, this paper will view project that had been and still develop in this area to absorb the problem that they faced. This paper will discuss the potential issues that arise when designing the user interface for a small scale device with limit screen display. The usage of mark-up languages for wireless devices is also viewed. At the end of this paper will focus on the implementing the user interface due to the problem that viewed. Finally, the snapshot of UiTM Mobile Learning prototype for the future work is viewed.

CONTENT

DECLARATION		ii
ACKNOWLEDGEMENTS		iii
ABSTRACT		iv
TABLE OF CONTENTS		v
LIST OF TABLE		ix
LIST OF FIGURE		x
LIST OF ABBREVIATIONS		xii
CHAPTER I	INTRODUCTION	
1.1	Problem description	1
1.2	Objective	3
1.3	Scope	4
1.4	Benefit/Important of Study	5
CHAPTER II	LITERATURE REVIEW	
2.1	Introduction	6
2.2	Mobile Devices	7
2.3	Mobile learning, m-learning	10
2.4	Wireless network and networking	11
2.5	Bluetooth and IrDA	13
2.6	Markup Language	14
	2.6.1 WML – Wireless Markup Language	14
2.7	Project Review	14

	2.7.1	The Project	16
2.8		Designing user interface on mobile devices	17
	2.8.1	Laying out the user interface	17
CHAPTER III		METHODOLOGY	
3.1		Introduction	20
3.2		Comparative Study/Research	20
3.3		Issues on new technology that apply this in new learning environment	21
3.4		Propose a framework of mobile learning user interfaces	22
3.5		Develop a prototype of mobile learning that presented in a mobile phone simulator	22
3.6		Markup languages for mobile interface	23
	3.6.1	Introduction	23
	3.6.2	XML	23
CHAPTER VI		FINDING	
4.1		Types of mobile devices user interface available	30
	4.1.1	Introduction	30
	4.1.2	Mobile phone	32
	4.1.3	Pocket PC (Compaq iPAQ)	36
	4.1.4	Personal Digital Assistant	40
4.2		Highlighted Issues: Requirement for mobile learning user interface	41
	4.2.1	Introduction	41