



UNIVERSITI TEKNOLOGI MARA

**MEDICAL SUPPORT SYSTEM (MSS) FOR WARD
ROUND USING POCKET PC**

MOHD KHAIRUL AZMI B. HASSAN

**Thesis submitted in fulfilment of the requirements
for the degree of
Master of Science**

Faculty of Information Technology and Quantitative Sciences

September 2005

Candidate's Declaration

I declare that the work in this thesis was carried out in accordance with the regulations of Universiti Teknologi Mara. It is original and is the result of my own work, unless otherwise indicated or acknowledged as referenced work. This topic has not been submitted to any other academic institution or non-academic institution for any other degree or qualification.

In the event that my thesis be found to violate the conditions mentioned above, I voluntarily waive the right of conferment of my degree and agree to be subjected to the disciplinary rules and regulations of Universiti Teknologi Mara.

Name of Candidate : Mohd Khairul Azmi B. Hassan

Candidate's ID No : 2001622488

Programme : Master of Science in Information Technology (By Research)

Faculty : Faculty of Information Technology and Quantitative Sciences

Thesis Title : Medical Support System (MSS) for Ward Round Using
Pocket PC

Candidate's Signature : 

Date : 26 September 2005

ABSTRACT

The usage of computer devices varies throughout the medical field, from the registration desk up to the medical ward. Handheld devices such as Pocket PC are portable and easy to use, thus are suitable tools to be implemented in this area. The objective of the project is to provide an alternative for doctors to use Pocket PCs as oppose to the wireless notebooks that are presently used for ward rounds. The systems and databases are developed based on two platforms; Windows ME on the desktop computer and Windows CE on the Pocket PC. The systems and databases that are developed in the two platforms are then synchronized in the MSS System. An extension of the MSS System is a prototype of an intelligent pharmaceutical prescription system. The system can be used to alert doctors of any incorrect prescription.

TABLE OF CONTENTS

	Page
ABSTRACT	ii
ACKNOWLEDGEMENTS	iii
TABLE OF CONTENTS	iv
LIST OF TABLE	viii
LIST OF FIGURES	ix
CHAPTER 1: INTRODUCTION	
1.1 Introduction	1
1.2 Problem Description	1
1.3 Objectives of The Research	2
1.4 Research Scope	2
1.5 Research Methodology	2
1.6 Significance of The Research	3
1.7 Organization of Thesis	3
1.8 Conclusion	4
CHAPTER 2: LITERATURE REVIEW	
2.1 Introduction	5
2.2 IT in Medical	5
2.3 Paperless Hospital	5
2.3.1 Local Product	6
2.3.2 Worldwide Product	6
2.4 Decision Support System in Medical Use	7
2.4.1 In Management	7
2.4.2 In Diagnosis	8
2.5 Current Hardware Architecture	9
2.5.1 Palm	9
2.5.2 Pocket PC	11

2.6	Present Software Available	11
2.6.1	Touch Work Dictate	11
2.6.2	Microsoft Visual Basic 6.0	12
2.6.3	SQL Server 7.0	12
2.6.4	Microsoft Embedded Visual Tools	14
2.6.5	Microsoft Active Sync 3.1	15
2.7	Searching Method	16
2.8	Related Work of Medical Support System	17
2.9	Conclusion	20

CHAPTER 3: METHODOLOGY

3.1	Introduction	22
3.2	Data Transfer Between Windows CE to Windows 9x Vice Versa	22
3.2.1	Windows 9x	23
3.2.2	Windows CE	23
3.2.3	Data Transfer Between Windows CE to Windows 9x Vise Versa (Link)	23
3.2.4	FAST Methodology	23
	• Scope Definition	23
	• Problem Analysis	24
	• Requirement Analysis	24
	• Logical Design	24
	• Physical Design	24
	• Implementation	25
3.3	Constraint Satisfaction Technique	25
3.4	Conclusion	26

CHAPTER 4: DEVELOPMENT PROCESSED

4.1	Introduction	27
4.2	MSS System Development	27
4.2.1	Scope Definition	27