UNIVERSITI TEKNOLOGI MARA

AN EXPLORATORY STUDY OF CONTEXT-BASED MOBILE SOLUTIONS FOR ELDERLY PEOPLE

NORSYAMIMI BT ABU BAKAR

IT Project submitted in fulfillment of the requirements for the degree of Master of Information Technology

Faculty of Computer and Mathematical Sciences

April 2010

ACKNOWLEDGEMENT

Immeasurable gratitude to Allah S.W.T. for giving me an opportunity to undertake and complete this project. This study would not have been possible without the guidance and support of many people. Firstly, I would like to express my deepest gratitude and sincere appreciation to my supervisor, Pn. Anitawati Mohd. Lokman, for her precious time, guidance, comments, support and encouragement. I also like to thank my project coordinator, Dr. Wan Abdul Rahim Wan Mohd Isa for his guidance and advice for betterment of this project.

Special thanks to all the respondents in Bintong area for helping me answered the questionnaire which provided valuable comments and opinions. Finally, I would like to extend my gratitude to all my friends for the support and contributions in making this report a success.

Thank you.

ABSTRACT

Mobile devices have become essential part of personal and business life crosses all age and gender boundaries. A tremendous increase in the usage of mobile devices can potentially play a significant role in assisting elderly people in many ways especially in terms of maintaining social relationship, providing sense of safety, and accessibility. However, this senior citizen seems to be neglected user group in the design of mobile devices and services. Hence, this study attempts to explore context-based mobile solutions that are suitable for elderly people. In order to achieve the aim of the study, we used a survey instrument to gather data from elderly aged 50 to 75 years old that focuses only one target community which is in Bintong area at Kangar, Perlis. The results of our study indicate that elderly people are interested in using mobile phones and services, but these services need to deliver real value for them. For future studies, there would be a research that investigates deeply in user-centered design in a better understanding on adoption and the use of mobile devices and services for elderly people.

Keywords: Elderly, mobile devices, mobile usage, mobile solutions, context-based, mobile services/applications.

TABLE OF CONTENT

			Page	
ACKNOWLEDGEMENT ABSTRACT TABLE OF CONTENTS LIST OF TABLES LIST OF FIGURES				
CHAPTER 1:	INTRODUCTION		1-6	
	1.0	Introduction	1	
	1.1	Overview	1-2	
	1.2	Research Background	2-4	
	1.3	Problem Statement	4	
	1.4	Aim	4	
	1.5	Research Objectives	4	
	1.6	Research Questions	4-5	
	1.7	Significance of Study	5	
	1.8	Scope of The Study	5	
	1.9	Limitation of The Study	5	
	1.10	Research Design	6	
CHAPTER 2:	LITERATURE REVIEW		7-16	
	2.0	Introduction	7	
	2.1	Definition of Terms		
		2.1.1 Context-based	7-8	
		2.1.2 Mobile Solutions	8	
		2.1.3 Elderly	8-9	
	2.2	The Impact of Mobile Technologies in Everyday life	9-10	
	2.3	Issues and Challenges in Mobile Solutions	10-12	
	2.4	Mobile Usability	12-14	
	2.5	The Use of Mobile Solutions to Improve	14-16	
		Elderly Quality of Life	_ , 10	

CHAPTER 3:	RESEARCH METHODOLOGY		17-20
	3.0	Introduction	17
	3.1	Research Process and Methodologies	17-18
	3.2	Data Collection	19
		3.2.1 Primary Data	19
		3.2.2 Secondary Data	19
	3.3	Research Instrument	19-20
CHAPTER 4:	DATA ANALYSIS AND FINDINGS		21-37
	4.0	Introduction	21
	4.1	Demography Information Analysis	21-23
	4.2	Usage Patterns Analysis	24-26
	4.3	List of Mobile Solutions	27
	4.4	Analysis by Average	28-32
	4.5	Factor Analysis	32-36
		4.5.1 Principal Component Analysis (PCA)	34-36
	4.6	Discussion	36-37
CHAPTER 5:	CONCLUSION AND RECOMMENDATION		38-40
	5.0	Introduction	38
	5.1	Conclusion	38-39
	5.2	Recommendation	39-40

REFERENCES APPENDICES