

UNIVERSITI TEKNOLOGI MARA

DEVELOPMENT OF ICON-BASED ATM MENU INTERFACE

SHARIFAH ZAFFY SAFARINA BT SYED MUBARAT

Thesis submitted in fulfillment of the requirement for
Bachelor of Science (Hons) Information System Engineering
Faculty of Information Technology And
Quantitative Science

December 2007

ACKNOWLEDGEMENT

First and foremost, I would like to express my thanks to Almighty Allah for giving me strength that enable me to successfully conduct this research.

A very special thank to my supervisor, Encik Fauzi Mohd Saman for all the dedication and hard work of giving me the knowledge and guidance to make sure that everything is in the right order and the entire task is fulfilled. It would be quite hard if there is no guidance from you. I've got nothing but gratitude for him.

I also would like to thanks to Prof. Madya Dr. Wan Adilah, Prof. Madya Rashidah Rawi, and Puan Wan Amalina our thesis coordinator. Their guide and advice are very useful.

For my parents, huge thanks for all your moral and material supports during my hard times where both of you were always there for me.

Last but not least, thanks to those who are directly or indirectly involved conducting this research. Your cooperation is highly appreciated.

Thank you,
Sharifah Zaffy Safarina Bt Syed Mubarat

TABLE OF CONTENTS

APPROVAL.....	III
DECLARATION.....	IV
ACKNOWLEDGEMENT.....	V
TABLE OF CONTENTS.....	VI
LIST OF FIGURES.....	IX
LIST OF ABBREVIATIONS.....	XI
ABSTRACT	XII
CHAPTER 1.....	1
1.0 INTRODUCTION.....	1
1.1 Research Background.....	1
1.2 Problem Statement.....	2
1.3 Objective.....	3
1.4 Research Scope.....	3
1.5 Significance of the Research.....	4
1.6 Problem and Limitation of the Research.....	4
1.7 Conclusion.....	5
CHAPTER 2.....	6
2.0 LITERATURE REVIEW.....	6
2.1 Definition of Automated Teller Machine (ATM).....	6
2.2 Definition of Functional Illiteracy.....	7
2.3 Definition of Icon.....	8
2.4 Why Use Icon.....	14
2.5 Types of Icon.....	17
2.6 Iconic Language.....	20

2.7	Iconic Interface.....	21
2.8	Definition of Menu.....	24
2.9	Types of Menu.....	25
2.10	Role of Menu in Improving User Interface.....	29
2.11	Conclusion.....	30
CHAPTER 3.....		31
3.0	RESEARCH METHODOLOGY.....	31
3.1	Introduction.....	31
3.2	Research Design for Icon-Based ATM Menu Interface.....	31
3.3	Research Methodology.....	33
3.3.1	Theoretical Study.....	34
3.3.2	Knowledge Acquisition.....	34
3.3.3	Analysis Stage.....	34
3.3.4	Designing Stage.....	35
3.3.5	Developing Stage.....	38
3.4	Software Specifications.....	38
3.5	Hardware Requirement.....	38
3.6	Conclusion.....	39
CHAPTER 4.....		40
4.0	RESULT AND FINDING.....	40
4.1	Introduction.....	40
4.2	Icon Analyzing.....	40
4.3	Icon Designing.....	42
4.4	Icon-Based ATM Menu Representation.....	46
4.4.1	Cash Withdrawal Operation.....	51
4.4.2	Balance Inquiry Operation.....	53
4.4.3	Funds Transfer Operation	54
4.4.4	Change PIN Operation	56
4.5	Conclusion.....	57

ABSTRACT

This research looks at the icon represent towards ATM's menu interface that can be used by functional illiterate user to use ATM. Icon-based ATM interface can provide convenience to user who is functional illiterate so that they can easily interact with ATM in order to help them in making their transaction. The icon was found in the internet and been modified and redesigned it so that easier for user to understand. The 20 people are asked about the designed icons by using theory of affordance in order to examine whether they understand and satisfied to use the icon in ATM menu interface. If the designed are not understand by the participants, the icon is redesigned until meet the understandable icon. From the survey, 14 from the participants understood what the icons represent about. Most of them satisfied with the icon to be used in ATM's interface to replace the text-based interface. From this study, the icon that have been identify can be used by ATM designer as the alternative to replace the text-based ATM interface. These icons can give an idea to them in order to enhance the quality of services to meet customer expectations in services. A recommendation for future work is to add voice recognition in the ATM interface to ease the user for more valuable interaction. For ATM side, it is recommended providing the head phone so that the user can use the ATM more safely. Besides that, the icon-based ATM interface can be add more animation in the interface so that easier to user to understand. By using an animation, the user interface is more interactively.