Universiti Teknologi MARA

Development of Non-Text Password using Single Image for Automated Teller Machine (ATM)

Juliana binti Hussein

Thesis submitted in fulfillment of the requirements for Bachelor of Science (Hons) Information System Engineering Faculty of Computer Science and Mathematic

May 2009

ACKNOWLEDGEMENTS

Alhamdulillah, praise be to God for his blessing and mercifulness throughout completing this thesis. Without help, I won't be able to complete this thesis successfully.

First and foremost, I would like to express my gratitude to my supervisor, Encik Fauzi Mohd Saman, for his support, guidance, and patience during these two semesters. Without his supervision and insight, I wouldn't have a thesis and all the valuable experience that resulted from it.

I also would like to take this opportunity to express my gratitude to my thesis coordinator, Assoc. Prof. Rashidah Rawi and Mrs. Wan Nor Amalina Wan Hariri, Information System Engineering Program for their thought and patience in helping me by providing a lot of information and advice in order to complete this thesis.

Most importantly, I would like to express my deepest gratitude to my parents who always giving me support and advice so that I can complete this thesis and eventually my degree. Also to all my friends who always been there for me when I need help, you all have my sincere appreciation.

Lastly, I would like to thanks again to all people that have helped in making this thesis a success.

Thank you.

TABLE OF CONTENT

Acknowledgement		V
List of Figures		viii
Chapter 1	Introduction	1
1.0	Research Background	1
1.1	Problem Statement	3
1.2	Objectives of the Research	4
1.3	Scope of the Research	
1.4	Significance of the Research	5
Chapter 2	Literature Review	
2.0	Introduction	6
2.1	Graphical Password	6
	2.1.1 A Picture is Worth a Thousand Words	7
2.2	Samples of Applications	10
	2.2.1 Draw a Secret	10
	2.2.2 Dej'a Vu	11
	2.2.3 Blonder's Graphical Password	12
	2.2.4 Key Images	13
	2.2.5 Passclick	14
	2.2.6 Passfaces	16
2.3	Accessibility	18
2.4	Automated Teller Machine(ATM)	20
	2.4.1 Problems with ATM	22
Chapter 3	Methodology	25
3.0	Introduction	
3.1	Problem Identification and Planning	
3.2	Requirements Gathering	
3.3	Requirements Analysis	27
3.4	Design Model	28

3.5	Prototype Development	30
Chapter 4	Results and Findings	31
4.0	Introduction	31
4.1	Design Analysis	31
Chapter 5	Conclusion and Recommendations	35
5.0	Introduction	35
5.1	Conclusion	35
5.2	Limitations	35
5.3	Recommendations	36
	-	
References		37
Appendix A		41

ABSTRACT

This project describes research to find alternative way to authentication. The research proposed authentication by using image as the password for the Automated Teller Machine (ATM). Even though password which uses alphanumerical is the most common authentication method, there are some significant drawbacks in using it. Illiterate people are the obvious example of people that experience the drawbacks as they had difficulties to remember the alphanumerical password. Hence, this research have been done to identify the requirements and to design the model for non-text password for ATM using single image. Further, the prototype for the non-text password for ATM using single image have been developed. This research is using the literature as the way to analyze the requirements that have been gathered. In this research, the users will have to touch (click) on the image to be their password or Personal Identification Number (PIN) in the case of ATM machine. This research will be of interest to HCI practitioners and information security researchers in exploring different approaches to accessible and usable system.