# UNIVERSITI TEKNOLOGI MARA

# A STUDY OF FRAUD CONTROL ON ONLINE CREDIT CARD PAYMENT: CASE STUDY ON DIGI ONLINE STORE

## MIMI MARISA BINTI MAT AMRI

IT Project submitted in partial fulfillment of the requirements for the degree of

**Master of Science (Information Technology)** 

**Faculty of Computer and Mathematical Sciences** 

February 2013

#### **ACKNOWLEDGEMENT**

### "In the name of Allah, Most Gracious, Most Merciful"

Alhamdulillah. Thanks to Allah SWT, whom with His willing giving me the opportunity to complete this my IT Project report. This report is a part of the requirement for me to complete my study in Master of Science (Information Technology).

Therefore, I would like to express my gratitude to all people around me which directly or indirectly who gave me the possibility to complete this IT Project. Firstly, my deepest gratitude goes to my wonderful supervisor which I am deeply indebted to Dr. Syaripah Ruzaini Binti Syed Aris for all her guidance, stimulating suggestion, comment and advice that have been the reason that this report can be completed. I also like to express my thanks to the programme coordinator, Dr. Wan Adilah Wan Adnan and research methodology class lecturer, Dr. Wan Abdul Rahim Wan Mohd Isa for their advices on my IT Project undertakings.

Especially, I would like to give my special thanks to my husband Wan Suwardi Bin W.Ibrahim whose patient love enabled me to complete this work. There was a time when I wish to throw a white flag and give up because of the time that I steal from my both kids Wan Daniel Iqram and Wan Dhia Irdina. However, I should repay the priceless time stolen by finishing this report to show my gratitude to my dearest family.

Last but not least, I would like to thank all the people whom generously spent little of their valuable time to participate in the interview session. Without their feedback, this project would not have anything to report. Not forgetting all my course mates and other individuals whom names are not mentioned here for their contributions in whatever forms whether directly or indirectly. Thank you so much and may Allah bless all of you.

#### **ABSTRACT**

It is convenient for customers do online shopping using a credit card. However, nowadays, the credit card payment faces a lot of security challenges. The amount of credit card payment is increasing and is it a necessity to ensure the data security is highly guarded. E-commerce has grown rapidly; therefore, credit card fraud has also caused a bomb in the online transactions. From this case study perspective, there are limitations on the current fraud control in the online payment. The barrier to build a fraud control is always the cost of investing in the fraud control itself. An investment in the fraud control is a necessity, but the best practice in investment is always to include the risk budgeting within the investment process since the organization is venturing into a new business which is the online business. Thus, in conclusion the aim of this research is to achieve a better understanding of the fraud control on online payment in wider coverage within the merchant environment in order to come out with a guideline to improve the fraud control in the Online Store. This study explained the current credit card fraud type, the current fraud control in the Online Store and proposed guidelines for fraud control improvement. This study is using an interview technique which targeted the panels that supporting the Online Store business in the telecommunications industry. In order to achieve accurate information and response to this study data collection through previous resources is gathered. In addition, the interview has been done in order to gather primary data source. This study was able to contribute better understand on the current credit card fraud happening in the market and the current fraud control being used. Based on this study some recommendations on the guidelines were being proposed to the Online Store.

# TABLE OF CONTENTS

ACI	KNOWLEDGEMENT	ii		
ABS	STRACT	iii		
TAE	BLE OF CONTENTS	iv		
LIST	ii			
LIST	T OF FIGURES	ix		
CHA	APTER 1: INTRODUCTION			
1.1	Research Background	9		
	1.1.1 DiGi Telecommunications Sdn Bhd	1.1		
1.2	Problem Statement	12		
1.3	Research Questions			
1.4	Research Objectives			
1.5	Significance of Research			
1.6	Scope of Research	18		
1.7	Limitation of Research	19		
1.8	Report Outline	20		
CHA	APTER 2: LITERATURE REVIEW			
2.1	Online Store	21		
2.2	Online / E-Commerce appeal to the fraudster	244		
	2.2.1 Online Auctions Fraud	25		
	2.2.2 Online Market Investment Fraud	26		
	2.2.3 "Work at Home" Fraud	26		
	2.2.4 Pyramid Scheme	27		
	2.2.5 Online Retail Sales Fraud	28		
	2.2.6 Credit / Debit Card Fraud	28		
2.3	Credit Card Fraud	30		
	2.3.1 Traditional Technique	32		

	2.3.1	Modern Technique	32
2.4	Credit	36	
2.5	Credit Card Payment Process		
	2.5.1	Model 1	39
	2.5.2	Model 2	41
	2.5.3	Model 3	42
	2.5.4	Compliance	43
	2.5.5	Fraud Transaction	44
2.6	Credit	46	
	2.6.1	Preventive Measures	46
	2.6.2	Detective Measures	48
2.7	DiGi 7	Telecommunications Sdn Bhd	49
2.8	Summ	nary	53
СНА	PTER 3	: RESEARCH METHOLOGY	
3.1	Resear	rch Approach	54
3.2	Resear	55	
3.3	Problem Definition		
3.4	Literat	60	
3.5	Data C	60	
	3.5.1	Primary Data	62
		3.5.1.1 Sampling Data	63
		3.5.1.2 The Interview Technique	63
	3.5.2	Secondary Data	64
	3.5.3	Tertiary Data	64
3.6	Data Analysis		65
3.7	Summ	66	
СНА	PTER 4	: RESULTS AND DISCUSSIONS	
4.0	Analys	sis of Interview	67
4.1	Respondents' Demographic Profile		
4.2	Current Online Store Process Flow		