

Universiti Teknologi MARA

**HIDE INFORMATION USING CRYPTOGRAPHY BASED ON
ANDROID PLATFORM**

Ahmad Farhan Bin Ahmad Husni

Thesis is submitted in fulfillment of the requirements for

Bachelor of Science (Hons.)

Data Communication and Networking

Faculty of Computer and Mathematical Science

JULY 2013

ACKNOWLEDGEMENTS

By the name of ALLAH s.w.t, the Most Gracious and Most Merciful All praises be to the Mighty Allah, the Merciful and the Beneficent for the strength and blessing in the completion of this study.

The research project will not be completed without the support of many people. I wish to express our deepest appreciation to our supervisor, Tuan Haji Jamaluddin Md Yusof for his valuable guidance, encouragement and constructive criticism that we had been receiving for the preparation of this report and the outgoing of the project. I also wish to express my sincere appreciation to my both lectures Dr Fakariah Hani and Dr Shahniza Kamal Bashah that had been teaching and give me guidance on this subject. Gratitude is also for all the lecturers without their knowledge and assistance this study would not have been successful. Especially to my beloved parents and all my classmate. Thanks a lot for your support and encouragement that had been given. And also to all lecturers in the Faculty of Computer and Mathematical Science, thanks for their dedication, efforts and support in sharing valuable knowledge.

Thank you all.

TABLE OF CONTENT

APPROVEL	II
DECLARATION	III
ACKNOWLEDGEMENT	IV
TABLE OF CONTENT	V
LIST OF FIGURES	VII
LIST OF TABLES	VIII
LIST OF ABBREVIATIONS	IX
ABSTRACT	X
CHAPTER 1	
1.1	Background of Study..... 1
1.2	Problem Statement..... 1
1.3	Research Question..... 2
1.4	Objective..... 2
1.5	Project Scope..... 2
1.6	Research Significant..... 3
1.7	Outline Of The Thesis..... 3
CHAPTER 2	
2.0	Literature Review..... 4
2.1	Definition Of Terminology..... 5
2.11	Cryptography 5
2.12	Public-Key Encryption..... 5
2.13	Private Key..... 6
2.14	Data Encryption Standard..... 6
2.2	Comparison Of Related Work..... 7
2.2.1	An Android-Base Application For Sending Stego Image Through Mms (Rosziati Ibrahim And Laaw Chia Kee, 2012)..... 7
2.2.2	A Copyright Information Embedding System For Android Platform (Yueh-Hong Chen And Hsiang-Cheh Huang, 2011)..... 7
2.2.3	Hybrid Embedded Steganography Technique: Optimum Pixel Method And Embedding (Nithyanandam Pandian And Ravichandran Thangavel, 2012) 8
2.2.4	A Hybrid Approach To Steganography Embedding At Darkest And Brightest Pixels (Gandharba Swain And Saroj Kumar, 2010) 8
2.2.5	Design Of Secure Location And Message Sharing System For Android Platform (Ramesh Shrestha And Yao Aihong, 2012)..... 9
2.2.6	Modified Bpcs Steganography Using Hybrid Cryptography For Improving Data Embedding Capacity (Leena R.Ragha Et Al. 2011)..... 9
2.2.7	Enhanced Text Steganography In Sms (Khan Farhan Rafat, 2009) 10

ABSTRACT

The high technology of hand phones today makes people prefer to use their mobile phone than computer to pass their sensitive information through internet. Without they realize, these technology can bring their confidential or private information being attack from unauthorized party and lead to information leakage. These unauthorized party that mention here is Man in The Middle Attack (MiTM). Man in The Middle Attack (MiTM) can manipulate and give false information to the sender. This problem can cause a big impact to the businessman when they do trading transaction. To solve the problem, a steganography tool is developed to help to hide the secret message before being sent through the internet. This project focuses on steganography and cryptography. This application uses two levels of securities that make the information more secure and bring difficult to unauthorized party get the information. The cryptography will use the DES algorithm to hide the message before hiding the information into an image by using steganography. DES algorithm uses public-key system means the algorithm for encrypting and decrypting a message is public know. This application will run on the android platform. This project aims to successfully encrypt and decrypt the message to protect the message from unauthorized person.

CHAPTER 1

1.1 BACKGROUND OF STUDY

Cryptography is defined as the study and practice of information security in hiding information. The word is originated from a Greek word kryptos means hidden. Cryptography is closely linked to the scope of cryptanalysis and cryptology. Cryptography is from the experts of both mathematics and computer science. In today's computer world, cryptography is well known with scrambling plaintext (ordinary text, sometimes referred to as clear text) into cipher text (a process called encryption), then back again (known as decryption). People who are experts in this field are known as cryptographers. It is an important technology for security and it has been used in computer password, e-commerce and ATM cards.

1.2 PROBLEM STATEMENT

The increasing technology of mobile phone makes people prefer to use their mobile phone than computer to pass their confidential information through internet. Without realizing, this technology can bring their confidential or private information being steal from unauthorized person and lead to information leak. These unauthorized person that been mention here is Man in The Middle Attack (MiTM). Man in The Middle Attack (MiTM) can manipulate and give incorrect information to the sender in order to cheat them. This problem can cause big problem for businessman when they do trading operation online.

These information can be protected by using the mobile application that been develops in this project. The two layers of securities that implement in this mobile application make the information more difficult for unauthorized person to steal the information and make the information more secure.