CHAPTER I

INTRODUCTION

1.1. Background

SMS (Short Message Service) is one of Instant Messaging (IM) which is cheap, simple and easy to be used, that's why SMS can be used by people from every economy class. One of weakness in SMS is its insecurity. Encryption and compression are two alternative options that can be used to make secure the contents of the sent messages in different ways. Encryption camouflage contents of message by substitution, permutation, expansion, and blocking, whereas compression hide the contents of message by compressing it. Using compression in SMS is not only for security function, but it has another advantage which is for reduce the cost of send message. Two of messages can be compressed into just one part message so the cost to send it will be count for one part message only. Combining encryption and compression will give double protection to the contents of message. Because when someone succeed break the encryption, he/ she will get compressed message.

1.2. Scope

This project is created with Android platform, using array and tree as data structure. Three compression algorithms available for options in user setting, such as : LZW, Huffman, and Shannon Fano. Caesar Algorithm combined with some custom byte manipulation is used as an encryption algorithm. This application can send messages with basic characters only (0-255 decimal on ASCII table).

1.3. Objective

This application was made to find out whether compression and encryption can be implemented directly and simultaneously on SMS to make double protection with side benefit to reduce cost of sending sms.