**CHAPTER 1**

**INTRODUCTION**

**I.1 Background**

Data Security is one of concern for all user who using the internet network. Nowadays, hackers threat all data and hangs it like a Damocles sword. The transmission data through any communication channel needs strong encryption techniques in purpose of the data security. The trends of development in information technology is needed to safe, secure, and protect the transmission of data. Conventional encryption technique methods give failed desired result of data protection. However, unique ID and password, and combination between symbol, alphabets & numerical will give a good impact to account security.

There are many ways to save our account data. As example we can save it into a card, account with password, or with key. But those method are not good because the security at every method is insecure. The card and key can be stolen or missing in some place, and the account with password can be stolen or the owner can forget the password. So every scientist trying to do some research to make data with most secure level. Finally nowadays, Face Recognition born as one of method to implement and secure any information related with account details with only our anatomy face.

Face recognition is one of technique to secure the information data which takes the image of person and compares it with the recorded image in the database. The comparing obtained from technique that capture the representation of the faces structure like the shape of eyes, the distance between nose, eyes and mouth, the eyebrows, form of the forehead, and etc.

This paper will describe the definition about Face Recognition as Authentication Security and the method to save and secure the information via face anatomy. This paper also tell about the process and algorithm how to detect the landmarks of face, after that the landmarks will be process and detected the spot. After that this paper also tell about the process of comparing between two images to find the similarity spot for authentication using face recognition. This paper aim to tell about the authentication process of Face Recognition and the method how to get the spot at human face.

**1.2 Writing Objective**

The purpose of this ISAS are :

1. Definition of Security System.
2. Definition of Biometric Security.
3. Definition of Authentication.
4. Definition of Face Recognition.

**1.3 Problem Domain**

Accordance with the title of ISAS "Face Recognition" We will discuss about:

1. SWOT Analysis of Face Recognition
2. Authentication Process of Face Recognition

**1.4 Writing Methodology**

The method which used in this ISAS is the method of browsing from internet, reading online journal, and make a survey in problem domain.

**1.5 Writing Framework**

The paper was written by systematic as follows :

**CHAPTER I : INTRODUCTION**

**1.1 Background**

Discusses the briefly description about security system, description about biometric security, briefly description about authentication, description about face recognition.

**1.2 Writing Objective**

The purpose of this article is to understand about face recognition, biometric security, SWOT analysis, and authentication with Face Recognition.

**1.3 Problem Domain**

First, tell about the SWOT analysis of Face Recognition, it’s a comparison between Strength, Weakness, Opportunity and Threat. Second, tell about process of authentication with Face Recognition.

**1.4 Methodology Writing**

To get data which needed, this paper use the method of observing or direct observation techniques, author reads famous repository online journal.

**1.5 Writing Framework**

This paper Writing Framework consists of four Chapter, the first chapter is introduction which tells the background, writing objective, several problem domain, methodology writing and writing framework of this paper.

**Chapter II Basic of Theory**

In chapter II, paper written several sub chapter. The first sub chapter is to tell about briefly description of system security. The second sub chapter is to tell about Definition of Biometric System. The third sub chapter is to tell about briefly description of Authentication. The fourth sub chapter is to tell about definition of Face Recognition.

**Chapter III Problem Analysis**

Analyzing and solve the problem that contained in problem domain.

**Chapter IV Conclusion and Suggestion**

Conclude and suggest related to this paper.