



Continuing Education Program
Center for Computing and Information
Technology
Faculty of Engineering
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ISAS (Information Search and Analysis Skill)

“Digital Watermarking”

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Preface

First, Let us give praise to Allah S.W.T who give guidance to us untill we can complete our ISAS entitled “Digital Watermarking”. As author write this article, author get a lot of support from various parties. Among others are :

1. Our parents, who always help in the form of spirit and material.
2. Dr. Aries Subiantoro, M.Sc as director of CCIT Faculty of Engineering, University of Indonesia.
3. Fachran S.T, M.M as our faculty who have provided guidance and support and referrals to us so that we can finish ISAS.
4. Our friends who always give the information that they know, exchange ideas and give encouragement to us in writing this article.

Author know that the results of this article is far from perfect and there are still many shortcomings, author hope readers will give comments and suggestions in building this article in order to become better. We hope this article can be useful for those who read or hear, especially for CCIT students of the Faculty of Engineering UI.

Our ISAS titled “Digital Watermarking” is One of Technique in Steganography to secure the message inside watermark. We hope with this ISAS people will understand about introduction of Code Igniter Framework.

Depok, February 2017

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CHAPTER 1

INTRODUCTION

I.1 Background

Based on Ponemon Institute researchers, around 432 Million account hacked in this world. Hackers have exposed personal information of 110 Million American people. The hacked account roughly half are the nation's adults. It happened in the last of 12 Months alone.

The security data is one of biggest attention in the world. Because every country secret should be protected with high security. The main of security data not only to protect the important information, but also to protect any disruption from unauthorized people. The security data have so many technique. There are several technique in security data such as Cryptography and Steganography.

Steganography is one of technique in security data to hidden the message inside or above the object. It can be images, video, and text. With Steganography, any message which send by the sender will be decrypted using technique. There are several technique in Steganography, one of the technique is Digital Watermarking.

Digital Watermarking is one of technique in Steganography. The main of this invention is to hidden the message above the watermark. With the watermark above the picture it will be encrypted with the algorithm to hidden and protect the message inside the watermark. Watermark will hide a message related to the actual content of the digital signal, while in steganography the digital signal has no relation to the message, and it used as a cover to hide the real message. As example, Sender sent a picture. The condition of a picture is on the mountain with all of the high view. At the right bottom of the picture there are a watermark for signify the owner of the photo (person who takes it). If we see it normally, there are no wrong with the pictures. It's only high view at the mountain with a watermark at the right bottom of the picture. But at the real condition, the sender give a message inside the watermark that only can be decrypted with someone who knows the algorithm. The point is to protect the message inside the picture.

Digital Watermarking is one of interesting technique in Steganography. The purpose is to study about Security Data with Digital Watermarking technique.

1.2 Writing Objective

The purpose of this ISAS are :

1. Definition of Steganography.
2. Definition of Digital Watermarking.
3. History of Digital Watermarking.
4. Classification of Digital Watermarking.

1.3 Problem Domain

Accordance with the title of ISAS "Architecture Technology of Code Igniter" We will discuss about :

1. Advantages and Disadvantages of Digital Watermarking
2. Technique of Image Watermarking

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 result of research in security data, briefly description about steganography , and briefly description about digital watermarking.

1.2 Writing Objective

The purpose of this article is to understand about steganography, digital watermarking, advantages and disadvantages, and technique of image watermarking.

1.3 Problem Domain

First, tell about the advantages and disadvantages of digital watermarking, it's a comparison between benefit and deficit. Second, tell about the technique of image watermarking which used to protect and hidden a message inside the picture.

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 definition of Steganography. The second sub chapter is to tell about Definition of Digital Watermarking. The third sub chapter is to tell about History of Digital Watermarking. The fourth sub chapter is to tell about Classification of Digital Watermarking.

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.