

Universiti Teknologi MARA

**Steganalysis Tool Based on Cloud
Computing**

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ABSTRACT

Steganalysis is the study of discovering hidden data that manipulated by steganography. The goal is to identify the suspected file, determine whether the file have a hidden data encoded and recover the hidden data. Steganography is increasingly being used by criminals creating malware and cyber-attack tools. Forensics examiner may have problems when they want to examine file such as they need to setup the tools itself and the suspected file could be larger than usual. This project aims to develop a steganalysis tool based on cloud to detect hidden evidence for forensic purpose. This project able to detect file with steganography and extract the hidden file. This project can detect image and document files. Project test was carried out to test the functionality of this project. The test involves examining two separate which contain hidden file and the others contain nothing. From this project, it will be able to help forensics examiner to perform steganalysis on cloud. Other than that, this project also will decrease time consuming and computer resources used.

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CHAPTER 1

INTRODUCTION

This chapter provides the background of study, problem statement, objectives, scope and the project significance that has guide to this project.

1.1 Background of Study

Steganalysis is the study of discovering hidden data that manipulated by steganography. The goal is to identify the suspected file, determine whether the file have a hidden data encoded and recover the hidden data. On the internet, there are some steganalysis tool such as StegSolve and StegDetect. However, this tool needs to be installed manually and not web based. Anita et al. (2016) stated that steganography technique can be evaluated by three parameters. They are hiding capacity, distortion measure, security and algorithm complexity. The technique could be powerful and yet require more resources to analyze due to the difficulties of the steganography itself.

Joel and Philipp (2019) found that cloud computing has set off the usual method for setting up computing infrastructure in many areas and has largely replaced personally possessing computational assets such as server racks.

Therefore, the project “Steganalysis tool based on cloud computing” will be developed. This project is a digital forensic-based solution. It is applying on cloud computing which capable of deploying platform as a service (PaaS).