

ABSTRACT

The ease of digital data processing create controversy about copyright protection. Often doubling, taking part or all of the data and the illegal distribution was harm the data owner. Therefore, we need a watermarking technique. Watermarking is a technique used to hide the mark or copyright information into a digital medium. One medium that can be inserted watermark is a three-dimensional object.

In this final project, we conducted an analysis of watermarking in three-dimensional objects using two methods, they are wavelet transform and fuzzy logic method and implement them in the form of software that can insert and extract the data residing on the three-dimensional object. In this final project, to compare the insertion in the spatial domain and frequency domain for watermark insertion and extraction processes.

The results of the experiments carried out is, the use of Haar Wavelet and Fuzzy Logic method amperceptibilioty to the value of SNR>50dB and a relatively robust against the geometric attacks such as rotation, translation, and rescaling resulting in the extraction of the watermark image with the original watermark image similarity (SIM) is 1. But in the Gaussian noise attack, Haar wavelet method for frequency domain is superior to using Fuzzy Logic, as it generates the extracted watermark image which approached the original watermark image similarity (SIM) is 0.9.

Key word : **3D object, watermarking, Haar Wavelet, Fuzzy Logic**