

## **Abstract**

With the growth of digital multimedia and internet, the problem of ownership protection of digital information become important. Watermarking is one of a way to protect the ownership of digital multimedia by inserting some information into digital multimedia file. Information that inserted into digital multimedia file then called watermark, and watermark can be assumed as a digital signature or digital stamp of the owner of the digital multimedia file. Although some important progress have been done in watermarking of digital images, there is still some challenges and problems left on its implementation. For an example is the trouble of geometric attack.

Watermarking pattern that become an outcome of this Final Project is compatible with public watermarking application where the original image is not available for watermark detection.

Methods that used on watermark insertion are direct-sequence code division multiple access (DS-CDMA) with help of discrete cosine transform (DCT) transforming. Some experiment demonstration have been made on watermarking patterns to make it robust of some attacks.

**Keywords :** Digital image, watermarking, DS-CDMA, DCT.