Abstract

The fast growth of technology makes one can easily exchange digital data. To keep the copyright labeling those digital data, one of the methods is watermarking. In this final project, it will be implemented digital image watermarking using spread spectrum on the domain ICA (Independent Component Analysis, where labeling hiding as watermark will be embedded into copyrighted image host data in domain ICA using spread spectrum method to *labeling protect as authentic ownership its digital image* (*copyright labeling)*..

From the experiment, watermarked image quality and watermark robustness is analyzed by PSNR (*Peak Signal Noise Ratio*) and *CorrelationCoefficient* estimation. It's also analysed for some signal processing process as filtering, gaussian noise, JPEG compression and rotation. In fact watermarked image quality in this watermarking using ICA can be influenced by image size and scale factor used. But, the experiment on signal processing shows that image watermarked, relatively, does not robust against that signal processing processes. Although notyet be protected the label (robust) 100%, but this digital image watermarking sistem would be able geting the watermarked image which have robustness 60 – 70% (with correlation value is 0.6 – 0.7).

Keywords: *Watermarking*, ICA (*Independent Component Analysis*), *Spread Spectrum*