Abstract

The development of Internet technology in recent years, has brought major changes to the distribution of digital media. Digital media in the form of text, images, audio and video can be easily distributed via the Internet. Ease of digital media distribution via the internet on the other hand can cause problems when the media is copyright protected (copyright).

Digital watermarking offers a more appropriate solution to this problem, watermarking techniques protect digital media with the specific data that is permanently embedded in the relevant media, but the insertion process sometimes not accordance with the wishes of users, where the insertion process sometimes does not guarantee the security of the image you want protected.

In this thesis, we used an Adaptive watermarking method, a method that can perform the insertion of a watermark on the most important regions of an image by using DCT transformation. In addition, the use of the shynthetic image that is image produced from scrambling Important region can reduce damage carrier image where inserted watermark.

After using objective and subjective measurement, finally concluded that Invisible Adaptive Watermarking method have shown good performance in blind image watermarking technique. This conclusion is based on fact that watermarked image had mean of PSNR more than 50 dB. Watermark extraction has good enough sensitivity level to information loose at watermarked image by attack. Besides, watermark also has good enough in robustness to Gaussian noise, JPEG compression, rescaling, and rotation. So it can be use for authentication.

Keywords : *watermarking, Adaptive,* DCT, *shynthetic image, Attack,* PSNR