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Abstract

Due to the rapid advancement in internet technology and evolution of high speed networks operating throughout the world, protection of multimedia content is urgently required. So, it has become a challenging task to protect copyright of an individual's creation. Digital watermarking provides a viable and promising solution to protect copyright and authentication of the ownership. In this paper, we have performed a statistical comparison of different Digital

Image Watermarking techniques (LSB, DCT based and DWT based) that can be used to protect copyright of digital Image. We have also provided the statistical comparison of these techniques that can help us to know the pros and cons of these techniques. This statistical comparison can further be used to improvise and propose new techniques for the same.

Refer

ences

- I. Cox, J. Killian, T. Leighton, T. Shamoon, "Secure Spread Spectrum Watermarking for Multimedia," IEEE Trans. Image Processing, Vol. 6, No. 12, pp. 1673-1687, 1997.

- N. F. Johnson, S. C. Katezenbeisser, " A Survey of Steganographic Techniques" in Information Techniques for Steganography and Digital Watermarking, S. C. Katezenbeisser et al., Eds. Northwood, MA: Artec House, Dec. 1999, pp 43-75.

- R. B. Wolfgang, C. I. Podilchuk, and E. J. Delp, "Perceptual watermarks for digital images," Proc. IEEE, no. 7, pp. 1108-1126, July 1999.

- Primo Braga, C. A, C. Fink, & C. Paz Sepulveda, "Intellectual Property Rights and Economic Development", technical report, The World Bank, Washington D. C 2000.

- Falkowski, B. J., Lim, L. S., 'Image Watermarking Using Hadamard Transforms', in IEE Electronics Letters, United Kingdom, vol. 36, no. 3, pp. 211-213, February 2000.

- P. Meerwald, and A. Uhl, " A Survey of Wavelet- Domain Watermarking Algorithm, " in P. W. Wong and E. J. Delp, (eds.), Proceedings of Electronic Imaging 2001, Security and Watermarking of Multimedia Contents III, San Jose, CA, January 2001, pp. 505-515.

- Mohamed A. Suhail, Mohammad S. Obaidat, "Digital Watermarking-Based DCT and JPEG Model", IEEE Transactions On Instrumentation And Measurement, Vol. 52, No. 5, October 2003.

- Tao, P., Eskicioglu, A. M., " A Robust Multiple Watermarking Scheme in the Discrete Wavelet Transform Domain", in Symposium on Internet Multimedia Management Systems, Philadelphia, PA. October 25-28, 2004.

- Lee, C., Lee, H., "Geometric attack resistant watermarking in wavelet transform domain," in Optics Express vol. 13, no. 4, pp. 1307-1321 2005.

- Vikas Saxena, J. P Gupta "Towards increasing the Robustness of Image Watermarking Scheme against JPEG Compression" IMECS vol II, pp 1903- 1906, Marc.

- T. K. Tiwari, Vikas Saxena " An Improved and Robust DCT based Digital Image Watermarking Scheme" International Journal of Computer Applications (0975 – 8887) Volume 3 – No. 1, June 2010.

- Shital Gupta, Sanjeev Jain " A Robust Algorithm of Digital Image Watermarking Based on Discrete Wavelet Transform" Special Issue of IJCCT Vol. 1 Issue 2, 3, 4; 2010 for International Conference [ACCTA-2010], 3-5 August 2010.

Computer Science

Index Terms Confluence

Keywords

Dct (discrete Cosine Transform) Dwt (discrete Wavelet Transform) Fft (fast Fourier Transform) Psnr (peak Signal To Noise Ratio)

Idct (inverse Discrete Cosine Transform)

Idwt (inverse Discrete Wavelet Transform)

Jpeg (joint Photographic Expert Group)

Lsb (least Significant Bit)

Hvs (human Visual System)

Ber (bit Error Rate)