The Robustness of Watermark Embeddedness Based on Different Transformations with Different Algorithms into Different Frequency

Abstract

In this essay, the blind watermark based on wavelet transformation with quantized algorithm embedded into high frequency will be set as a reference. By changing the transformation method(Fourier transformation or Wavelet transformation) the watermark bases on, the algorithm method (Additive or Quantized) the watermark uses and the frequency(High or Low) the watermark is inserted into respectively, we embed these sorts of watermarks into the same picture and check their robustness respectively. Thus, we acquire a sort of watermark among them with the best robustness and acceptable invisibility. To test their robustness, the pictures with the information of the watermarks will be rotated, cropped, blurred, sharpened,compressed and added salt and pepper. Whether we can still detect the watermarks' information after the process is the index of corresponding robustness.