Abstract

Steganalysis is the art and science of detecting messages hidden using steganography. The goal of steganalysis is to identify suspected packages, determine whether or not they have a payload encoded into them, and, if possible, recover that payload. Selecting a proper cover image plays a prominent role in steganography success. Various measures have been introduced to choose a proper image so far. In this work we are going to present a new measure independent of hidden message and it is just build on the image content. It is also quite effective on steganalysis and steganography success. This measure has been constructed by using histogram as the main component of image processing and it is called Variance Difference of dyadic Quantized Histograms. A quantized histogram to N is an image histogram with decreased color to N. Comparing several quantized histogram pairs by their variance demonstrates that the more the variance differences in quantized histogram pairs of an image is, the more probable the universal steganalysis failure is. Generally, universal steganalysis has less accuracy and more expected failure in detecting a true stego image. This paper considered quantized histograms to 64, 128, and 256 in grayscale JPEG images and it outlined that the effect of quantized histograms to 128, 256 is more than the other pairs.
References

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Index Terms

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