Report of ECI 2019 Course: " Introduction to Steganography and Watermarking "

Assignment E.316-N

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1 Introduction

Steganography is the procedure of insert information inside a data source without changing its perceptual quality. Digital steganography uses digital data sources as a cover for hidden information. Examples of digital covers are digital text files, image files and sound files among others.

In particular for digital image based steganography the pixel intensity is usually used for encoding information [REF] but other approaches are also widely used such as embedding information in the frequency domain.

There are available many software tools

In this report, five steganographic tools that hides text into a digital image were chosen to perform an assessment in terms of imperceptibility of the stego-image, capacity and robustness.

2 Materials and methods

Since we want to evaluate performance of steganographic tools that hide text into an image, a image dataset is needed. We built a dataset containg images 20 of four types: N-type (landscapes and open nature), S-type (still life), P-type (portraits) and T-type (text). The complete dataset is then 80 images in total. N, S, P-type images were obtained and selected from Google images search engine queries. Namely, keywords for queries were *landscapes*, *still life* and *portrait* respectively. Right usage for the images was selected such that results were labeled for noncommercial reuse, and size of the images was set in medium [NOTA AL PIE DE LA FECHA]. Text images were collected from research papers by exporting pages as jpeg images. Table [REF] summarizes some basic features of the dataset used such as mean image size and mean file size. All the images in the dataset were stored as jpeg format. DECIR AHORA EL TAMAÑO MEDIO, Y LA MEMORIA DE CADA IMAGEN MOSTRAR UN EJEMPLO DE CADA TIPO

3 Results

4 Discussion and Conclusion