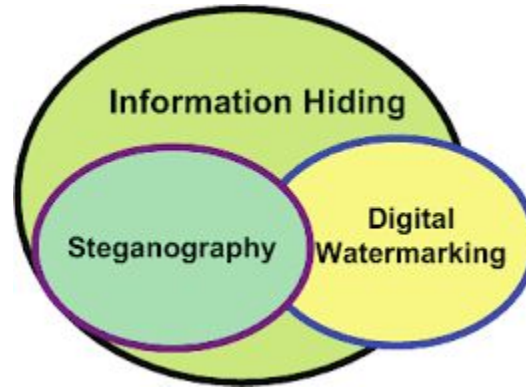# Info Hide - A digital Watermarking systems

Andreas Jakoby

-Bathala, Siva : 119484

Watermarking System 1 Overview - Skycker

1. Field Title indicates our watermark (wm_title for example, we will use it a bit later)

2. Upload watermark image

3. In Position choose place for watermarks

4. For positions at corners you can tune X and Y indent

5. Content images get their watermarks when page loads for the first time. By default the library does not redraw

already created watermarks. If you need change it use Update hard. If it is True watermarker change

watermarks for images every time when page loads. Be accurate! It decrease performance very much

6. Is active is an easy way to switch watermark off. There is no necessity to change code

Watermarking System 1(Cont.)

https://github.com/Skycker/watermarker

Change Watermark

Title:	wm_title
Watermark:	**Currently:** watermarks/Garant_PfXGMch.png
	Change: Выберите файл Файл не выбран
Opacity:	0,88
	Value must be between 0 and 1
Position:	buttum right corner ▼
Indent X:	25 Indent Y: 50

☑ Is active

☐ Update hard
Use it if you want to update all already created watermarks

Watermarking System 2 (Video Watermarking)

1. The goal of video watermarking is to embed a message within a video file in a way such that it minimally impacts the viewing experience but can be recovered even if the video is redistributed and modified, allowing media producers to assert ownership over their content.

2. RivaGAN implements a novel architecture for robust video watermarking which features a custom attention-based mechanism for embedding arbitrary data as well as two independent adversarial networks which critique the video quality and optimize for robustness.

3. Using this technique, we are able to achieve state-of-the-art results in deep learning-based video watermarking and produce watermarked videos which have minimal visual distortion and are robust against common video processing operations.

4. https://github.com/DAI-Lab/RivaGAN

Watermarking System 3 (StegHide)

Steghide is a steganography program that is able to hide data in various kinds of image- and audio-files. The color- respectivly sample-frequencies are not changed thus making the embedding resistant against first-order statistical tests.

The current version is 0.5.1.

Features:

- compression of embedded data
- encryption of embedded data
- embedding of a checksum to verify the integrity of the extraced data
- support for JPEG, BMP, WAV and AU files

Steghide is licensed under the GNU General Public License (GPL) which permits modification and distribution of the program as long as these modifications are made available to the public under the GPL.

Watermarking System 4 (Python Wavelet watermarking)

Principle :

https://www.researchgate.net/publication/267988699_Image_Watermarking_Using_3-Level_Discrete_Wavelet_Transform_DWT slide : https://www.slideshare.net/suritd/ppt1-48438386 Python Script :

Features :

1. Adopt 2 wavelet transforms;
2. Support watermark format: image, text;
3. Support watermarking, watermarking;
4. Support one image plus multiple watermarks (for screenshots/cut attacks).

https://github.com/NewRegin/python_wavelet_digital_watermarking

Bauhaus-Universität Weimar

Watermarking System 5 (Fragile Watermarking)

Invisible Digital Image Watermarking in spatial domain using LSB bit manipulation

This is the project for Digital Image Processing. It is completely developed in java using eclipse ide. For GUI, I have used Windows Builder plug-in in eclipse. This project consists of three parts.

1)Watermark Embedding

2)Watermark Extraction

3)Extracted watermark comparison with a manipulated one.

https://github.com/googleknight/FragileWatermarking

THANK YOU