

FRAUNHOFER INSTITUTE FOR SECURE INFORMATION TECHNOLOGY



Fraunhofer Institute for Secure Information Technology SIT

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SITMark IMAGE »YOU CAN'T SEE IT, BUT IT'S THERE!«

Nowadays, it is easier than ever to copy, edit and distribute digital images. Search tools enable people to find images as they desire. Image editing tools help people to process images at will. And the Internet allows people to publish images rapidly and widely.

Example: The catalog images you put on your web site today may be found on eBay or blogs tomorrow. Even worse, promotion pictures of new products, that are going to be released on a magazine cover next month, appear earlier on a blog site.

Unfortunately, it is very difficult to claim the ownership or to find out who gave away the confidential pictures, because usually all copies of digital images are identical. Therefore, efficient protection mechanisms for the intellectual property of images are required.

Digital Image Watermarking

Our security solution is based on digital watermarking technology. A digital watermark is an additional information that is embedded into images in an invisible way. This information can represent a copyright notice, file information, or user ID to distinguish individual copies of an image.

The watermark information stays inside the image data. While it is invisible, the embedded information is very robust against various kinds of image processing and manipulations. Even after printing and scanning, it still remains detectable.

Copyright Protection & Image Individualization

By embedding copyright information, e.g. the content provider identifier, digital watermarks allow to give a proof of ownership of images. By embedding a unique user ID, one can identify the leak when unauthorized image copies are found.

Watermark Properties

- Image quality: totally invisible with standard embedding
- Capacity: variable net payload up to 48 bits
- Robustness: robust against common image processing, cropping, scaling, rotation, JPEG compression, etc.
- Security: embedding and retrieval controlled by secret key.

Technical Data

- Image formats: supports most popular image formats, e.g. JPEG, TIFF, PNG, BMP, RAW, etc.
- Platforms: Microsoft Windows, Linux, Macintosh, UNIX.

Watermarking Software

- Various software interfaces can be provided: graphical interface (GUI), command line interface, static and dynamic libraries etc.
- Easy to be integrated into various existing environments
- Free demo version for testing

Other Offers

- Tailored watermarking solutions for special requirements
- Media security and rights management consulting

Please contact us for more information and references!