



FRAUNHOFER INSTITUTE FOR SECURE INFORMATION TECHNOLOGY

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# **SITMark VIDEO** FAST, ROBUST AND READY TO USE

Digital videos are mainly distributed via storage media like DVD and via the Internet through video rental shops and live-streaming portals. With the growth of these distribution channels, the illegal distribution of videos via file sharing networks increases to the same extent. To claim the copyright on a video or to identify the source of an illegally distributed video (e.g. a screener) an efficient protection mechanism is necessary. It needs to survive the »analogue hole« (conversion from digital to analogue domain) and should not influence the usability for the user. Protection mechanisms like digital rights management systems (DRM) do not provide these properties.

#### **Digital Video Watermarking**

Our protection mechanism is based on the digital watermarking technology. A digital watermark is a set of additional information that is embedded into the video in an invisible way. This information can represent a copyright notice or an ID to identify the recipient of an individual copy. The watermark information resides inside the video data. While it is invisible, the embedded information is very robust against different video processing operations like lossy compression and format conversion.

## **Copyright Protection & Video Individualization**

By way of the embedded copyright information (e.g. the ID of the content provider), digital watermarking can provide a proof of ownership of your videos. If one embeds a unique ID for each recipient or a single copy, one can identify the source of leakage when unauthorized copies are found (transactional or forensic watermarking).

#### Watermark Properties

- Visual quality: invisible to the viewer
- Capacity: 3 bits/second and higher
- Robustness: detectable after lossy compression (e.g. full HD content down to H.264, <1 mbps, PAL resolution), rotation and scaling operations (after resynchronization), cutting processes</p>
- Security: watermark embedding and retrieval process controlled by secret key
- Performance: embedding and retrieval faster than real-time

## **Technical Data**

- Supported video formats: most common video formats (e.g. MPEG-2, MPEG-4, Apple QuickTime)
- Supported Platforms: Microsoft Windows, Linux, UNIX

#### Watermarking Software

- Various software interfaces can be delivered, including graphical interface (GUI), command line interface, static/dynamic libraries, etc.
- Easy to be integrated into various existing environments
- Free demo version for testing
- »Container technology« for ultra-fast watermarking (for selected formats)

#### **Other Offers**

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

Please contact us for more information and references!