



*Fraunhofer Institute for Secure
Information Technology SIT*

*Contact:
Dr. Martin Steinebach
Rheinstrasse 75
64295 Darmstadt, Germany*

*Phone +49 61 51 8 69-349
Fax +49 61 51 8 69-224
martin.steinebach@sit.fraunhofer.de
www.sit.fraunhofer.de/watermarking*

SITMark AUDIO

»YOU CAN'T HEAR IT, BUT IT'S THERE!«

For music albums and audio books, online services like download shops or online promotional distribution are becoming increasingly popular. Nowadays, audio downloads are either completely unprotected with respect to copyright protection or controlled by inconvenient digital rights management (DRM) environments. Unfortunately, audio downloads also circulate in illegal Internet sources like file sharing networks or streaming platforms. With its digital audio watermarking solutions Fraunhofer SIT has successfully established an accepted alternative to the options stated above. In recent years, more and more providers of digital audio have trusted our algorithms to protect their goods.

Digital Audio Watermarking

Our security solution for preventing copy right infringements uses digital watermarking: this technique embeds an inaudible watermark message into the audio file. This message represents a copyright notice or a transaction ID for matching a single medium to a specific sales transaction or user. The audio watermark is inaudible to listeners, and it is very robust to post-processing. Thus the watermark can be detected and retrieved after re-encoding to mp3, or even microphone recording, and it does not modify the file format.

Psychological Copy Protection

The watermark serves as a »psychological copy protection« because the users know that their individual audio copy can be traced back whenever it appears illegally. Honest users are not affected by the watermark and can enjoy the full sound sensation on any device, e. g. CD players or mp3 players.

Software Products for the Media Industry

Our audio watermarking software can be easily integrated into download shop platforms, CD duplication devices, or audio editor software. Protection can be provided for music albums, audio books, digital archives, sound libraries, and movie sound tracks.

Technical Properties

- Sound quality: watermark inaudible to a human listener
- Robustness: watermark survives mp3 encoding, dynamic compression, time stretching, pitch shifting, re-sampling, analog recording
- Security: access to watermark message controlled by secret keys
- Data capacity: 1-10 bits per second
- Performance: 3x faster than realtime, up to 3000x faster with our watermarking container solution

Our Offer

- »Off-the-shelf« or »Out-of-the-box« software solutions
- Software interfaces: Graphical User Interfaces (GUIs), command line versions, SDKs, VST-Plugins
- Tailored watermarking solutions for special requirements
- Media security and rights management consulting
- Free demo version for testing
- Support for Microsoft Windows, Linux, Macintosh, Unix

Please contact us for more information and references!