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(ITU-T SG21)

Coding of Still Pictures

JBIG

*Joint Bi-level Image
Experts Group*

JPEG

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TITLE: JPEG Trust Part 3: Media Asset Watermarking Terms and Definitions – v1.0

SOURCE: WG1

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1 Introduction

ISO and IEC maintain terminology databases for use in standardisation at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org>

To ensure a correct understanding of the JPEG Trust documentation, this document defines terms and concepts as they are used in this context.

2 Terms and definitions

In this section, the terms and definitions used in JPEG Trust Part 3 are listed in alphabetical order with a reference to their original source wherever applicable.

capacity - the maximum amount of information that can be embedded by a watermark on a media asset under preset conditions of robustness and for a given impact on its visual quality.

computational cost - the time and processing resources required on any specified computing hardware for operations, such as embedding and extraction, depending on the specific constraints of the application.

embedding - a method to insert certain information (e.g. a watermark) into a media asset.

extraction - a method to extract certain information (e.g. a watermark) that was previously inserted into a media asset.

false positive rate - refers to the likelihood that an unwatermarked media is incorrectly identified as containing a watermark during the extraction process.

fragility - represents the watermark's sensitivity to content modifications, such as its ability to enable detection of even minor changes.

imperceptibility - a measure of watermark embedding that indicates the similarity between the original (non-watermarked) and watermarked media asset according to human perception.

invisible watermark - a watermark that is not visible to human perception.

payload - the amount of data carried by the watermark.

robustness - measures of successful watermark extraction from the media asset, which may or may not have gone through certain processes such as filtering, compression, cropping or modification.

visible watermark - a watermark that is visible to human perception.

watermark - data that has been encoded for the purposes of embedding into media assets. It may be visible/perceptible or invisible/imperceptible.

watermark decoding - the process of converting the watermark that was extracted from media assets back into its original format.

watermark encoding - the process of converting the watermark into a form suitable for embedding into media assets.

watermark security - the inability to detect, tamper with, or decode the watermark by an unauthorised user.

watermarked media asset - a media asset that carries a visible or invisible watermark.

watermarking - a technique that embeds data into a media asset. It also provides the technique to extract the data back from the watermarked media asset.