ISO/IEC JTC 1/SC 29/WG 1
(ITU-T SG16)

Coding of Still Pictures

**JBIG**
Joint Bi-level Image Experts Group

**JPEG**
Joint Photographic Experts Group

**TITLE:** Terms and definitions for JPEG Trust v1.0

**SOURCE:** WG1

**PROJECT:** ISO/IEC 21617 – JPEG Trust

**STATUS:** Approved

**REQUESTED ACTION:** For distribution

**DISTRIBUTION:** Public

**Contact:**
ISO/IEC JTC 1/SC 29/WG 1 Convener – Prof. Touradj Ebrahimi
EPFL/STI/IEL/GR-EB, Station 11, CH-1015 Lausanne, Switzerland
Tel: +41 21 693 2606, Fax: +41 21 693 7600, E-mail: Touradj.Ebrahimi@epfl.ch
1 Introduction

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

The terms and definitions are organised in two sections: 2) Terms and definitions and 3) Additional terms and definitions. The first set includes all terms which are currently used in the JPEG Trust documents and specifications. The second set includes terms and definitions that have been discussed and considered for usage in the future.

2 Terms and definitions

- **Action**: an operation on a media asset.
- **Actor**: A human or non-human (hardware or software) that is participating in the media ecosystem. For example: a camera (capture device), generation or editing software, cloud service or the person using such tools.
- **AI Generated Content (AIGC)**: media asset created or modified by means of artificial intelligence (AI).
- **Anonymisation**: process of altering data in a media asset with the aim to protect the privacy of an actor.
- **Assertion**: data structure which represents a statement asserted by an actor concerning the media asset. This data is a part of a Trust Manifest.
- **Authentic media asset**: media asset that is verifiable and/or trustworthy or both.
- **Author**: a human whose creativity led to a work being created or modified.
- **Blockchain**: a blockchain system is one type of distributed ledger architecture.
- **Claim**: digitally signed and tamper-evident data structure that references one or more assertion by one or more actors, concerning a media asset, and the information necessary to represent the content binding.
- **Claim signature**: digital signature on the claim using the private key of an actor. The claim signature is a part of a Trust Manifest.
- **Composed media asset**: media asset composed of multiple media assets.
- **Contract Expression Language (CEL)**: a general-purpose language designed for expressing contractual agreements in a clear, machine-interpretable form. It is part 20 of
the MPEG 21 standard (ISO/IEC 21000-20) and utilises XML technology for defining its syntax and semantics.

- **Disinformation**: information that is false and deliberately created to harm a person, social group, organisation or country¹.
- **Distributed ledger**: a database that spans many physical locations.
- **Digital master**: master media asset as intended by its creator.
- **Distributed Ledger Technology (DLT)**: a distributed system that enables a tamper-evident, append-only data store (ledger).
- **Fungible token**: Fungible tokens or assets are divisible and non-unique. They are interchangeable and store value.
- **GLAM institutions**: Galleries, Libraries, Archives and Museums.
- **Identifier**: a value that uniquely refers to something, such as an asset or actor.
- **Intellectual Property Rights (IPR)**: exclusive rights of an actor to their intellectual work.
- **Ledger**: A ledger is a book of accounts that contains the records of transactions.
- **Mal-information**: information that is based on reality, used to inflict harm on a person, social group, organisation or country¹.
- **Manipulated media asset**: media asset that has been changed with the intention to induce misinterpretation.
- **Media asset**: digital assets including images, videos, audio or text. In the context of this document we mainly focus on images, however, other media types are not necessarily excluded from the scope.
- **Media asset content**: the portion of a media asset that represents the actual content, such as the pixel data of an image, along with any additional technical metadata required to understand or render the content (e.g. a colour profile or encoding parameters).
- **Media asset integrity**: lack of corruption of a media asset.
- **Media asset metadata**: the portion of a media asset that represents non-technical information about the media asset or its content, such as location, creator, annotations or IPR information.
- **Media asset original**: media asset produced by a device or method without any modification.
- **Media asset provenance**: a set of information about a media asset including the trail of modifications starting from the media asset origin.
- **Media asset source**: the non-human actor that created the media asset original.
- **Misinformation**: information that is false but not created with the intention of causing harm\(^1\).
- **Modified media asset**: media asset that has been changed.
- **Natural media asset**: sensor-acquired media asset.
- **Non-fungible token (NFT)**: a unique data record containing a verifiable reference to an asset.
- **Obfuscation**: process of altering data in a media asset with the aim to protect unauthorised access.
- **Permission**: the ability to exercise an Action over an asset.
- **Prohibition**: the inability to exercise an Action over an asset.
- **Region of Interest (ROI)**: subset within the media asset content identified for a particular purpose.
- **Registrar**: an actor that performs a registration.
- **Registration**: the process of storing information (e.g. media asset, metadata or provenance) about a media asset, separate from the media asset itself.
- **Signer**: an actor who digitally signs the Trust Manifest for a media asset.
- **Signing**: a process that establishes the relation between an actor and the Trust Manifest of a media asset in a tamper-evident manner.
- **Smart contract**: a computer program that is intended to automatically execute, control or document events and actions according to pre-specified rules.
- **Smart legal contract**: a smart contract which creates legally binding obligations on the parties and which is wholly or partly written as a computer program.
- **Synthetic media asset**: media asset generated at least partially by a computer programme.
- **Tokenization**: Tokenization is the process of encapsulating an asset's rights into a digital token.
- **Trust credential**: the set of trust indicators that are derived from a media asset and its trust record
- **Trust declaration**: specific type of trust manifest that, when present, is always first in the trust record.
- **Trust indicators**: information derived from a combination of the media asset and the trust record.

\(^1\) As defined by UNESCO: [https://en.unesco.org/fightfakenews](https://en.unesco.org/fightfakenews)
• **Trust manifest**: set of information about the media asset provenance of a media asset. A trust manifest is part of a trust record.

• **Trust profile**: set of expressions that are used to evaluate trust indicators in a given trust credential to indicate a level of trustworthiness for a given media asset.

• **Trust record**: collection of one or more trust manifests that can either be embedded into a media asset or be external to its media asset.

• **Trust report**: result of evaluating a trust credential against a trust profile.

• **Trustworthy**: able to be relied on as being what it is asserted to be.

• **Verifiable**: able to be checked.

3 Additional terms and definitions

• **Constraint**: a logical expression that defines conditions applicable to a rule.

• **Content Delivery Network (CDN)**: a system of distributed servers that deliver media assets to a user based on their geographic location, the origin of the webpage, and the content delivery server.

• **Coordinate system**: a method of representing points in a space of given dimensions by coordinates.

• **Distributed CDN**: an advanced type of CDN that utilises a wide, decentralised array of servers, often including personal and IoT devices, to cache and deliver content closer to users, enhancing speed and reliability.

• **Duty**: the obligation to exercise an agreed action.

• **Media Contract Ontology (MCO)**: an integral part of the ISO/IEC 21000-21:2017 standard, specifically designed to represent contracts related to multimedia assets and intellectual property protected content.

• **Micro-licensing**: a legal phrase to describe the difference between a standard licence and a limited licence in terms of time, purpose, channels, territories, etc.

• **Minter**: actor who publishes an NFT.

• **Phygital**: a portmanteau of physical and digital, referring to the blending of the two experiences.