

**A Metadata Manifesto (Version 1.0 July 2006)
Text copyright Stock Artists Alliance**

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Photographers, illustrators, publishers, advertisers, designers, art directors, picture editors, librarians and curators all share this same problem: struggling to track rapidly expanding collections of image assets.

In a world of desktops increasingly crowded with digital files, old methodology persists. Folders of digital images are "filed" while information about the images—creator, caption and rights data—often is available only from a separate database, notebook, or CD jacket.

The only link between the image and this data is a file name and where that file is stored. Unfortunately, this link is easily severed when file names get altered, files get relocated, copies are made and disseminated. Meanwhile, image information gets left behind.

Without effective systems in place for identifying and managing digital assets, everyone working with digital images is adversely affected. Resources are wasted, opportunities are lost, liability increases and intellectual property rights are eroded.

The volume of digital files challenges publishers who need to manage and access them. Busy designers and art directors download preview images to their desktops, only to find weeks or months later they cannot identify the source. Librarians and curators—charged with making more cultural resources available to the public—are already overburdened managing their legacy analog material. Now, they must cope with rapidly expanding digital assets as well.

Lack of information about an image file can delay projects, necessitating additional research to establish licensing rights, obtain clearances, and confirm caption details. This in turn has contributed to the growing problem of misuse of images, whether through error or by intent. Without proper licensing or permissions, users infringe copyright and expose themselves to liability.

The pressures on image creators—as copyright holders—to protect their intellectual property has intensified since the digitalization and online distribution of their images. If their images cannot be properly identified, they suffer from lost revenues due to missed licensing opportunities. Add to this the challenge posed by proposed changes in U.S. Copyright Law. If "orphan works" legislation passes as drafted, it would permit use of their images without a license in the event the owner cannot be located.

Industry wide adoption of metadata is the key to addressing these challenges. Yet today, it is underused and under-supported. What's missing is an adherence to standards and technology solutions that support metadata use and preservation.

Image creators need to commit to embedding metadata as they move rapidly to an all-digital workflow. Those at the forefront have recognized the value of metadata to better protect their intellectual property. A recent Stock Artists Alliance member survey of nearly 400 active stock photographers found that a majority currently embed metadata in their image files. 9 in 10 include a copyright notice, 8 in 10 include creator contact information, and 7 in 10 include a unique image identifier, title, caption and keywords.

Yet, image creators have no control over what happens to that metadata once their files are circulated. It can be easily removed, as we lack the technological means to create permanent or protected metadata.

Stock photographers, for example, provide digital files to single or multiple distributors who commonly omit metadata from the image files they post online. The problem worsens as files are then forwarded to sub-distributors. Along the way, file names get changed and metadata may be altered or stripped. SAA's Investigative Shopping Study observed this process through a series of buys made from a range of stock distributors and sub-distributors. Typically, there is no metadata in the images, and the stock distributor file names are not helpful for identification. In one case, SAA tracked a sub-distribution "chain" that

involved five different companies, all marketing the same image but with different file names and credit lines.

For image users who are downloading images, archiving, and later repurposing these digital files, the loss of critical information along the way can be detrimental. Without licensing metadata, they cannot determine their rights to use the image. Without contact metadata, they cannot easily inquire about these rights. And without caption metadata, they may not be able to identify who or what is in the image.

In order for metadata to be effective, it must be incorporated into the workflow at all phases of image production, distribution and use. Significant efforts are being made to increase awareness and proper use of metadata from a number of standards bodies and industry coalitions—such as IPTC, UPDIG and PLUS—along with trade organizations and product developers. Their work is making a difference and setting up models for moving forward.

We need a coordinated industry wide commitment to fully recognize metadata as an effective solution. Together, we need to embrace a set of guiding principles for metadata use, and then put these principles into practice.

Imagine a world where metadata is ubiquitous. It's a world where images can be easily located and identified by anyone, anywhere. Creators can transmit their images to distributors and users, who instantly integrate these into their systems. Image users can track their digital assets using fully automated systems. A registry—now in development by the Picture Licensing Universal System (PLUS)—will link every image to current information about its source and owner.

To realize that future, we propose three guiding principles as our “metadata manifesto.”

- **Metadata is essential to identify and track digital images.**
- **Ownership metadata must never be removed.**
- **Metadata must be written in formats that are understood by all.**

Metadata is essential to identify and track digital images.

Everyone involved with digital images needs to recognize that embedded metadata is an essential part of every digital image. We feel it is the most efficient means of storing information about an image, and the best way to ensure that users can easily find the image and identify its source after it has been distributed or exchanged.

Therefore, we rely on image creators to responsibly and accurately enter metadata before their image files are disseminated to others. Most critical is the inclusion of ownership information, along with other valuable metadata such as creator contact details, rights information, captions and keywords.

Ownership metadata must never be removed.

We need to institute standards and best practices in order to protect and preserve critical metadata. Information that identifies the copyright holder must be treated as “read only” or “write once” data, and must never be removed by image distributors and users. The only exception would be changes done with the explicit consent of the copyright owner.

Automated systems for creating and managing digital files need to honor and assist implementation of this principle. Most critically, these systems need to preserve ownership metadata by default and discourage removal of other metadata by warning users about the legal implications of removal.

Metadata must be written in formats that are understood by all.

Metadata must be written using a format and syntax that is fully consistent with open interoperable standards. Outside of the digital image arena, there are numerous other metadata systems in place. Rather than attempting to unify these systems into one, what is needed is the means for them to communicate with and understand each other.

We need metadata to be able to move seamlessly between different systems and environments. In order for this to work, automated processes need to adhere to open standards or publicly accessible application program interfaces (APIs).

An excellent example of interoperability has been set by the “IPTC4XMP” working group that involved IPTC, Adobe and other industry partners. Together, they developed the IPTC Core schema that includes five fields that are shared with similarly named fields in the Dublin Core schema, a format popular among librarians and web developers.

We all need to take these guiding principles and put them into practice.

We need industry wide commitment to use metadata.

We need to embrace metadata standards and best practices that have a consistent world-view approach.

We need technology that makes it easy to embed metadata, preserve it, and facilitate tracking and rights management.

Starting Today:

As an Industry Leader

Work with other groups to encourage the adoption of metadata standards that address the needs of a broad constituency of metadata users.

Get involved or support standards bodies and joint efforts such as IPTC, PLUS, UPDIG, Dublin Core or PRISM/DIM2.

Make a commitment to educating your peers about the use of metadata.

As an Image Creator

Make sure you are entering all critical metadata, such as copyright and creator contact information, into your images at the earliest possible point in your workflow; and always before passing on to other parties.

Consider adding other forms of rich metadata, such as captions, keywords and unique identifiers, to make it easier for end users, distributors, and yourself to find your images.

Make metadata the primary means of storing your image information and quit the practice of storing this information in separate, out-of-sync documents.

Ensure that the applications you are using support current metadata standards, and if not, encourage the developers to make this a priority.

As an Image Distributor

Develop submission guidelines that require using embedded metadata, and specify which data or fields are required.

Establish guidelines for the preservation of metadata embedded by the creator.

Make it a standard practice to never remove or change ownership metadata already embedded in the file.

Examine your existing image processing workflows to insure that metadata is not being indiscriminately “stripped” before posting online or delivering files to clients.

Ensure that all embedded metadata in your image files complies with existing standards such as the IPTC Core schema.

Make it a priority to complete the transition to a metadata-driven system for managing all of your digital assets.

As an Image User

Check the images you receive to see if they have metadata, and if none is present, encourage the creator or distributor to include this vital information.

Do not remove or change ownership metadata without first checking with the Image Creator or Copyright Holder.

Insure that the applications used in your workflow are not removing or replacing metadata; and if they are, contact the developers to inquire why this is occurring.

Begin the transition to a metadata-driven system to manage all of your digital assets.

As a Technology Provider

Insure that your products are compliant with current metadata standards, and backwards compatible with legacy systems and standards.

Make preserving metadata the default option when copying, saving or exporting any image.

Insure that user interfaces—for operations that remove metadata—are designed to allow users to clearly understand what they are about to do.

Ensure that your implementations comply with I18N (internationalization) best practices.

Ensure that the user interface provides easy (preferably inline) access to definitions for each metadata field.

See the Addendum for Technology Providers & Product Developers for additional suggestions.

Metadata Resources

Stock Artists Alliance (SAA) www.stockartistsalliance.org

Metadata Manifesto blog <http://MetadataManifesto.blogspot.com>

Picture Licensing Universal System (PLUS) www.useplus.org

International Press Telecommunications Council (IPTC) www.iptc.org

“IPTC Core” Schema Users Guide

http://www.iptc.org/std/lptc4xmpCore/1.0/documentation/lptc4xmpCore_1.0-doc-CpanelsUserGuide_13.pdf

Origin of the IPTC “File Info” http://www.ControlledVocabulary.com/imagedatabases/iptc_naa.html

Dublin Core Schema <http://www.dublincore.org/>

Publishing Requirements for Industry Standard Metadata (PRISM) <http://www.prismstandard.org/>

Deadline Duel: A Magazine Drama in Four Acts <http://www.prismstandard.org/resources/dduel.zip>

Proposed “Orphan Works” Legislation <http://orphanworks.blogspot.com/>

Universal Photographic Digital Imaging Guidelines (UPDIG) <http://www.updig.org/>

Addendum for Technology Providers & Product Developers

The ideals behind ideal products

Besides adhering to the guiding principles proposed in the Metadata Manifesto, products aiming to gain significant market share in an increasingly metadata-hungry market should embody the following design ideals.

Products must allow metadata to be embedded as early as possible in the image creation process. This could include:

- the ability to store a metadata template—or at least the image creator’s name—in the internal memory of digital cameras and other image generating devices so that authorship information is automatically written to the metadata section of every newly created image.
- the ability to store authorship information on a protected sector of storage devices such as memory cards, and
- the ability to have image processing utilities automatically transfer this information (and even embed the information in the image) at the time images are copied to another device.

Products must allow metadata to be ubiquitous and persistent

- Metadata must be preserved by default in all imaging applications.
- User interfaces must be clearly designed to prevent users from inadvertently removing metadata.
- Any mechanisms for removing metadata must allow image users to clearly understand what they are about to do.
- Metadata removal mechanisms must allow for selective removal of individual fields, as opposed to wholesale removal of all data.
- Any process for compression of images for low-bandwidth use should by default preserve at least a reduced set of metadata, and must at a minimum preserve the image ownership information.

Products should facilitate usage rights tracking, including:

- the ability to automatically assign a persistent, unique identifier to each image so image users can identify and track its origin more easily.
- the ability to store passwords for selective levels of use permissions.

- the ability to password-protect authorship-related metadata to prevent inadvertent changes, as well as reduce the incidence of fraudulent changes.

Products must facilitate metadata automation. Ideal products should:

- allow recorded actions or macros for metadata manipulation, including support for conditional statements.
- allow automated access to metadata elements through a cross-platform scripting language. There should be agreement on a common API and allow scripts to call the application's own metadata parser.
- allow scripts to read any and all metadata elements meant for public consumption. Restrictions, if any, should be honored so that private metadata is not read.
- allow scripts to write to any metadata elements for which writing is applicable or allowed.



The Stock Artists Alliance invites feedback on this document. Send an email to standards@stockartistsalliance.org, or post to their blog at <http://MetadataManifesto.blogspot.com>.

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