

## What are image metadata (EXIF, IPTC, XMP)?

[Mac](#)[Metalmage](#)[Metadata](#)[EXIF](#)[IPTC](#)[XMP](#)[Editor](#)

EXIF  
IPTC  
XMP ?

In this article, we are going to learn what metadata are. In particular, we will briefly explain what image metadata are and what they are used for. You will thus understand the importance of correcting your photos' metadata and why a metadata editor such as Metalmage is essential for all photographers and all people sharing content on the internet.

# What are metadata, and how are they stored?

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The data in an image file are made up of several blocks of information. The most important block for an image is obviously the block containing the pixels of the images. Other blocks are often available containing textual information such as the camera's name, the GPS coordinates, and the date of the shoot. This extra information is called "image metadata." Metadata can be of many types and can include a variety of information. Moreover, these are independent of the pixels of the images and can be corrected without degradation of the pixels.

## What are the uses of metadata?

### Providing technical details

One use of metadata is to provide technical information. The camera automatically generates technical metadata. It includes details about the camera's manufacturer, model, and settings such as ISO number, shutter speed, flash on / off, aperture, and more. It can also include the GPS location of where the image was created, along with the date and time.

### Describing photos

Another use is to describe images. Descriptive metadata is mostly manually added through some imaging software, such as MetImage. It can include the name of the photographer or creator, keywords, captions, or comments. Descriptive metadata makes the image easier to search. For example, metadata allow software like Apple Photos to index, sort, and find your photos using keywords.

### Sharing photos

The last use we are going to present is for the administration. Administrative metadata are also mainly added manually. It includes rights about the image's usage, licensing, and restrictions on reuse or copying. These data allow you to inform to whom you share your files their right without attaching additional documents.

## What are metadata standards?

Metadata are included in your files in a textual format. Several companies have developed several formats over the years. So if you want to change the image description, there is not just one metadata tag but several. It's up to you to choose which tags to edit according to your needs. The three primary standards are EXIF, IPTC, and XMP. We have them detailed below. You should also note that each camera vendor has its metadata format alongside other metadata.

### EXIF metadata

The "Exchangeable Image Format," or EXIF, is used for storing a variety of information. It includes the date and time recorded by digital cameras when the photo is taken. Smartphone

cameras can also include GPS location. Camera details and settings are also stored in EXIF. These are the kind of information we mentioned above as technical details. A thumbnail for previewing the photo on the camera's screen and file managers on computers may also be part of it. Nearly all phones and digital cameras support this standard for the images they create.

## XMP metadata

The "Extensible Metadata Platform" (XMP) is an ISO standard created and adopted by Adobe Systems Inc. XMP is different from EXIF as it does not contain basic details about the image or the camera. Instead, XMP metadata helps in the processing and interchange of image files. XMP files store information about the changes made to your image in post-processing. For example, Adobe Lightroom saves metadata about the image's manipulation as a separate XMP file, also called a 'sidecar' file, because it is connected to your original image file and not embedded within it.

## IPTC metadata

The IPTC stands for International Press Telecommunications Council. It is a standard created in the early 1990s to assist in the exchange of data among media and news agencies. Since then, it has been updated a lot and is mainly used to contain a title, description, keywords, photographer's information, copyright restrictions, and much more. Many stock image agencies and even search engines use this standard nowadays for searching, sorting, and protecting images. IPTC metadata is very useful for copyright protection.

## Why use Metalmage?

Metalmage is an easy-to-use metadata editor for macOS. The application allows you to open images and read, edit and create metadata tags. This app supports hundreds of tags such as EXIF, IPTC, and XMP tags. Thus, in an easy-to-use interface, Metalmage allows you to modify the keywords, the GPS location, or the creation date and time of your files. A demo version of the Mac application is available on our [website](#). You can also find the app in the [App Store](#).

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