

Metadata 101 : Create Image Metadata With Ease in Windows XP

by Keith Mauli

We all know that we're supposed to do it, but many of us don't find the opportunity to think to do so until it is too late. As we begin to amass more digital images and find more uses for them, without a good system in place to actually name, categorize, and properly file our best shots, they're doomed to be lost in the digital ether forgotten and faded. In this article, we'll review some basics of metadata formats for JPG images, and then review a free Microsoft tool called Photo Info that allows you to quickly and easily add metadata to a single image or batch of images.

Technical Metadata : A Brief Exif Primer

Metadata is information describing an object or thing. For digital images, there are really two kinds of metadata : technical and descriptive. Technical metadata captures information directly from the camera about the image, such as shutter speed, aperture, ISO rating, camera make and model, even geospatial data for some of the newer cameras on the market. This kind of technical metadata is automatically generated so that each time the shutter is clicked, the camera automatically records this information into the image. This technical information is widely known as Exif metadata, which stand for the "Exchangeable image file format". While most of the Exif information is automatically generated and does not require further editing, special fields for encoding metadata about copyright, author and image description are included so that at a later time the image can be updated with the appropriate information.

Descriptive Metadata : IPTC

Beyond Exif, there is another metadata format that can provide the key to adding descriptive metadata to your images when Exif falls short. The IPTC or "International Press Telecommunications Council" metadata format, which is controlled by a consortium of global news agencies and industry experts, allows the embedding of even more information than provided by the Exif format. With IPTC information, you may embed such elements as keywords, descriptive narratives about the image, author information, copyright information, and even image title. IPTC is considered an international standard and most image editing tools that allow for metadata editing, allow for IPTC editing for JPG files, among other formats.

Future Freedom : XMP

XMP is the younger of the three metadata formats, having been introduced by Adobe Systems in 2001. It stands for the "Extensible Metadata Platform" and is yet another way to encode metadata about your images. XMP embeds both Exif and IPTC, and then provides for highly flexible additions for embedding a number of additional standards which are beyond the scope of this article. XMP also has interesting uses for

nondestructive image editing, including embedding information about modifications made to the image (like crop areas, color adjustments, etc.), and when used with some formats (like RAW) can be reused to apply those same settings to one or more images (even the same image) in a non-destructive way. XMP can be generated as a separate “sidecar” file, or can be attached directly into the JPG image as with the Exif and IPTC metadata. The primary advantage of using XMP is that it’s far more flexible and expressive than the other two formats, though it is still gaining momentum toward the widespread universal acceptance as Exif and IPTC already have.

Why Care About Metadata?

Though there are many ways to record metadata about your images, the formats described already, exist for a reason : embedding metadata within the image is the best way to provide portable, consistent and standardized ways of transmitting information about the image *within* the image. That way you’re not trying to find the “information” about your images, because that information is already stored within the image. Furthermore, embedding metadata, for example, about copyright, allows your indisputable copyright to be transmitted directly in the image.

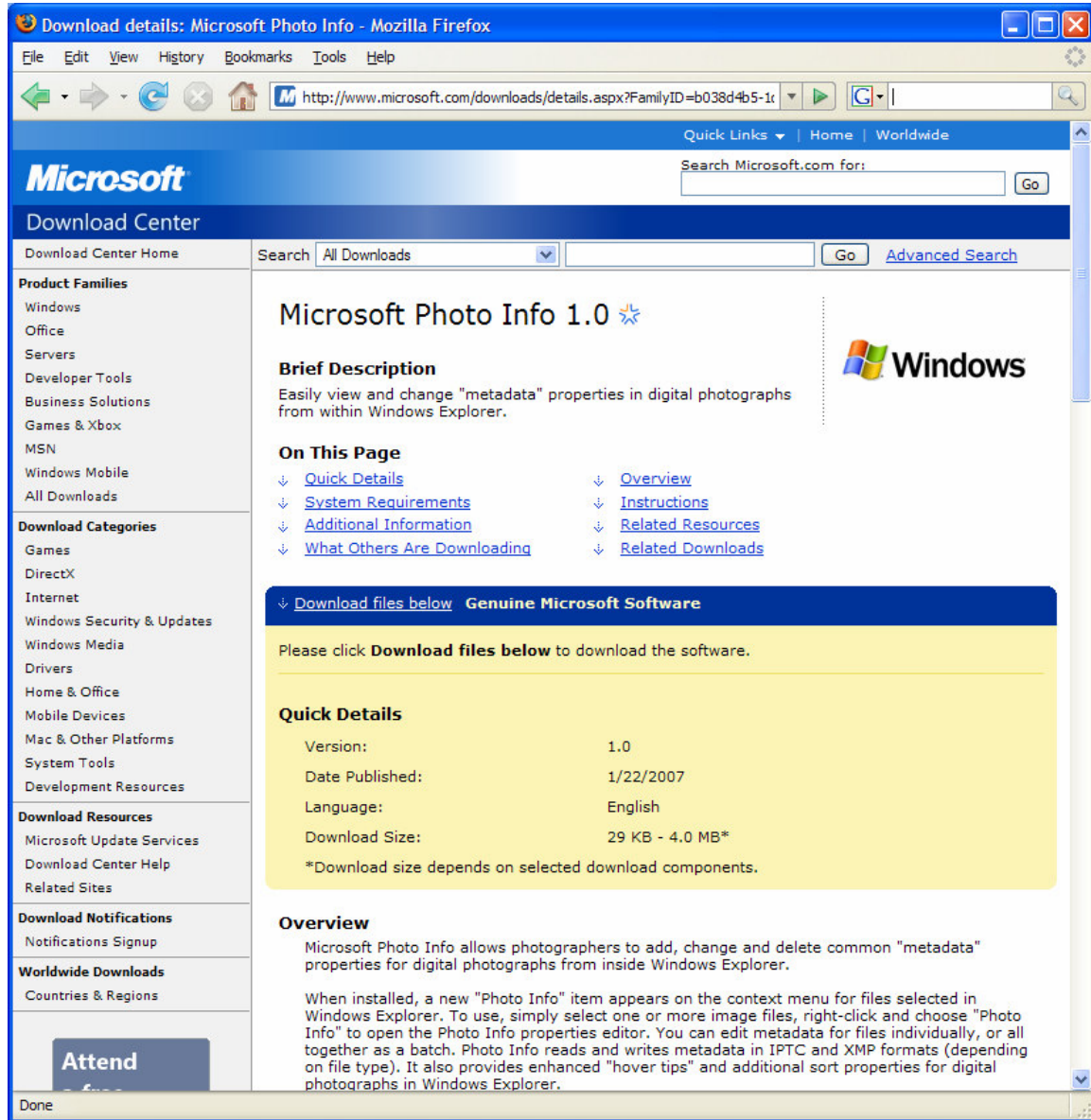
Many cataloging tools read the Exif and IPTC information inside your images to build up the technical and descriptive information about your images. Keywords, dates and capture information embedded in your images are then used to build internal databases that allow easy indexing and searching of your images, so that within a few keystrokes you can find all the photos you took on your family vacation to Tahiti in 2004 or your best friend’s birthday last year. Metadata allows you the power and freedom to gain control over your images, and embedding that metadata directly in the image allows you to “future” proof your images, in the event that the tools you use today to search and index your metadata end up in software’s hall of doom.

Ultimately, metadata is a way to improve the quality of your digital imaging workflow. By adding metadata editing as part of the workflow process, you can quickly make sure that any new images you take will be appropriately updated, so that you don’t have to spend hours retrofitting hundreds or thousands of old images with the metadata that could have been added in minutes after the images were loaded from your memory card to your computer.

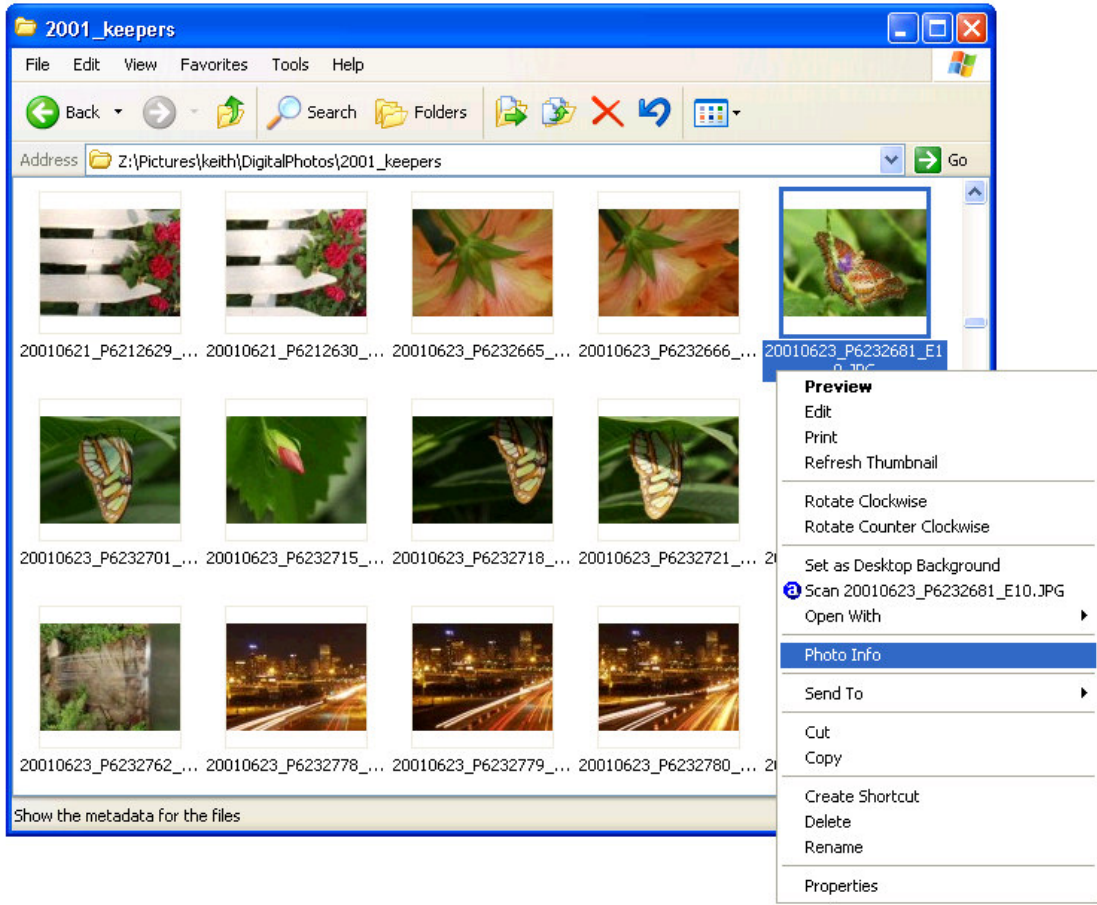
Tools

There are a number of tools on the market for cataloging, rating and describing your images. The prices vary from free to very expensive – and as much variance as there is in price, there is even more in features and functionality. There is an easy and free tool, however, to gain access to editing metadata on PCs with a recently released Microsoft utility that makes updating Exif, IPTC and XMP metadata as simple as a right click and a few keystrokes. The tool is called “Photo Info” and can be found at <http://www.microsoft.com/windowsxp/using/digitalphotography/prophoto/photoinfo.msp>. We’ll briefly describe how this tool is used and how it can be quickly integrated as the metadata editing tool of choice for your photo workflow.

Downloading and Installing Microsoft Photo Info

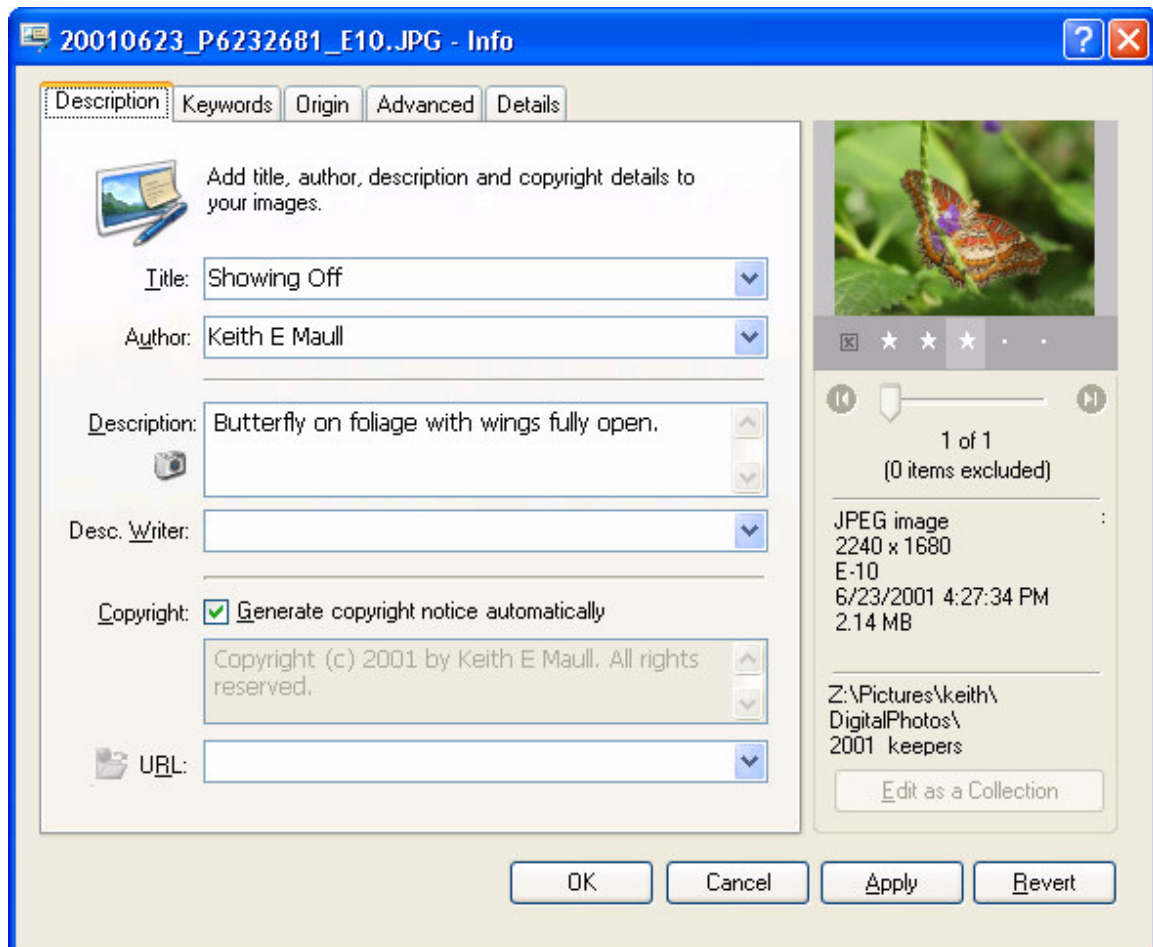


After downloading the tool from Microsoft's website, follow the installation instructions to load the application on your Windows XP machine. Currently the tool supports JPG, TIF, WDP, NEF, CR2, CRW and Microsoft's own HDP (HD Photo) formats. Once installed, you'll notice a new menu item when you Right-Click on images in your file explorer.



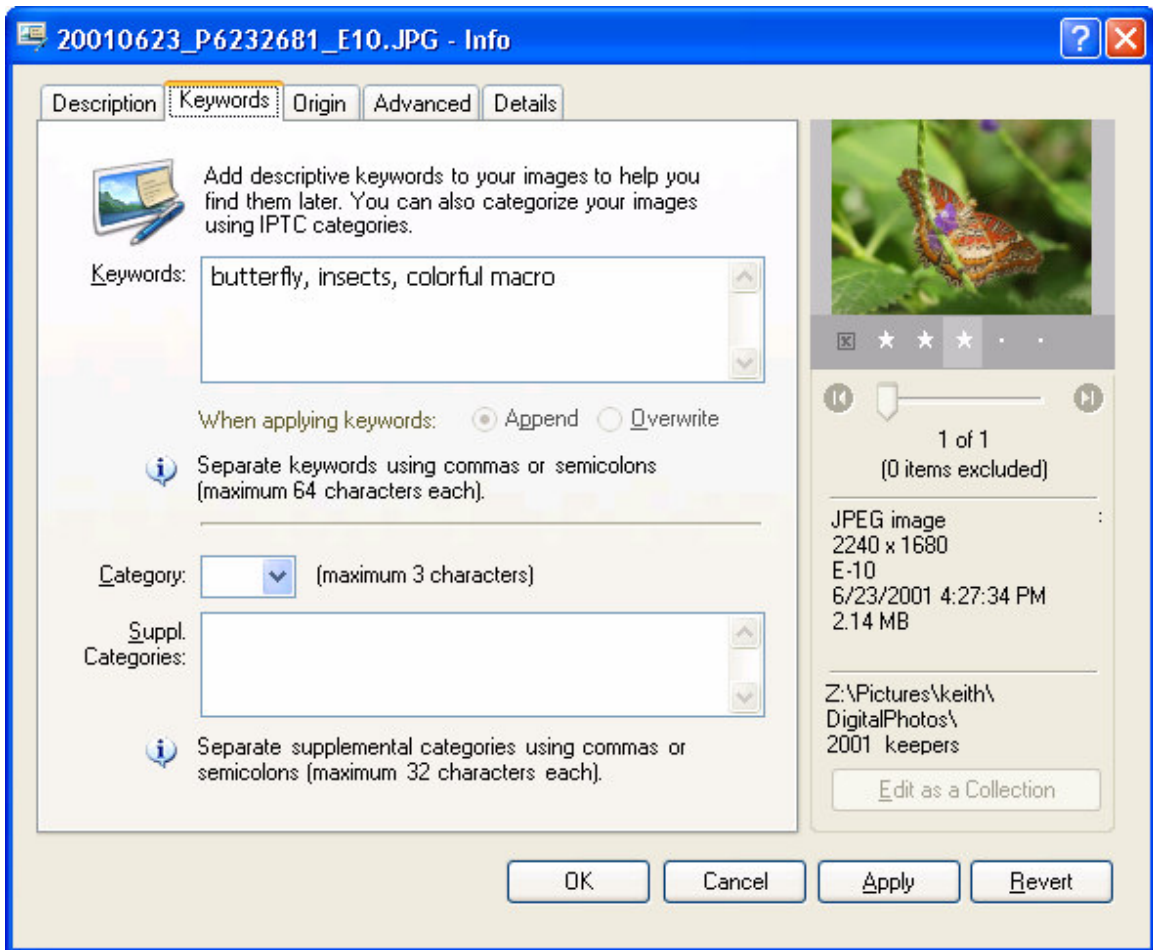
Using Photo Info on a Single Image

Using the tool is as simple as right clicking one or more files from your file explorer. For example, edit the image metadata by right clicking and choosing the “Photo Info” option. The Photo Info edit tool will appear and you will be able to enter information about your image directly. You can even choose a star rating by choosing one to five stars under the image. This rating will be visible only to other Microsoft and Adobe tools.

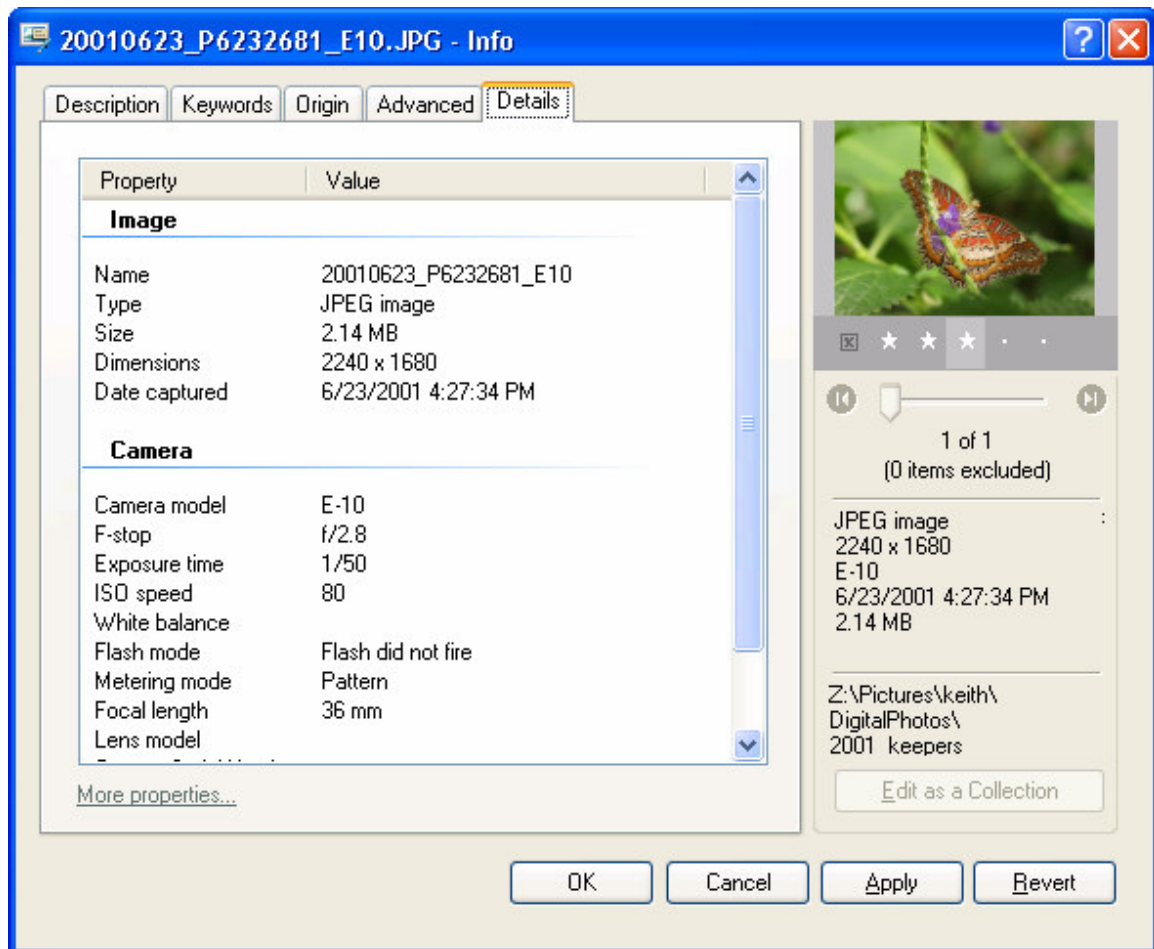


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Navigating to the Keywords tab, you can add keywords to describe the image. These keywords become part of the IPTC data and will be seen by other cataloging tools that will search your images for keywords.

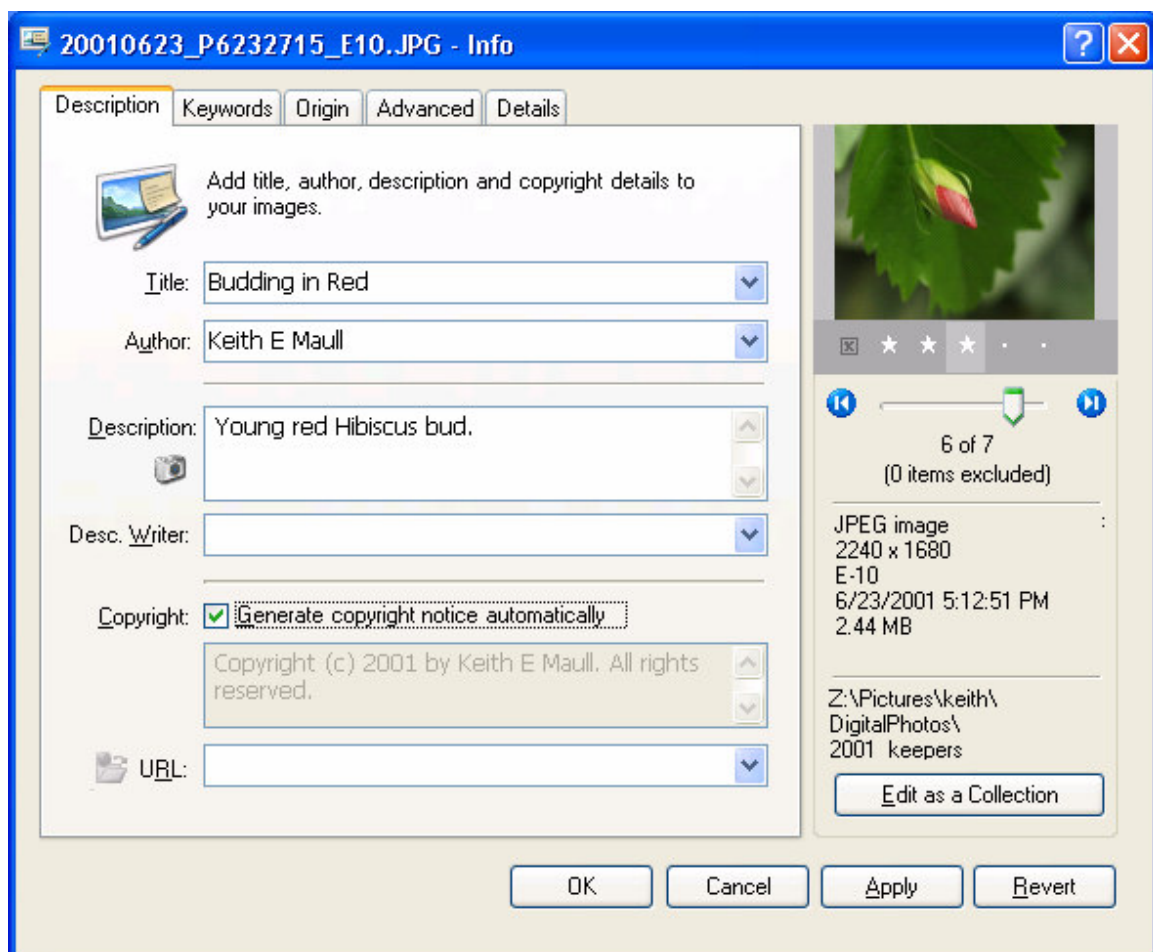


Choosing the Details tab, shows some of the Exif data for the image :



Batch Processing with Photo Info

Batch processing a group of images is almost as easy as single image processing. You can multi-select more than one image and right click as before. Now you will see the image count in the thumbnail view and can navigate between each image editing the data for each image independently. As a convenience, the tool allows you to select the group of images and apply the same metadata to each of them. For example, you can apply the same copyright and author information to a set of images quickly and easily by clicking the Edit as Collection button. For values that differ from image to image (like title), the tool will indicate that there are multiple values. Beware, since once you edit a field, all the images will take on the new value. Editing as a collection can, however, be useful for applying common keywords or copyright information to a group of images quickly. Later each image can be edited individually for keyword, title and description refinement.



Adding Metadata Just Got a Little Easier

Adding metadata to your images can be time consuming – and this is probably one of the primary reasons it takes second, third or last priority. Without metadata, however, images will be difficult to find as time moves forward. The more images taken without some kind of additional information about them, the more difficult it will be to find them when you need them. While there are a number of excellent tools to catalog and edit your images, one of the fastest ways to update your images is through tools provided directly by your operating system. Microsoft's free Photo Info tool is a great place to begin the discipline of adding metadata to your images, so that the next time you're navigating through directories of images, editing the metadata for them is as easy a right click!