CATALOGING

Introduction

Photo Supreme is "Digital Asset Management" software. Photo Supreme makes it possible to manage your image files by categorizing them. It will categorize the files based on the available details of the file, this includes technical photo details, but also the location of the file on disk, etc. Apart from those properties you can add tags to the images, enrich the files with descriptions, or add custom information. This may sound like a very time-consuming task, but once you've worked yourself through that, you will benefit from the many advantages. With Photo Supreme at hand you will be able to quickly retrieve your images using all kinds of criteria or combinations.

This manual explains the cataloging concept, how to import images, how to access your cataloged files, the Catalog Labels concept, and how to work with descriptive metadata.

Cataloging Concept

Assets and Metadata

Cataloging is the process of listing something for inclusion in a catalog (source WikiPedia). In the context of asset management, a catalog is a reference index that you can use to organize, manage, and retrieve your assets.

You'll typically use Photo Supreme to manage images files. The assets then are images. However, with Photo Supreme you can also manage non-image files, including video files, text documents, or any other file type, and so the term "files" would be better covering the type of assets managed in Photo Supreme. For the rest of this document, we'll speak about images, but images can be replaced with any type of file that you decide to manage with the software.

Your images all have attributes, properties, and/or characteristics. Some examples of such attributes are: the file name, the file size, the folder where the file is stored in. When recording an image with your digital camera then the camera will write the pixels of the image to the file, but it will also add information to the file with the technical details used to record the image. These technical details (Exif) contain loads of information about the image like the camera brand, the camera model, the recording date, the pixel dimensions, the aperture used, the focal length, the lens model, the lens range, and much more. These too are attributes of your asset. Then there is a group of cameras that embed a GPS chip and these cameras automatically write the GEO coordinates to the image file, sometimes even including the location details like country, city, location.

About every possible attribute of your asset (image/video/…) can be managed in Photo Supreme.

The group of attributes that is collected about your asset is so-called "metadata". Metadata is the generic name to cover the set of information used to describe something. More simply put: metadata is the set of attributes that describe your asset.

Catalog

A Catalog is the reference index used to organize, manage and retrieve your assets. Photo Supreme uses a database system to store such information. This is either a SQLite or, for the Server Edition, a SQLServer or PostgreSQL database. Each of these database systems allow for virtual unlimited file size (all limits are theoretical). *The Catalog is the database.*

By adding assets (images) to your catalog you're telling Photo Supreme that you want to manage those files. Many attributes of the images are then added to the catalog and will be populated automatically. This includes the file system details, file details, technical details (Exif). Also optionally pre-existing descriptions will be imported to the catalog. This includes pre-existing IPTC and XMP.

After importing images to the catalog, you can use the many Photo Supreme features to organize images in Portfolio albums, manage the images by adding metadata like keywords, or use the advanced search features for retrieval.

Once you have your images in the catalog you can use Photo Supreme to create additional metadata, or extend the existing metadata.

Catalog Software vs File Browser

While a file system browser can work with images inside a single folder on the file system, Photo Supreme, as Cataloging Software, relies on its Catalog database and allows you to work with images in the catalog.

Simply put: **Photo Supreme is not restricted by the file system**.

A perceived downside of using Cataloging Software is that the software must first be made aware of the images, through importing them. However, the time spent doing the initial import process is quickly offset by the future time saved when browsing the cataloged images.

As Photo Supreme is not restricted by the file system, it offers two major benefits:

1. Powerful search capabilities; *you can now query information about all images in the catalog*

2. Flexible organization abilities; *you can group images together that reside in completely different folders, even different media, even disconnected media*

Importing to the Catalog

The process of getting images into your catalog is called "importing". During an import, you can either import existing images from the hard drive, or copy files to a target folder and then import those images. You will always be in control of where on the file system your images are stored and the catalog contains references to the files.

There are two types of Import Operations:

1. Import files that are in their designated folder (files are already in the correct folder on the hard drive)

2. Import files that are copied to their designated folder (files need to be copied to the correct folder on the hard drive and them imported)

During the most rudimentary import, the import will result in:

- The folder is defined in the catalog

- The folder details are stored (disk name, unique serial number)

- The file is defined in the catalog

- The file details are read and stored

- Optionally pre-existing descriptive metadata (IPTC/XMP) is imported to the catalog

- Optionally existing keywords are converted to catalog labels

Import files that are already in their designated folder

This is an import process where the files are already in their correct folder on the hard drive and you want to use Photo Supreme to manage those files. By importing them to the Catalog, the physical location of the files remain in place; so without the copy process.

When you first run an import then it's recommended that you import only a sub-set of images and not start with importing *all* your image files. First become familiar with how importing works and what the result of the import is in the catalog. Create a test folder and copy some images to this test folder. Those can also be copied in sub folder of the test folder. For testing, I suggest that you copy a few hundred images to this test folder.

To import the test set, click the Import Button in the Main Toolbar.
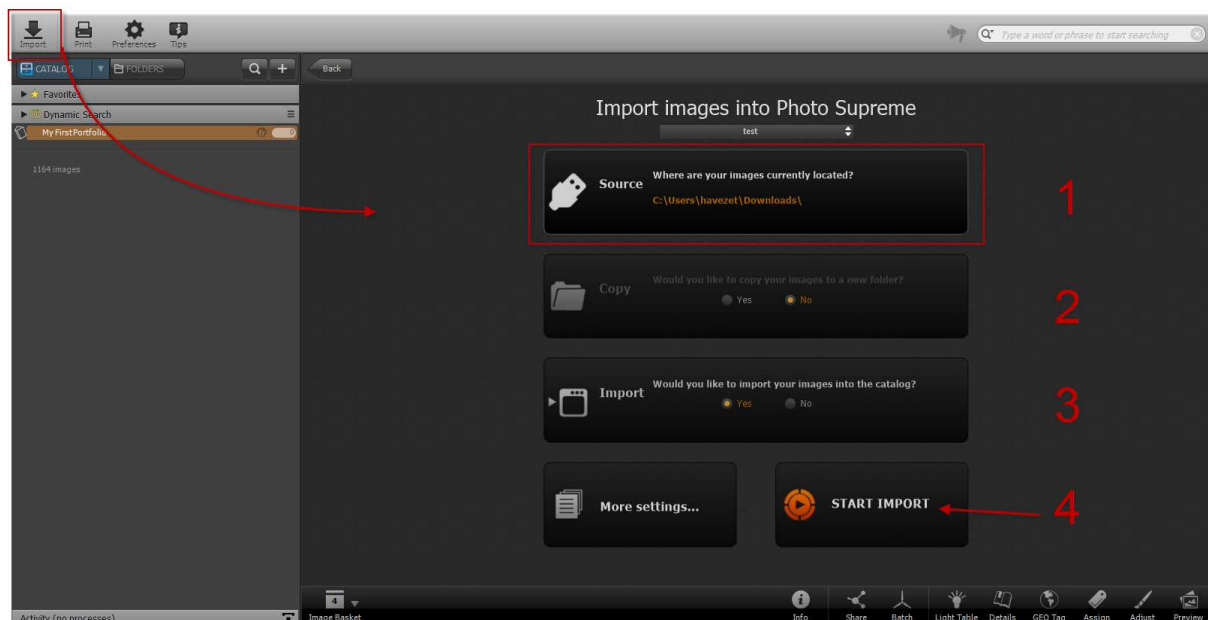
To quickly import images, follow these steps:

1. Select a source. Click the first button and select the source folder. In this case this will be the test folder we just created.

2. We don't want to copy the images to a new destination so make sure the Copy feature is OFF by selecting the "No" button.

3. Of course we want to import the images to the catalog

4. Start the import

The import process now starts and your images will become defined in the catalog. Also the existing attributes (metadata) of the images is imported to the catalog. In addition, existing keywords will be converted to Catalog Labels.

You see, at the top of the Import dialog that I have a Profile selected. It is possible to customize the import process to your personal needs and then store such an import definition as a profile. In the drop down, I can select which profile I'd like to use.

To create an Import Profile, you'd have to open the full import dialog. Do this by clicking the lower left button "More Settings…". That will open the full Import panel, where you can tweak about every aspect of the import process.
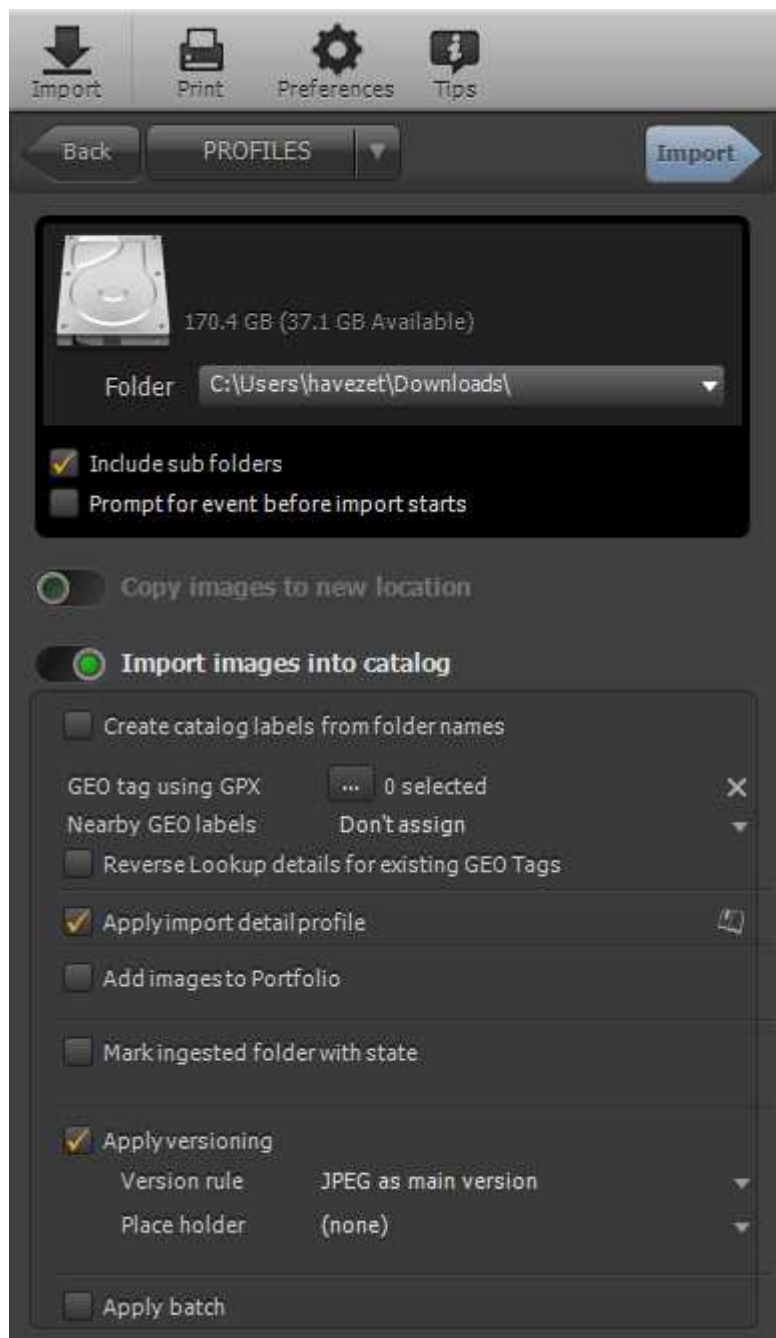
The profile that you had selected in the previous screen is loaded. The first thing to decide is if you'd like to "Copy images to a new location" and/or "Import Images into the catalog".
You can toggle those by clicking the lever button.

Use the Tips system (click Tips in the main application toolbar) for a description of each field.

Browsing the Catalog

After importing a set of images to the catalog, it is now time to browse those. As Photo Supreme doesn't limit you to the file system, it is possible to access your images in many different ways. The CATALOG and FOLDERS buttons will provide you with these options.

Clicking the FOLDERS button gives you access to the folder structure as it exists in the Catalog. By using this access type, you're mimicking browsing the file system. The folders are presented hierarchically and you can expand or collapse folder nodes to access lower nodes (if any). By selecting a folder, the images that represent the folder will be loaded in the Collection Viewer and presented as thumbnails.
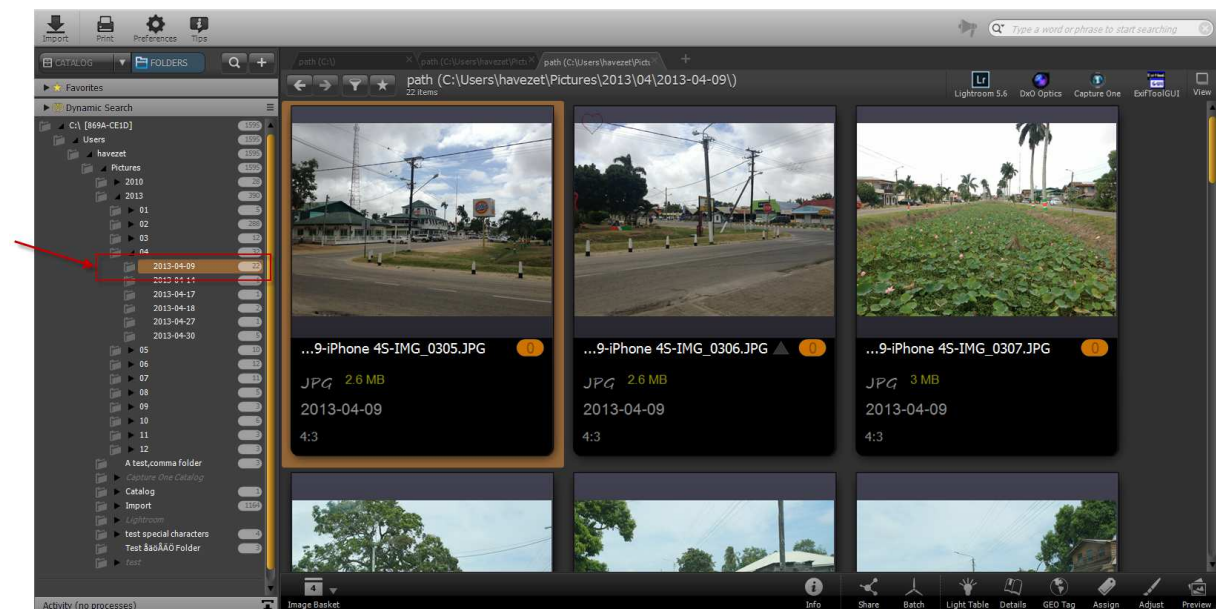
Clicking the CATALOG button gives a drop down with options to access the catalog:

By Category   *Within this section you can access the hierarchical catalog label structure and browse through all the images that are assigned to the different labels.*

The top level is called "Categories" and all the lower levels are called "catalog labels", so categories are main dividers for your catalog labels. Each catalog label, again, can be divided into one or more sub catalog labels, and each of those catalog label into more labels...you get the picture.

By Portfolio

This provides access to your Portfolio Albums and their hierarchical organization.

With Photo Supreme you can organize your images in portfolios. Organizing images in portfolios is intended to allow you to build a structure of images that belong together. This may sound similar to catalog labels but the difference is that with portfolios you can make selections; for example you can have a catalog label "Holiday 2014" and you may also decide to create a Portfolio collection for that, but only store your best images there so that when someone visits you at home, you can just show your portfolio images. You can also create portfolios for your online image archives, which typically will be a sub set of your complete collection.
For example; a portfolio for your website images, and/or a portfolio for your projects per year, and/or any other main divisor you want to use to organize your images.

By Rating

Within this section you can browse through all the images, based on their assigned star rating.

With Photo Supreme it is possible to rate every individual image with a 0 to 5 score. By rating your images you can graduate them and distinguish the good from the bad (0 = unassigned, 1 = very bad,.., 5 = best) . For example; you can retrieve all your best images, just by selecting the "Five Stars" entry in the "By Ratings" section.

By Color Label

Within this section you can browse through all the images, based on their color rating.

With Photo Supreme it is possible to assign color labels to your images. Color labels provide a mechanism to rank or mark your images.

Examples of color labels could be:

Red: Ready for the trash bin
Yellow: Your Pick
Green: Customer Pick
Blue: Ready to print
Purple: Temporary tag

After you have determined what the colors mean for your workflow, you can define your own captions for each color. Do this in the application's Preference panel by clicking the Preferences button in the main toolbar. Inside the

Preferences, open the Catalog section and then "Color label names"

By File Type

Within this section you can browse through all the images, based on their file extension.

Every image file will be of a specific file type. Generally the file type is determined by the file's extension. A typical file type will be "JPG" or "CR2" or "NEF" or "DNG". This section allows you to browse through all your images of a certain file type, e.g. all JPG images or all DNG images.

By Catalog State

Within this section you can browse through all the images, based on their information state in the catalog.

Photo Supreme pertains several states of your images as they are imported to the database. This section contains entries to display all images that are catalog labeled, bookmarked, rated, GEO tagged, etc. Catalog States allows you to quickly get a helicopter view of the organizing state of your images in the catalog and is a real time saver.

By Version Placeholder

Within this section you can browse through all the images, based on their version placeholder assignment.

As you start working with versioning, you'll see that Photo Supreme allows you to define version placeholders. These are slots in the version set that allow you to quickly access versions with particular properties. For instance when you'd like to identify the version to be used for printing, then you can assign that version to the "print placeholder". In the Catalog Explorer you'll be able to quickly browse through all your placeholders and view all print versions. By default, Photo Supreme defines version placeholders for album display, web display, slide show display, e-mail and printing. These placeholders are customizable.

By Date

Within this section you can browse through all the images, based on a date hierarchy
Year->Month->Day

This section offers a tree that allows you to browse your images by the date the photo was taken (generally this is the "Exif photo digitized date" as recorded by the camera). The tree is structured on Year->Month->Day. So, for example, clicking on a particular day will display all images for that day.

By Image Details

This browses the catalog based on image details/metadata

As you import images to your catalog the catalog also maintains your metadata (data and properties specific to your images, for example a photo headline or the lens aperture value (F-stop) when the image was recorded). This metadata can then be browsed by opening this branch. In

this way you'll be able to quickly find all images with a specific F-stop or all images with a certain ISO value.

Keywording and Catalog Labels

What is keywording and what are Catalog Labels?

Keywording is the process where to enrich images with tags that describe the content of the image. Compare it with sticking post-it notes to your images. For example; you can add tags for people in the image (Simon), tags for objects (Statue of Liberty), locations (New York), emotions (happy), etc. The level of keywording is of course up to the level needed. The more tags, the more work for you, but the more accurate the image can be identified and found. Keywording, in Photo Supreme, takes place by adding Catalog Labels to the images. Catalog Labels again are "tags" that describe the image. Then how does that differ from keywords? The reason is simple, yet technical.

Keywords are stored in the image's descriptive data (metadata) and this is a flat list of strings. As you can imagine it will be very tedious when you have to maintain a list of hundreds, maybe even thousands, of keywords and then use that to tag images. That's why Photo Supreme came up with Catalog Labels. Catalog Labels are database tags and can be organized over multiple levels/hierarchies. At the same time these catalog labels can be enriched with further intelligence. This makes Catalog Labels easier and more powerful to use.

For instance; you can specify that when you assign a catalog label "Statue of Liberty" that Photo Supreme should also assign higher leveled catalog labels like "New York" and "United States". This just to illustrate the power of separating the concepts of keywords and catalog labels.

Having a catalog/database with images and assigned catalog labels is nice, but in the end you don't only want to depend on Photo Supreme for your data. That's why Photo Supreme offers mechanisms that allow you to write the information from the database back to the descriptive data for the image file (metadata). By doing so your image files will be completely self-containing and keywords travel with the files, as does all the other descriptive data like your copyright notice etc. Every Catalog Label that you assign to an image will then eventually carry over to your image file as a keyword. This gives you the highest level of interoperability and independency for your catalog data.

Creating Catalog Labels

This document can't dictate how you should construct your catalog nor can it tell you what the most suitable catalog labels would be for your images. The most important step in building a good Catalog Structure is to determine what should be stored in it. This is probably best determined by you deciding what set of criteria you would use to find your images.

As explained above, Catalog Labels can be structured in a hierarchical order. This means that every Label can be itemized into new sub-labels and again and again. While such break-

downs are possible, this is not a requirement. A hierarchy of Catalog Labels is what we call a Catalog Label Structure or in short the Label Structure.

Before you start creating your own Catalog Label Structure, the following note: start with as few Catalog Labels possible and let the amount of Labels grow over time. Create new Labels once the need arises. You can always relocate labels in the structure, even to other categories. You can also merge labels if, for whatever reason, you come up with two labels for the same thing.

You create your label structure in the "By Category" section of the Catalog, accessed by clicking the CATALOG button. Find this button at the left side, directly below the application's main toolbar.

As a sample, the application comes with some pre-created Categories and Labels.

A Category is a top-level container for your catalog labels. You are free to define as many Categories as you like or rename the existing ones.

To create your first Catalog Label:

1. Select the appropriate category (e.g. Events)

2. Press [Insert] or right click on the Category and select "Add Item".

3. Enter the details (in 90% of the Catalog Labels, just a name will be sufficient)

4. Store your new Catalog Label by clicking the "Apply" button.

To create a sub level of an existing Catalog Label, then:

1. Select that label

2. Press [Insert] or right click on the Category and select "Add Item".

3. Enter the details (in most of the Catalog Labels, just a name is sufficient)

4. Store your new sub Catalog Label by clicking the "Apply" button.

Again, start with few Catalog Labels and let your structure grow over time

Assigning Catalog Labels

Now that you've created a Label Structure (or at least a part of it), you're ready to assign these Catalog Labels to your images. You do that in the Label Assignment Panel that can be opened by clicking the Assign button.

Sections in the Label Assignment Panel

The Label Assignment Panel is organized in sections. The top section displays the catalog labels that are assigned to the selected set of images (thumbnails).

|	
RECENTLY USED	*These are the catalog labels that you've used recently. The number of catalog labels displayed in this section can be configured in the application's Preferences. There click Catalog -> number of "Recently Used" items*
FAVORITES	*These are catalog labels that you've also defined as your favorite labels. You can make a label a favorite by either dragging it to this section, or by clicking the star icon next to the label in the Catalog Explorer (CATALOG -> By Category)*
SUGGESTED	*This is a set of labels that Photo Supreme suggests to you and the catalog labels displayed are based on the number of times that they are used in combination with already assigned catalog labels.*
NEARBY LABELS	*If you use GEO tagging then your image can have GEO coordinates in the metadata. It's also possible to define GEO coordinates for a catalog labels. Then the NEARBY LABELS will contain all the catalog labels that have GEO coordinates that are close to the GEO coordinates of the selected image(s)*

Assigning Catalog Labels

The Label Assignment panel works for the active selection, meaning it displays, assigns, and revokes Catalog Labels for the currently selected thumbnails in the Collection Viewer. For images that have existing Catalog Label assignments then existing labels that are assigned to *every* selected image are displayed in green. Labels that are assigned to *some* images in the

selection, are displayed in orange. By clicking an orange box you can assign that label to **all** selected images, meaning it turns green. Clicking on the label again, turning it from Green to Gray, un-assigns from all images.

TIP: When clicking an Orange box, the box will turn Green, but by holding down the Ctrl key (Mac users hold down the Cmd key instead of the Ctrl key), you can turn the box Gray instantly, meaning it is unassigned from all selected images.

Assigning a new label is as simple as typing in the Catalog Label name in the input field and selecting the appropriate label from the drop down list provided. If no match is found then you can create the label on the fly.
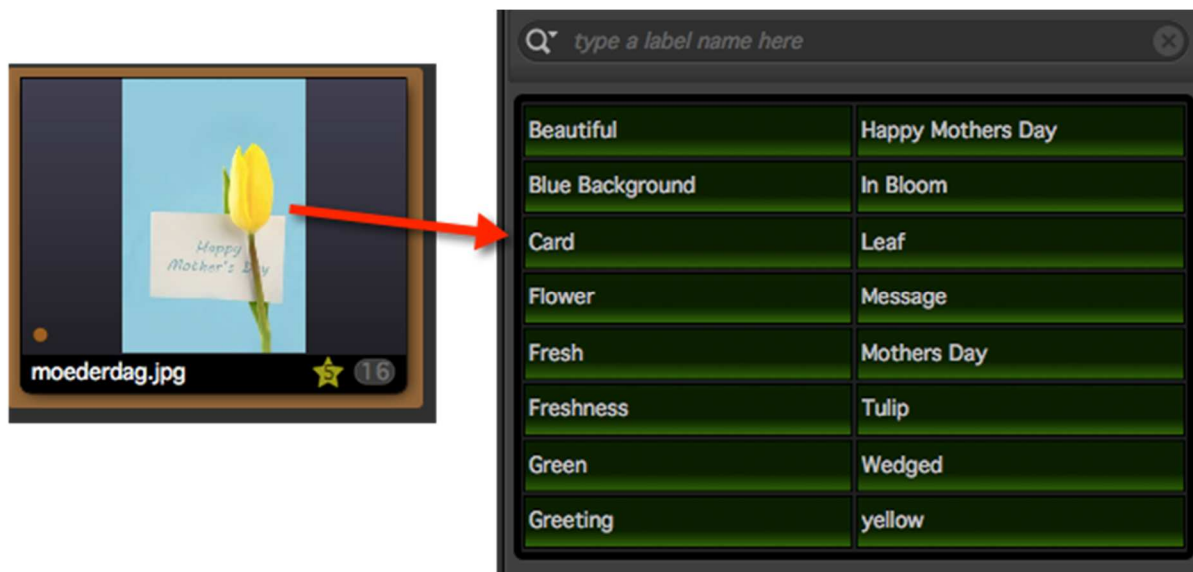
TIP: You can quickly find your Cataloging workload by clicking the CATALOG drop down and then select "By Catalog State". There, open the images with the "Not Catalog Labeled" state.

Working with Label Sets

Label Sets are a collection of catalog labels. You typically create a label set when you use a set of catalog labels frequently or you can also create a label set to create combinations of labels that you typically assign together.
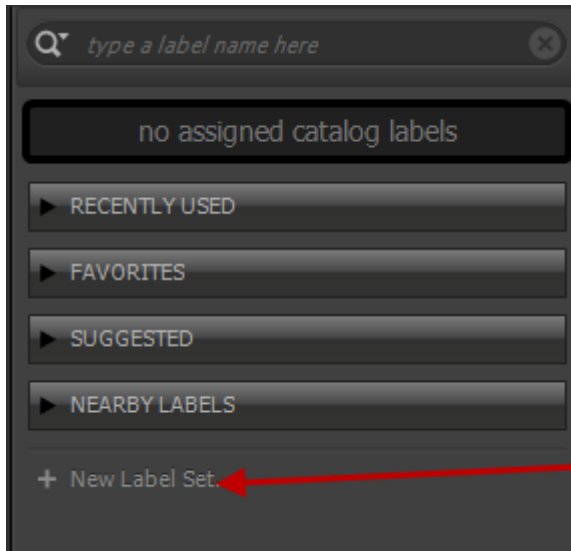
To create a new Label Set, open the Label Assignment Panel by clicking the "Assign" button below the thumbnails. At the bottom of the Label Assignment Panel there is a hyperlink called "New Label Set". Click that.

This will ask you to name the label set. Enter a name that covers the set of labels you intend to group together in the set.
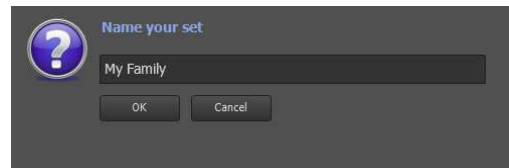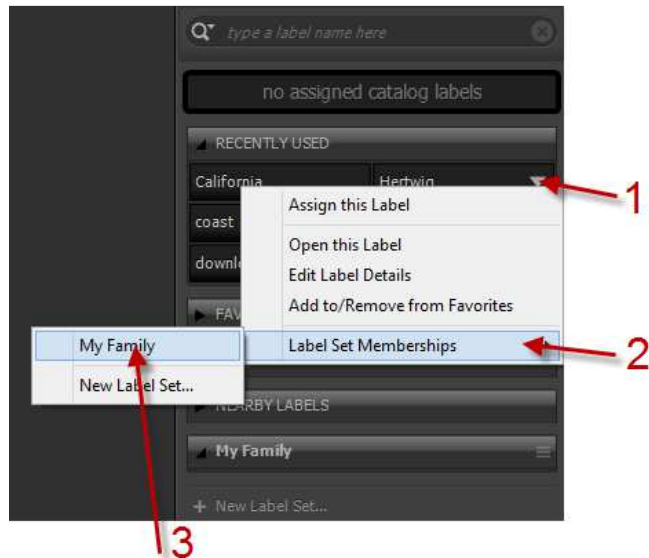

This will show the new, still empty, label set in the panel. There are different way to add a catalog label to the set.

Drag and Drop a label in the Label Assignment Panel

Use the menu of a label box in the Label
Assignment Panel

As soon as one or more thumbnails are selected you can also assign/revoke labels from the
label set. This is done identically as any other box in the Label Assignment Panel; simply by
clicking the box. To assign the complete label set (in other words, all the labels that are part
of the label set), click the menu icon in the title bar of the label set and select "Assign this full
Label Set".

This is also where you can delete a label set, rename a label set or revoke all the catalog
labels in the label set.

Working with Metadata

Metadata is data that describes the characteristics or properties for a document. It can be
distinguished from the main contents of a document. For example, for a word processing
document, the contents include the actual text data and formatting information, while the
metadata might include properties like author, modification date, or copyright status. There
is a gray area where the same information could be treated as content as well as metadata.
In general, however, metadata should have value on its own without regard for the content.
For example, a list of all fonts used in a document could be useful metadata, while

information about the specific font used for a specific paragraph on a page would be logically treated as content.

Metadata allows users and applications to work more effectively with documents and files, and metadata can greatly increase the utility of managed assets in collaborative production workflows. For example, an image file might contain metadata such as its working title, description, thumbnail image, and intellectual property rights data. Accessing the metadata makes it easier to perform such tasks as associating images with file names, locating image captions, or determining copyright clearance to use an image. Importantly, applications can do many useful things with metadata in files, even if they are not able to understand the native file format of the document itself.

File systems have typically provided metadata such as file modification dates and sizes. Other metadata can be provided by other applications, or by users. Metadata might or might not be stored as part of the file it is associated with.

What is XMP?

In order for multiple applications to be able to work effectively with metadata, there must be a common standard that they understand. XMP - the e**X**tensible **M**etadata **P**latform - is designed to provide such a standard. Designed by Adobe, the developer of Photoshop™, XMP standardizes the definition, creation, and processing of metadata.

With Photo Supreme you get

- A predefined set of the most common used XMP schemas

- A way to use XMP embedded

- A user interface to access the XMP data

- A way to extend existing XMP

- Validity checking on meta properties

Metadata for image files

Some image formats allow embedded storage of metadata, which means that the metadata will be stored inside the image file itself. This way you are ensured that the information travels with your image file. File formats that allow embedded storage of metadata include: PSD, JPG, TIFF, and DNG.

Some image formats, such as BMP, GIF, ICO, etc., do not allow you to write embedded metadata. For these formats a "sidecar" file is created that holds the metadata. This sidecar file has the same base name as the original file but uses a different extension: .xmp. For example: if you are working with a BMP file named "sample.bmp", the metadata for this file will be stored in a sidecar file named "sample.xmp".

Photo Supreme will always keep the XMP sidecar file together with your original file. When you move the image file inside Photo Supreme, the sidecar files with travel with it. Likewise if you copy the original file, the sidecar files will be copied along. This makes the use of sidecar files transparent for you.

Apart from non-embedded formats, Photo Supreme will also create XMP sidecar files for files that are marked as read-only. This allows you to maintain metadata for the image on the file system, even for files that Photo Supreme can't write to. Keep in mind though that many third party applications will not read XMP from sidecar files for formats that support embedded XMP, so if you're using other tools in your workflow that depend on the metadata then first verify if those tools also read sidecar files for read-only files.

What about IPTC and EXIF?

Photo Supreme uses the highest level of metadata possible; that is XMP. Metadata is stored either as embedded XMP or as an XMP sidecar file. When your images have pre-existing IPTC but no XMP then Photo Supreme will convert these IPTC fields to XMP using the field mapping structure as defined by the IPTC organization in their specifications. This also applies to pre-existing EXIF fields.

When writing metadata to the file, Photo Supreme will write XMP. For file formats that support embedded IPTC records (e.g. JPG, TIFF), Photo Supreme will map all relevant metadata from the XMP to IPTC and store those appropriate fields as well. Likewise, if the file format supports EXIF records, then the relevant information will be stored into the EXIF records as well (e.g. author or description). This way, you'll have maximum compatibility with other tools, even if these other tools don't support XMP.

Apart from embedded/sidecar writing, all your XMP information will also be written to the catalog database. This allows you to search in your catalog for images that contain specific metadata, regardless of whether those images are online or offline (e.g. you can locate images stored on a DVD that match a certain condition, even if the DVD is not in the drive).

Editing Metadata as Image Details

In Photo Supreme you can edit the metadata with the Image Details panel.

Click the "Details" button in the Control Bar below the thumbnails to open the Image Details panel. By default, Photo Supreme opens the Image Details with the more advanced view, meaning that it displays many fields. It is possible to select from two other "editors". Do this by clicking the menu button in the upper right corner.
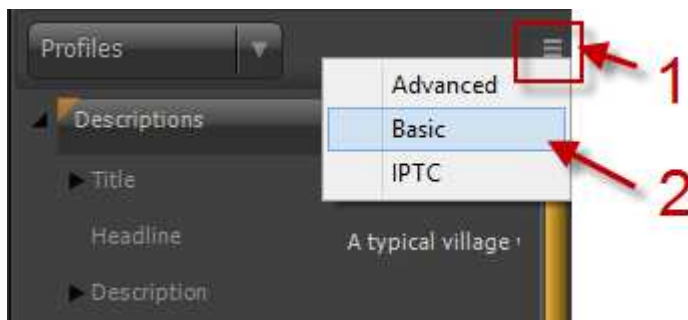
Try each of them and see which one meets your needs best.

TIP: While editing the fields, you can use Macro Commands. Right click in the field to select any available macro command. Then when applying the metadata, the macro commands will be replaced with their appropriate value.

After editing the Image Details you can click the "Apply" button to store them. At this point the metadata is updated in the catalog. If you have auto-sync enabled in the Preferences

then these changes are also automatically written to the file, together with the matching IPTC and EXIF.

## Keywords and Hierarchical Keywords in Metadata

As explained in this document, catalog labels will be written as metadata keywords as soon as you write the catalog information to the file; so-called Synchronizing. In the Preferences, you can configure how the synchronization takes place. The default configuration is a safe configuration and you'll hardly ever need to make changes there.
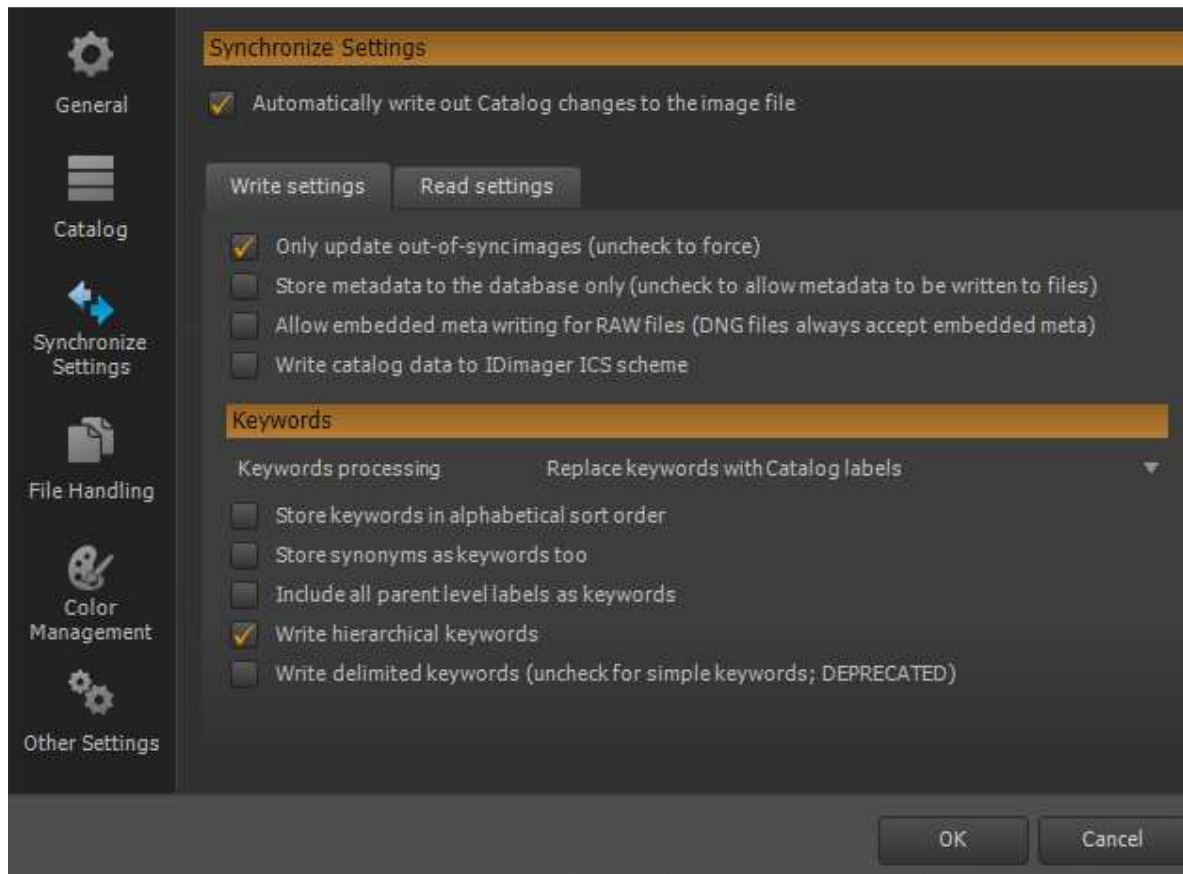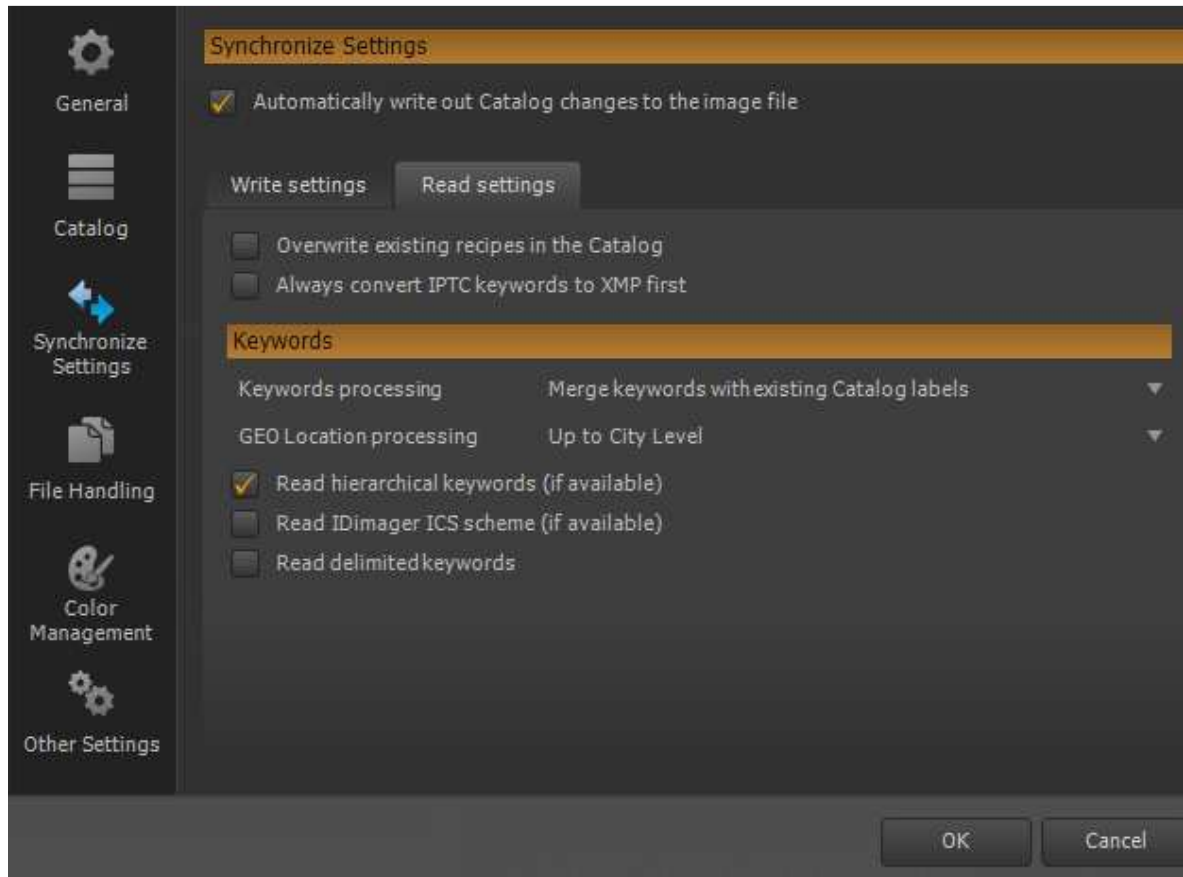
Still, I do want to highlight one particular aspect of the Write settings.

In the Write Settings it is possible to specify if catalog labels should be written as "hierarchical keywords" and/or as delimited keywords.
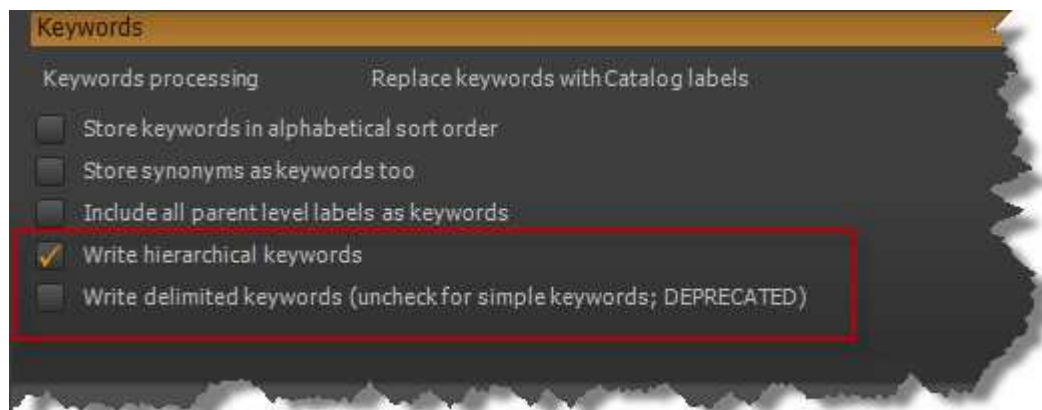
To illustrate this, I'll use an example.

When there's an image with a catalog label assigned that is defined in the Catalog Structure as:

Nature → Trees → Oak

When this image is synchronized then the assigned catalog label "Oak" is stored as a keyword. And you'll get a keyword "Oak". Without writing hierarchical keywords, the information about the parent levels will not be written to the image.

Here's how the keywords are written when you do use hierarchical and/or delimited keywords.

1. Delimited keywords OFF and Hierarchical keywords OFF; then you'll get *dc:subject[1] = Oak*
2. Delimited keywords ON and Hierarchical keywords OFF; then you'll get *dc:subject[1] = Nature|Trees|Oak*
3. Delimited keywords OFF and Hierarchical keywords ON; then you'll get *dc:subject[1] = Oak* *lr:hierarchicalSubject[1] = Nature|Trees|Oak*
4. Delimited keywords ON and Hierarchical keywords ON; then you'll get *dc:subject[1] = Nature|Trees|Oak* *lr:hierarchicalSubject[1] = Nature|Trees|Oak*

As you can see, it's redundant to use delimited keywords. The other downside for using delimited keywords is that the standards intended the keywords (dc:subject) to be "single leaf", meaning one keyword. When misusing the keyword for delimited keywords then some tools out there may do unexpected things with the entry in the keyword. That simply because they won't (and shouldn't) expect hierarchical info in the standard keyword field.

This is also why delimited keywords are marked as "DEPRECATED" in Photo Supreme. It is still in the application, and won't be removed yet. That simply because some tools out there that aren't actively being developed anymore (including some of the Microsoft photo tools) still use delimited keywords.
But in general I vote against the use of delimited keywords and highly recommend today's pseudo industry standard for it; being the "hierarchical keywords" (also known as Lightroom keywords; though it has nothing to do with the Lightroom software itself). Using hierarchical keywords ensures the highest interoperability level with other metadata products.

Travel Mode

Photo Supreme can be switched into the so-called "Travel Mode". The Travel Mode means that all the catalog features are available but without access to the file. In Travel Mode the application assumes that you don't carry your images with you and hence those are considered "unavailable". This is comparable to working with images from a external hard drive while the hard drive is not connected. The advantage of using Travel Mode is that you can carry your catalog and previews with you, while the original images stay at the office or at home.

As mentioned above, in Travel Mode the application assumes that the files are not available. So while in Travel Mode you won't be able to write catalog data back to the files. Such operation requires access to the file system.

Switching the application to Travel Mode is done by selecting the option "Travel Mode" from the File menu. The Travel Mode is recognizable by the main toolbar's red color.
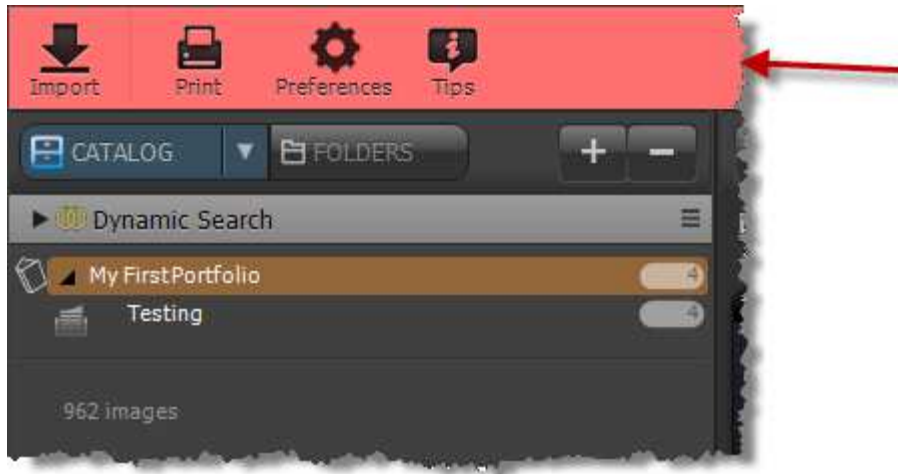
While in Travel Mode, you can continue to work with the catalog. Assign catalog labels, edit metadata, make image adjustments, versioning, etc. All changes that you make while in Travel Mode, will be written to the catalog only. After switching Travel Mode off, you can then synchronize your files. You can switch off the Travel Mode by selecting the Travel Mode entry again in the File menu.