Qimage Ultimate - PDF Version of On-line Manual

To see latest version go to: http://www.ddisoftware.com/qimage-u/help/index.html
What is Qimage? (This document is bookmarked and has page links on the contents pages)

Qimage is a digital imaging application that has grown from its simple roots of printing multiple images on a single page, to being one of the most frequently referred to and highly recommended batch printing and processing applications in the world. Qimage is designed to make image printing easy and painless by eliminating the need to resample images to higher resolutions, manually place images on printed pages, make touchups and apply filters in separate photo editors, etc. For a purchase price that is a mere fraction of the cost of high end photo editors, you get an application that is capable of producing professional quality prints that exceed the quality of nearly all other photo printing applications, even high end (read incredibly expensive) photo editors. Although not designed to be (or replace) a full featured photo editor, the majority of the time you will find that Qimage is the only tool you need to enhance and/or print your digital images. With high quality image noise filtering, blemish and redeye removal, rotation, hybrid, vector, pyramid, and Lanczos print interpolation, and many other "on the fly" tools, Qimage may make many of your other digital imaging tools obsolete.

Why Qimage?

Qimage offers many features and techniques not found in **any** other digital imaging software. Check out the features below, but please note that this is **not** a comprehensive list!

- Quality: Many professionals and amateurs agree, Qimage simply produces the best quality
 prints possible, bar none! Qimage is designed to print your original images at maximum quality
 no matter what type of printer you are using and no matter what the resolution of your original
 images. Internal print optimization algorithms use hybrid, vector, pyramid, or Lanczos resampling
 (much higher quality than traditional bicubic methods) to ensure that you never again have to
 worry about DPI, print sizes, or resolution numbers.
- Ease of use: In addition to never again needing to fiddle with resampling, resaving photos to 300 DPI, etc., Qimage offers an efficient and simple means to automatically arrange multiple prints so that they use the least amount of expensive photo paper.
- Flexibility: Numerous auto placement methods and full manual placement of images available for maximum flexibility. You can print images from different folders and even different drives in the same session, all with different print sizes if you like!
- **Lightning Raw**: Raw flexibility without the slow processing penalty: work with your raw photos as you would any processed file (JPEG, TIFF, etc.). With Qimage Ultimate's lightning raw, your raw photos are developed once, cached, and only redeveloped when you make a change to the raw developing parameters. No other tool on the market supports this type of intelligent raw data caching!
- Posters: Print 20 images on one page for contact sheets, three 4x6 images per page on an 8x10 page, mixed sizes of different (or the same) images, or a multi-page poster of a single image that covers an entire wall. The possibilities are limitless!
- Professional quality image editing: Cropping, brightness, contrast, sharpening, levels, curves, auto-exposure compensation, CCD noise filters, blemish and redeye removal, image rotation, mirror, image information stamp, and luminance based unsharp mask are just some of the ways that you can enhance your images.
- Associative and batch editing: You can apply filters (edits) that you design to images as "masks" that get associated with the original, eliminating the need to store separate/modified versions. Simply edit your images and Qimage will associate those edits with the original image, applying the edits to the original each time the image is opened for viewing/printing. Of course, you can always save the edited/modified images separately if you like so that they may be used in other applications or the web. Edits you design can be applied to a single image or hundreds of different images from different folders in batch. For example, you could apply a dark frame subtraction to remove all the "hot pixels" in long exposure photographs, and apply the "fix" to a

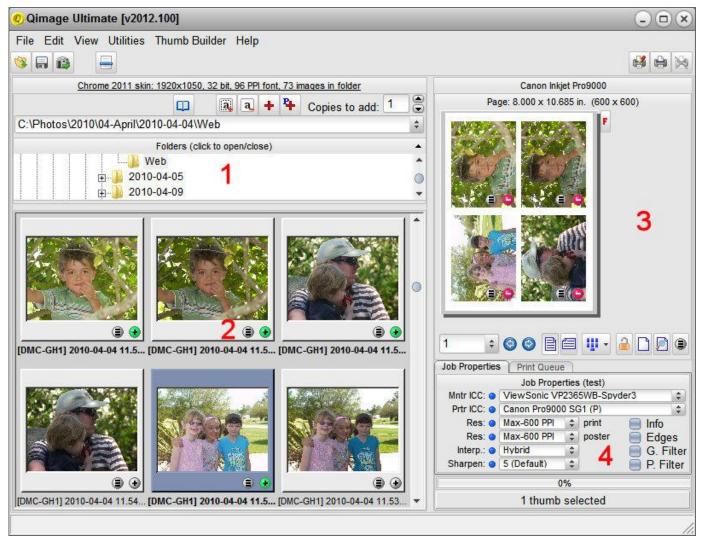
dozen different images that you just took.

- Color management (ICC) support: Full support to actually start managing your images for accurate color. Qimage allows you to link ICC profiles to multiple cameras separately so that you can ensure that you have the most accurate color possible. Also supports profile to profile conversions for images.
- Many supported image types: Qimage currently supports the following image types: JPEG, TIFF, PSD, BMP, GIF, PCX, TGA, PCD, PNG, and raw formats from over 300 cameras!
- **Image Comparator**: Compare any two images side-by-side using the built in "Image Comparator".
- Fully automated slide shows: Use Qimage at photo events to continuously display images for customers. Ability to auto-advance and stamp each image with information needed for clients to identify photographs.
- **Image management**: Copy, move, delete, auto-rename based on date, and download images from flash cards.

So how do I get started?

We recommend that you continue to the next section of the help, "Getting Familiar with Qimage Ultimate". There, you will learn how to use the functions on the main window to navigate through your images and create printouts easily.

Getting Familiar with Qimage Ultimate



First a note about skins: Note that the appearance of the above window and other windows is controlled by "skins" that can tailor the appearance for different tastes and workflows. Click "Edit", "Preferences", "Skins" from the top menu to change the appearance of windows displayed in Qimage Ultimate.

"Queue" terminology. "Qimage" gets its name from the fact that many photos can be Queued to print. This document will often refer to "the queue". The queue in this context simply means "the document" that you've created by adding prints to the preview page. If a thumbnail has been added to the preview page at a size of 5x7 for example, we might say that there is a 5x7 of that image "in the queue". Please keep this in mind when referring to the help: "in the queue" simply means "in the current document to be printed". If you click on the "Print Queue" tab in area 4 above, you can actually see the files that are in the queue ready to be printed (or batch processed).

Major areas of the main window: red labels 1-4 on the figure above

- 1. Area 1 is the folder browser. This is where you select a folder that contains your photos. You simply navigate the folder tree and select a folder and the images in that folder are displayed automatically in the thumbnail grid (area 2). The folder browser window can be opened/closed by clicking on the gray bar just above the folder tree.
- 2. Area 2 shows you all the supported photos that exist in the folder that you selected in area 1 above. Note that you can select one or more thumbs by clicking on them in the typical Windows fashion via Ctrl or Shift-click. Once selected, thumb(s) can be added to the page in one of two ways. You may click the "+" button on any thumbnail(s) to add prints at the current/default print size (hover over the "+" button to see that size). You may also click the "Print properties" button on any selected thumbnail and the Print Properties dialog appears where you can select any size(s) you like on the fly. Note: when selecting a size from the Print Properties dialog, you can single click to select/try a size or you can double click a size which will select that size and automatically close the Print Properties dialog. Notice that the "+" icon on the thumbnails will turn green if that image has already been added: it is in the "queue" already, i.e. on the preview page. All functions that can be applied to selected thumbnails (rename, copy, delete, etc.) can be accessed by right clicking in the the thumbnail grid (on any thumbnail).
- 3. Area 3 is the preview page. This page shows a preview of how prints are arranged and what your page(s) will look like when printed. To change the appearance of prints on the preview page, you must first select the print(s) you

want to change. For example, select two prints and then change the print size by clicking the Print Properties button on either selected print, then select "5x7" or some other print size in the Print Properties dialog. The buttons under the preview page can be used to move forward or back to view other pages, change the page from portrait to landscape, etc. Note that the "Edit Page" button under the preview page opens a full featured page editor where print cropping, placement, text annotations, and other functions can be performed. Not all page editing functions are available on the small preview page in area 3 so use the Edit Page button for more options. All functions that can be applied to selected prints (new size, rotate print, etc.) can be accessed by right clicking on the the preview page (on any print).

- 4. Area 4 is the Print Queue and Job Properties. Click the "Print Queue" tab to display a listing of all images (file names) currently queued to print. Click the "Job Properties" tab to control options related to how each page prints. On the Job Properties tab, you may change print quality, color management, and turn features like file info on/off.
- 5. The fifth area, not labeled in the above figure, is the main menu. This menu contains headings such as "File" and "Edit" where you will find additional features that affect how Qimage Ultimate performs. In the file menu, for example, you will find "Save" and "Recall" where you can save and recall printer setups (program and even driver settings) or entire jobs that you have previously saved! Check out the "Menu Cheater" dialog (fourth icon, top left) as it allows quick access to the most used menu functions without having to navigate menus.

Tips:

- Hover your mouse over any thumbnail in area 2 or any print in area 3 and press the middle mouse button to preview that image at a larger size.
- Hover your mouse over a print in area 3 to view details about that print (size and available PPI/resolution).
- Hover your mouse over the "+" on a thumbnail in area 2 to see the current (last used) print size. Click the "+" to add a print at that size.
- Double click on a thumbnail in area 2 or a print in area 3 to edit that image.
- The Print Properties auto-popup (where you can select print sizes, borders, etc.) opens automatically whenever you click on a thumbnail or a print.
- Click the "-" button on any print to remove that print from the page.
- Click the print placement button at the bottom of area 3 to choose how Qimage auto-arranges prints on each page.

Printing multiple images: the simplest workflow

Due to the very high level of functionality available in Qimage Ultimate, typical workflows can vary widely depending on whether or not you need/want certain features. The following, however, is a good baseline of how to quickly print images assuming you know which images you would like to print:

- 1. Use "File", "Printer Setup" to select your printer, paper, and paper size.
- 2. Use area 1 to navigate to a folder that contains images that you want to print.
- 3. Select one or more thumbnails from area 2. The Print Properties auto-popup will open automatically. Select the desired print size and the selected thumbnails will be added to the queue (preview page) at that size.
- 4. Click the "Print" button on the upper right of the main window.

Note: the above identifies a method of printing multiple images at the **same** print size. A vast array of functions exists which allow you to change the appearance of your printout even after you have added images, but the above identifies the minimum recommended steps to simple multiple image printing. If you routinely print multiple images at different sizes within the same printout, simply select thumbnails one at a time and click the desired size in the Print Properties auto-popup.

Printing multiple images: previewing each image prior to adding to the queue

The following outlines the simple steps required to preview images prior to printing.

- 1. Use area 1 to navigate to a folder that contains images that you want to print.
- 2. In area 2, select all thumbnails that you believe to be candidates for printing. You can multi-select using the standard Windows Ctrl-click or Shift-click methods. If you would like to preview all thumbnails in the current folder, simply right click in the thumbnail area and click "Select All". All thumbnails will be selected.
- 3. Right click in the thumbnail area (area 2) and choose "Preview/Add to queue".
- 4. Images will be displayed in a separate window and in a larger format. You may use that window to scroll forward/back through the selected thumbs using the left and right arrow buttons.
- 5. As each image is displayed in the large preview window, you may click "Add" to add that image to be printed. Alternatively, you can check "Select this image" at the bottom of the preview window to simply refine your selection of thumbnails. Once you close the preview window, only the thumbnails you

selected will be marked in the thumbnail grid (area 2)

Changing/modifying settings after adding images to the queue

There are a host of options available for changing the appearance of your pages/prints even after you have created a document. Many commonly used features such as ability to change the size or fit of prints on the page, etc. can be accessed simply by selecting one or more prints on the preview page(s) and then using the controls in area 8.Visual/manual sizing and placement and more complex functions can be performed by opening the full page editor using a right click on the preview page and selecting "Edit Page".

Qimage - Learn by Example:

A general note on using these examples: Qimage always remembers all program selections (parameters) so that the next time you use the software, you will start with the same settings you used in your last session. For this reason, once you've performed steps such as selecting a placement method, fitting and image lock, you will not have to perform these same steps each time. For example, once you perform steps 1 through 3 in example 2, there is no need to repeat them again since these settings will be retained.

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Section I: The Basics

Example 1: Setting Qimage to Produce Maximum Quality Prints

- 1. Click the "Printer Setup" tool button. Select your photo printer and click "Properties" for the printer, making sure that your printer driver settings are set to the highest quality photo settings and select the appropriate media type/size (photo glossy, etc).
- 2. Click the "Job Properties" tab on the lower right of the main window and make sure that your "Interp." method is set to "Hybrid". Also make sure that your first "Res" value (output resolution for prints) is set to "Max" and the second Res value (output resolution for posters) is set to "High".
- 3. Still on the "Job Properties" tab, leave "Prtr ICC" set to "OFF" if you do not have a custom printer ICC profile for the printer, paper, and ink you are using. If you have obtained or created an accurate ICC profile for your printer and the type of media you are using, activate that profile in "Prtr ICC". Before activating any profile, make sure you know the proper print driver settings to use with the profile because an ICC profile will only work properly with specific print driver settings. See the Color Management section for more details.
- 4. \square Finally, on the "Job Properties" tab, make sure that all checkboxes are **not** checked. This will ensure that no borders or text information are printed with your prints, and will ensure that no global or print filter is active that may affect the appearance of prints.

Example 1a: Setting Qimage to Produce Borderless Prints

Background: Qimage gets page size information from your print driver so to print borderless prints, we must set the print driver properties for the paper size we are using and tell the driver to print borderless on that paper. Note that not all printers support borderless printing and some print drivers may only support borderless printing on certain types/sizes of paper. Assuming your printer and print driver support borderless printing, the following example will produce bordlerless prints from Qimage. Note that if borderless is *not* supported on your paper/media, *no software* will be able to overcome these printer/driver limitations.

1. Navigate to a folder that contains images using the folder browser directly above the thumbnail grid on the main window. If the folder browsing panel above the thumbnails is not

- visible, you can show the panel by clicking on the bar labeled "Folders" above the thumbnail grid. When you have selected a folder that contains your images using the folder browser, the images/file names in that folder will display under the folder tree.
- 2. Optional: You can hide the folder browser by clicking again on the bar labeled "Folders" if you like in order to have more room for viewing thumbnails.
- 3. Select one or more thumbnails in the thumbnail grid using the standard Windows multi-select functions of Ctrl-mouse click or Shift-mouse click.
- 4. Click "Custom" size in the Print Properties auto-popup panel.
- 5. Click the "Borderless" radio button on the left side of the window.
- 6. Click "OK" and the selected images will be added using borderless size. If your "OK" button is grayed out, your print driver is not currently set up to produce borderless prints. Because all print drivers implement borderless printing slightly differently, Qimage cannot set your print driver to borderless mode automatically. Like setting the paper size and type, borderless is a driver option that must be set via the print driver. Use the "click here" link in the right window panel to open your print driver properties and select borderless (sometimes called "no margins") mode in the driver. The "click here" link will only be visible if Qimage detected that your driver is not currently set for borderless printing.

Notes: Once you have set your print driver to produce borderless prints, Qimage will remember the print driver settings, so you will only need to set the borderless option in your print driver once and it will remain in effect until you go back to normal (non-borderless) printing.

Example 2: Printing Multiple Images at the Same Size (in this example, 4x6 images)

Background: Before beginning with examples, it is important to understand one important concept in printing, and that is how to handle print sizes that are different proportions (aspect ratios) that may/may not match the proportions of your images. In many of the following examples, we use the "Auto Cropping" button in the down position () to give Qimage permission to automatically crop some of the image to obtain the exact print size chosen. Qimage may need to crop some of the image, for example, if you are printing a 6x4 print from a typical consumer camera that has a 4:3 image which is more "square" than the print you are printing. If you would like Qimage to print the entire photo but would like to ensure that the photo would fit within a 6x4 frame (with some white space if needed), you may set the "Auto Cropping" button to the up position (). Here is an example of what you can expect when printing a 6x4 print from an image captured on a typical consumer camera with a 4:3 image:

"Fit in frame": With the "Auto Cropping" button in the up position, you are telling Qimage that you want to fit the entire image within the frame size (6x4 in this example) that you have chosen. In this case, Qimage *modifies the print size* and not the image, and you will get a 5.33 x 4 inch print which is the largest possible print that will fit within a 6x4 frame and still print the whole image.

"Crop to size": With the "Auto Cropping" button in the down position, you are giving Qimage permission to automatically crop out the center of the image to obtain a print that is the exact size chosen. In this case, Qimage modifies the image by cropping it and leaves the print size alone, and you will get a 6x4 print cut from the center of the photo. In this example, the print will cover the entire image left to right but will have a small portion of the top and bottom cut off to obtain the proper size.

Note that if the aspect ratio of your *image* matches that of the *print size* chosen, the "Auto Cropping" button will have no effect on the prints. For example, most professional cameras use a 3:2 aspect ratio instead of the 4:3

found in most consumer grade cameras so if you print a 6x4 print from a pro camera (which is a 3:2 aspect ratio), the "Auto Cropping" button will have no effect on the image and you will get a 6x4 print regardless of the position of the "Auto Cropping" button. This is due to the fact that the entire image will fit in a 6x4 print, so no cropping is necessary.

- 1. Click the placement tool button below the preview page and select "Optimal" placement. This instructs Qimage to arrange images on the page to minimize paper usage.
- 2. Make sure that the "Image Lock" button under the preview page is not depressed (unlocked). This tells Qimage that it is ok to automatically rotate your images to obtain the best fit inside the frame size.
- 3. K Click the "Auto Cropping" button on the "Print Properties" auto-popup panel below the preview page. Make sure that the button is depressed/on. This tells Qimage that it is ok to crop some of your images in order to obtain exact print sizes.
- 4. Navigate to a folder that contains images using the folder browser directly above the thumbnail grid on the main window. If the folder browsing panel above the thumbnails is not visible, you can show the panel by clicking on the bar labeled "Folders" above the thumbnail grid. When you have selected a folder that contains your images using the folder browser, the images/file names in that folder will display under the folder tree.
- 5. Optional: You can hide the folder browser by clicking again on the bar labeled "Folders" if you like in order to have more room for viewing thumbnails.
- 6. Select one or more thumbnails in the thumbnail grid using the standard Windows multi-select functions of Ctrl-mouse click or Shift-mouse click.
- 7. Go to the size dropdown in the "Print Properties" auto-popup panel and select 6x4 (may also be labeled 4x6).
- 8. Click the "Print" tool button on the top/right of the main window.

Example 2a: Printing Multiple Images at the most "compatible" size

Background: Sometimes the actual size of the print is not important; we just want to pick a common size that best "fits" the images that we plan to print. We may be printing images from different sources/cameras that are of different proportions (aspect ratios) and we are not sure what "standard" print size best matches those images. If we can pick a print size that has proportions similar to our image proportions, we can reduce or eliminate the need to crop prints. Qimage offers a visual tool that allows you to determine the most appropriate print size(s) for images that you select *before* you even add them to the queue!

- 1. Navigate to a folder that contains images using the folder browser directly above the thumbnail grid on the main window. If the folder browsing panel above the thumbnails is not visible, you can show the panel by clicking on the bar labeled "Folders" above the thumbnail grid. When you have selected a folder that contains your images using the folder browser, the images/file names in that folder will display under the folder tree.
- 2. Optional: You can hide the folder browser by clicking again on the bar labeled "Folders" if you like in order to have more room for viewing thumbnails.
- 3. Select one or more thumbnails in the thumbnail grid using the standard Windows multi-select functions of Ctrl-mouse click or Shift-mouse click.
- 4. Go to the size dropdown on the "Print Properties" auto-popup panel. The [text] color of the standard print sizes on the list will change to indicate which print sizes are the best match for the selected images. The following outlines the meaning of the colors of sizes in the list:

Black: Black indicates that the print size is not the best match for the images you have selected (or you have not selected any thumbnails in the thumbnail grid).

Blue: Blue indicates that the print size is an *exact* match to the proportions of the selected image(s). Using this size means that no cropping of the image will be necessary to obtain this

size.

Red: Red indicates that the print size is *not* an exact match to the proportions of the image(s), but is the closest match of the standard sizes. Using this size will help minimize cropping to obtain exact sizes but will not completely eliminate the need to crop some images.

5. Click on one of the highlighted (either blue or red) sizes to add the selected images at that size.

Example 3: Printing Multiple Images at Different Sizes (in this example, one 7x5, one 5x3 and one 3x2)

- 1. Click the placement tool button below the preview page and select "Optimal" placement. This instructs Qimage to arrange images on the page to minimize paper usage.
- 2. Make sure that the "Image Lock" button under the preview page is not depressed (unlocked). This tells Qimage that it is ok to automatically rotate your images to obtain the best fit inside the frame size.
- 3. Keep Click the "Auto Cropping" button on the "Size" tab just below the preview page. Make sure that the button is depressed/on. This tells Qimage that it is ok to crop some of your images in order to obtain exact print sizes.
- 4. Navigate to a folder that contains images using the folder browser directly above the thumbnail grid on the main window. If the folder browsing panel above the thumbnails is not visible, you can show the panel by clicking on the bar labeled "Folders" above the thumbnail grid. When you have selected a folder that contains your images using the folder browser, the images/file names in that folder will display under the folder tree.
- 5. Optional: You can hide the folder browser by clicking again on the bar labeled "Folders" if you like in order to have more room for viewing thumbnails.
- 6. Select a thumbnail that you wish to be printed at a size of 5x7 in the thumbnail grid.
- 7. Go to the size dropdown in the "Print Properties" auto-popup panel and select 5x7 (may also be labeled 7x5).
- 8. Select a thumbnail that you wish to be printed at a size of 3x5 in the thumbnail grid.
- 9. Go to the size dropdown in the "Print Properties" auto-popup panel and select 3x5 (may also be labeled 5x3).
- 10. Select a thumbnail that you wish to be printed at a size of 3x2 in the thumbnail grid.
- 11. Go to the size dropdown in the "Print Properties" auto-popup panel and select 3x2 (may also be labeled 2x3).
- 12. Click the "Print" tool button.

Qimage provides two workflows for adding images of different sizes:

Select thumbs, add size: In the above workflow, we select multiple thumbnails and then click a size to add the selected thumbs at the size chosen.

Select size, add thumbs: In some cases, it may be desirable to select a default size to work with first, add images to the queue using that size, switch to the next size, add the next batch of images at the new size, etc. Qimage allows this workflow as well. To select a size first (without adding thumbnails at that size), simply click on white space on the preview page or right click on the "+" on any thumbnail and then select a new "default" size. You can then click the small "+" icon on thumbnails to add them to the page. Alternatively, you can select multiple thumbs, drag them to the preview page, and drop them.

Example 3a: Moving the Crop Area when "Crop Image" is Turned On (instead of accepting the default "crop center of photo")

Background: Now that you have had the opportunity to create a document with various

print sizes, you may have noticed that the automatic crop that is used when the "Auto Cropping" button is down () may not always be optimal due to the fact that the auto-crop always crops out the exact center of the image. You may have a photo where the top of your subject's head is at the very top edge of the photo for example. In this case, you would want to crop the image so that only the bottom part of the photo is cropped rather than a small portion of the top *and* bottom which would cut off the top of the subject's head. The following example illustrates how to adjust the auto-crop in order to crop an area other than the default (center of image).

- 1. Add images to the queue with the "Auto Cropping" button set so that crop is on (button depressed).
- 2. Using the preview page in the upper right of the main window, locate a page that contains the print that you would like to adjust.
- 3. Click the "Edit Page" button under the preview page or simply double click just outside the page area next to the preview page to open the full page editor. This full page editor is the area where you make fine adjustments to your prints such as freehand movement, click/drag sizing, crop adjustment, and more.
- 4. When the page editor opens, click on the "Cropping" tab on the right side of the window (if not already selected).
- 5. Next, click the image on the page that you would like to adjust with respect to cropping.
- 6. The crop is displayed on the "Cropping" tab on the right. Move your cursor over the image on the cropping tab and click/drag to move the image around within the crop window. When you have finished dragging the image so that the important parts of the image are visible in the crop window, simply release the mouse button and your new crop is instantly in place.
- 7. X When finished, close the page editor window.

Notes: The cropping tool on the page editor window is a powerful tool that has additional features other than the simple click/drag mentioned in the example above where we were just dragging the photo *down* in the crop window to include all of the subject's head in the photo. Here are some other helpful features you will find in the cropping tool:

- Red boundary lines: You may notice thin red lines at the outer edges of the crop window. These lines indicate that some of the image is being cut off on those edges. For example, if you add a perfectly square image at a size of 6x4, you will see red lines at the top/bottom of the crop window indicating that the image is being cut on the top/bottom. The red lines on the top and bottom tell you that there is room to slide the image up/down in the window but not left/right. Once you slide the image all the way down, you reveal all of the top of the image, so you will have a red line at the bottom only, indicating that all of the left, right, and top of the image is showing and only the bottom is cut off.
- Rotate: Sometimes we would like to create a portrait crop from a landscape image or vice versa. Checking the "Rotate" box on the cropping tool will rotate the crop window (unless your print size is perfectly square) in order to accomplish this task.
- Apply to all copies of this print: You may have multiple copies of the same image in the queue, for example, you may be printing ten copies of the same photo: eight 4x6 prints and two 3x2 wallets. If you check "apply to all copies of this print", Qimage will automatically "carry" your crop to all other copies of that same image. In the example where we have eight 4x6 and two 3x2 copies of the same image in the queue, we could modify the crop on *any* of these prints (you do not have to pick the first one) and that crop would automatically be copied to the other nine prints, thereby eliminating the need to identify the same crop on multiple copies of the same image. Note that the crop will only be copied to prints that are the *same image* and also have the *same aspect ratio*. If you had 3.5 x 5 prints of the image in the queue as well, your crop would not be carried over to these prints and you would have to modify the crop on the 3.5 x 5 prints separately because the crop will be

- different on those due to the fact that 3.5 x 5 prints are a different aspect ratio than 6x4 and 3x2 prints, requiring a separate crop.
- Zoom: The zoom lever defaults to the bottom (no zoom), resulting in the least
 amount of cropping. If you would like to zoom in on an area of your print or get
 "tighter" on your subject, you can increase the zoom lever to zoom in as far as 8x on
 the photo and then click/drag to position the zoom.
- Your crops will "stick": Note that once you move the crop for a print of a certain aspect ratio, Qimage will remember that crop indefinitely and automatically! For example, if you add an image to the queue at a size of 8x10 and then drag the crop to a certain location for that image, Qimage will honor that crop any time you add that same image to the queue in the future using a print size that has the same aspect ratio (8x10, 4x5, etc.). This is convenient because it allows you to specify a certain crop for each print that is a different aspect ratio and Qimage will remember your crop preference for that particular aspect ratio! In this example, if you later wish to print a 4x6, note that Qimage will default to a center crop for the 4x6 since that size print is a different aspect ratio. Once you define the crop you wish to use for the 4x6 size, however, Qimage will remember that too (and separately from the 8x10 crop).

Example 3b: Printing Images at their Original (Scanned) Size

Background: Rather than manually selecting print sizes on a per-image basis, it is sometimes desirable to be able to create duplicates of images by printing them at their original size. Such is the case when photos of different sizes are scanned in a flatbed scanner and duplicates of those photos (at the same size as scanned) are desired. The following procedure describes how to accomplish this task.

- 1. Click the placement tool button below the preview page and select "Optimal" placement. This instructs Qimage to arrange images on the page to minimize paper usage.
- 2. Make sure that the "Image Lock" button under the preview page is not depressed (unlocked). This tells Qimage that it is ok to automatically rotate your images to obtain the best fit inside the frame size.
- 3. Kee Click the "Auto Cropping" button on the "Size" tab just below the preview page. Make sure that the button is depressed/on. This tells Qimage that it is ok to crop some of your images in order to obtain exact print sizes.
- 4. Navigate to a folder that contains images using the folder browser directly above the thumbnail grid on the main window. If the folder browsing panel above the thumbnails is not visible, you can show the panel by clicking on the bar labeled "Folders" above the thumbnail grid. When you have selected a folder that contains your images using the folder browser, the images/file names in that folder will display under the folder tree.
- 5. Optional: You can hide the folder browser by clicking again on the bar labeled "Folders" if you like in order to have more room for viewing thumbnails.
- 6. Select one or more thumbnails in the thumbnail grid using the standard Windows multi-select functions of Ctrl-mouse click or Shift-mouse click.
- 7. Click the size dropdown in the "Print Properties" auto-popup panel and select "Original Size".
- 8. Click the "Print" tool button.

Notes: Not all images/image types have a PPI listed in the file. When Qimage cannot find the PPI parameter in the image file, it will use the fallback PPI listed on the right window panel after completing step 8 above. Note that you can also check the "Override embedded size" checkbox to override the embedded PPI information in image files and force PPI to the value listed in the edit box. The override checkbox can be accessed via selecting the "Custom" print size and then "Original Size".

Example 3c: Reviewing Images and Selecting Prints in an Integrated Workflow

- 1. Click the placement tool button below the preview page and select "Optimal" placement. This instructs Qimage to arrange images on the page to minimize paper usage.
- 2. Make sure that the "Image Lock" button under the preview page is not depressed (unlocked). This tells Qimage that it is ok to automatically rotate your images to obtain the best fit inside the frame size.
- 3. K Click the "Auto Cropping" button on the "Size" tab just below the preview page. Make sure that the button is depressed/on. This tells Qimage that it is ok to crop some of your images in order to obtain exact print sizes.
- 4. Navigate to a folder that contains images using the folder browser directly above the thumbnail grid on the main window. If the folder browsing panel above the thumbnails is not visible, you can show the panel by clicking on the bar labeled "Folders" above the thumbnail grid. When you have selected a folder that contains your images using the folder browser, the images/file names in that folder will display under the folder tree.
- 5. Optional: You can hide the folder browser by clicking again on the bar labeled "Folders" if you like in order to have more room for viewing thumbnails.
- 6. Right click in the thumbnail grid and choose "Select All" to select all thumbnails in the current folder.
- 7. Right click in the thumbnail grid and choose "Preview Selected". The preview window will open with the first selected thumbnail.
- 8. You may scroll forward/back through the selected thumbnails using the "Prev" and "Next" buttons on the preview window. When you see an image that you would like to print, simply click the "Add" button. The print currently being reviewed in the preview window will be added to the queue. Repeat for as many images and sizes as you like.
- 9. Close the preview window and your document will now contain the selected images. When moving forward through the selected thumbnails, you can tell when the end of the list is reached because the "Next" button will be grayed out and will not be operational.

Example 4: Printing Many Copies of One Image (in this example, 9 wallets at 3x2 size)

- 1. Click the placement tool button below the preview page and select "Optimal" placement. This instructs Qimage to arrange images on the page to minimize paper usage.
- 2. Make sure that the "Image Lock" button under the preview page is not depressed (unlocked). This tells Qimage that it is ok to automatically rotate your images to obtain the best fit inside the frame size.
- 3. K Click the "Auto Cropping" button on the "Size" tab just below the preview page. Make sure that the button is depressed/on. This tells Qimage that it is ok to crop some of your images in order to obtain exact print sizes.
- 4. Navigate to a folder that contains images using the folder browser directly above the thumbnail grid on the main window. If the folder browsing panel above the thumbnails is not visible, you can show the panel by clicking on the bar labeled "Folders" above the thumbnail grid. When you have selected a folder that contains your images using the folder browser, the images/file names in that folder will display under the folder tree.
- 5. Optional: You can hide the folder browser by clicking again on the bar labeled "Folders" if you like in order to have more room for viewing thumbnails.
- 6. Select the thumbnail in question.
- 7. In the "Copies to add" parameter above the thumbnails, enter "9" as the number of copies to be added to the queue.
- 8. Go to the size dropdown in the "Print Properties" auto-popup panel and select 3x2 (may also be labeled 2x3).
- 9. Click the "Print" tool button.

Example 5: Printing a Specified Number of Prints to Each Page (in this example, dividing the page into 9 prints as large as possible on the page)

- 1. Click the placement tool button below the preview page and select "Optimal" placement. This instructs Qimage to arrange images on the page to minimize paper usage.
- 2. Make sure that the "Image Lock" button under the preview page is not depressed (unlocked). This tells Qimage that it is ok to automatically rotate your images to obtain the best fit inside the frame size.
- 3. K Click the "Auto Cropping" button on the "Size" tab just below the preview page. Make sure that the button is depressed/on. This tells Qimage that it is ok to crop some of your images in order to obtain exact print sizes.
- 4. Navigate to a folder that contains images using the folder browser directly above the thumbnail grid on the main window. If the folder browsing panel above the thumbnails is not visible, you can show the panel by clicking on the bar labeled "Folders" above the thumbnail grid. When you have selected a folder that contains your images using the folder browser, the images/file names in that folder will display under the folder tree.
- 5. Optional: You can hide the folder browser by clicking again on the bar labeled "Folders" if you like in order to have more room for viewing thumbnails.
- 6. Select one or more thumbnails in the thumbnail grid using the standard Windows multi-select functions of Ctrl-mouse click or Shift-mouse click.
- 7. Click the size dropdown in the "Print Properties" auto-popup panel and select "Custom".
- 8. Click the "Enter number of prints per page" radio button on the left side of the window.
- 9. In the right panel, enter "3" in both the "columns" and "rows" edit boxes.
- 10. Click "OK" and images will be added so that 9 prints (3x3) will be on each page.
- 11. Optional: note that since your "last used" size is remembered, you can click the small "+" icon on thumbnails to add more thumbnails at the same size without repeating the above until you have as many prints as you like.
- 12. Click the "Print" tool button.

Example 6: Printing a Multi Page Poster of a Single Image (in this example, printing a 2 page by 2 page poster for a total of 4 pages)

- 1. Click the "Auto Cropping" button on the "Size" tab just below the preview page. Make sure that the button is depressed/on. This tells Qimage that it is ok to crop some of your images in order to obtain exact print sizes. Optional: turn crop off to ensure that the entire image is printed instead.
- 2. Make sure that the "Image Lock" button under the preview page is not depressed (unlocked). This tells Qimage that it is ok to automatically rotate your images to obtain the best fit inside the frame size.
- 3. Click the "Landscape" tool button to orient the printed page in landscape format.
- 4. Navigate to a folder that contains images using the folder browser directly above the thumbnail grid on the main window. If the folder browsing panel above the thumbnails is not visible, you can show the panel by clicking on the bar labeled "Folders" above the thumbnail grid. When you have selected a folder that contains your images using the folder browser, the images/file names in that folder will display under the folder tree.
- 5. Optional: You can hide the folder browser by clicking again on the bar labeled "Folders" if you like in order to have more room for viewing thumbnails.
- 6. Select one or more thumbnails in the thumbnail grid using the standard Windows multi-select functions of Ctrl-mouse click or Shift-mouse click.
- 7. Click the size dropdown in the "Print Properties" auto-popup panel and select "Custom".
- 8. Click the "Enter poster rows/columns" radio button on the left side of the window.
- 9. In the right panel, enter "2" in both the "pages across" and "pages down" edit boxes.
- 10. Click "OK" and image(s) will be added as 2x2 page posters.
- 11. Click the "Print" tool button.

Example 6a: Using the poster feature to overcome your print driver's maximum page length

limitation

Background: Qimage not only overcomes your printer's size limitations by being able to print a multi-page poster, but it can also override page length limitations on printers that support roll/banner paper. For example, your print driver may have a limit of 44 inches for the length of a "page" even when you are using roll/banner paper. If you want a print that is 50 inches in length, you can use this example to get a single print that is 50 inches in length even though your printer is limited to pages of 44 inches or less in length. Note that this example only applies to print drivers that have a "roll" or "banner" option for the paper feed. If your print driver does not have either of these options, it will not be possible to overcome your printer's page length limitation without cutting/pasting two pages together as would be done in example 6.

- 1. Click the "Printer Setup" tool button and select "roll paper" and also select "banner" if that option is available for the paper source in your print driver. Set the page width to maximum (the width of the roll) unless you do not want to use the entire width, and set the page height to your driver's maximum allowable size.
- 2. Make sure that the "Image Lock" button under the preview page is not depressed (unlocked). This tells Qimage that it is ok to automatically rotate your images to obtain the best fit inside the frame size.
- 3. Click the "Portrait" tool button to orient the printed page in portrait format.
- 4. Click the placement tool button below the preview page and select "Center" placement. It is best to use "Center" placement when printing posters.
- 5. Navigate to a folder that contains images using the folder browser directly above the thumbnail grid on the main window. If the folder browsing panel above the thumbnails is not visible, you can show the panel by clicking on the bar labeled "Folders" above the thumbnail grid. When you have selected a folder that contains your images using the folder browser, the images/file names in that folder will display under the folder tree.
- 6. Optional: You can hide the folder browser by clicking again on the bar labeled "Folders" if you like in order to have more room for viewing thumbnails.
- 7. Select a thumbnail in the thumbnail grid.
- 8. Click the size dropdown in the "Print Properties" auto-popup panel and select "Custom".
- 9. Click the "Enter Specific Size" radio button on the left side of the window.
- 10. Enter the desired print size (for example 13 x 50 inches) and click "OK" on the custom size window.
- 11. Qimage will warn you that the size selected is larger than one page and will ask if you really want the print to span multiple pages. Answer "Yes".
- 12. Click the "Print" tool button.

Qimage will print a "poster" that is 1x2 in size (one page wide and two pages tall). Since you selected "roll" or "banner" paper in the print driver, when Qimage gets to the bottom of the first page and starts printing the second page, there will be no break in the print because there is no "page eject" command when using roll paper. The result is one continuous print at the size selected. In the example where the print driver is limited to a 44 inch page length and you print a 13 x 50 print, Qimage will print the first 13x44 inch page followed by a 13x6 inch page. Since both of these "pages" are printed on a continuous roll, there is no break and the result is a continuous 13x50 inch print.

Example 7: Printing a Contact Sheet of Small Images that Includes the File Name Under Each Print

- 1. Click the "Landscape" tool button at the top of the Qimage window to orient the printed page in landscape format.
- 2. Navigate to a folder that contains images using the folder browser directly above the thumbnail grid on the main window. If the folder browsing panel above the thumbnails is not

- visible, you can show the panel by clicking on the bar labeled "Folders" above the thumbnail grid. When you have selected a folder that contains your images using the folder browser, the images/file names in that folder will display under the folder tree.
- 3. Optional: You can hide the folder browser by clicking again on the bar labeled "Folders" if you like in order to have more room for viewing thumbnails.
- 4. Select one or more thumbnails in the thumbnail grid using the standard Windows multi-select functions of Ctrl-mouse click or Shift-mouse click.
- 5. Click the size dropdown in the "Print Properties" auto-popup panel and select "Custom".
- 6. Click the "Contact sheet w/info" radio button on the left side of the window.
- 7. In the right panel, enter "16" at the right in the "per page" entry. This will split the page into 4 rows and 4 columns.
- 8. Click "OK" and image(s) will be added to the queue.
- 9. Click the "Print" tool button.

Example 7a: Printing a Professional Contact Sheet of Small Images that Includes image and EXIF info

- 1. Navigate to a folder that contains images using the folder browser directly above the thumbnail grid on the main window. If the folder browsing panel above the thumbnails is not visible, you can show the panel by clicking on the bar labeled "Folders" above the thumbnail grid. When you have selected a folder that contains your images using the folder browser, the images/file names in that folder will display under the folder tree.
- 2. Optional: You can hide the folder browser by clicking again on the bar labeled "Folders" if you like in order to have more room for viewing thumbnails.
- 3. Select one or more thumbnails in the thumbnail grid using the standard Windows multi-select functions of Ctrl-mouse click or Shift-mouse click.
- 4. Click the size dropdown in the "Print Properties" auto-popup panel and select "Custom".
- 5. Click the "Layout: predefined page set" radio button on the left side of the window.
- 6. Click "OK" and on the subsequent file-open dialog, select and open the file: "contact-sheet-25-up". All selected thumbnails will be loaded onto the contact sheet. Note that remaining/unused positions on the page set will not be printed.
- 7. Click the "Print" tool button.

Example 7b: Printing a Package of Predefined Sizes for all Selected Images (in this case three 4x6 and one 3x2 print)

- 1. Click the size dropdown in the "Print Properties" auto-popup panel and select "Custom".
- 2. Click the "Layout: predefined page set" radio button on the left side of the window.
- 3. Click "OK" and on the subsequent file-open dialog, select and open the file: "4x6 (3), 3x2 (1)".
- 4. Templates will appear; note that there are four templates on the preview page.
- 5. Enter the number "4" in the "Copies" edit box above the thumbnails.
- 6. Navigate to a folder that contains images using the folder browser directly above the thumbnail grid on the main window. If the folder browsing panel above the thumbnails is not visible, you can show the panel by clicking on the bar labeled "Folders" above the thumbnail grid. When you have selected a folder that contains your images using the folder browser, the images/file names in that folder will display under the folder tree.
- 7. Optional: You can hide the folder browser by clicking again on the bar labeled "Folders" if you like in order to have more room for viewing thumbnails.
- 8. Select one or more thumbnails in the thumbnail grid using the standard Windows multi-select functions of Ctrl-mouse click or Shift-mouse click.
- 9. Right click in the thumbnail grid and select "Add to Queue". Each selected thumbnail will fill all four templates on each page, resulting in packages of three 4x6 and one 3x2 prints of each selected thumbnail.

10. Click the "Print" tool button.

Example 7c: Printing Order Sheets and Fulfilling Customer Orders

It is important to start this example with your paper size (set via "File", "Printer Setup") set to 8.5 x 11.

- 1. Navigate to a folder that contains images using the folder browser directly above the thumbnail grid on the main window. If the folder browsing panel above the thumbnails is not visible, you can show the panel by clicking on the bar labeled "Folders" above the thumbnail grid. When you have selected a folder that contains your images using the folder browser, the images/file names in that folder will display under the folder tree.
- 2. Optional: You can hide the folder browser by clicking again on the bar labeled "Folders" if you like in order to have more room for viewing thumbnails.
- 3. Select one or more thumbnails in the thumbnail grid using the standard Windows multi-select functions of Ctrl-mouse click or Shift-mouse click.
- 4. Click the size dropdown in the "Print Properties" auto-popup panel and select "Custom".
- 5. Click the "Layout: predefined page set" radio button on the left side of the window.
- 6. Click "OK" and on the subsequent file-open dialog, select and open the file: "order-sheet-16-up". All selected thumbnails will be loaded onto the contact sheet. Note that remaining/unused positions on the page set will not be printed.
- 7. Click the "Save" tool button from the top toolbar. On the save dialog, select "Job" at the bottom of the dialog and enter a file name like "john-doe-order-sheet" and click "Save" to save.
- 8. Click the "Print" tool button.
- 9. Give the order sheets to your customer and ask them to mark the prints/sizes that they want printed in final form.
- 10. Click the "Recall" tool button, select "Job" as the file type at the bottom of the window, and select/open the file that you saved in step 7 above. When the job loads, your preview pages in Qimage will look just like the order sheet pages that were marked up by your customer.
- 11. Matching the pages/page numbers in Qimage to the mark-ups of the printed order sheet pages, use the preview page on the Qimage main window to click and select all the prints that were marked by the customer. Use the standard Windows Ctrl-click as you go to mark/highlight multiple images on the pages. Note that if you have the "EXIF Hotbar" enabled, the status bar at the bottom of the main window will indicate the print number as you move the mouse across the preview page and "point at" different prints, so you can also match prints by print number.
- 12. Once the desired prints have been selected, right click on the preview page and select "New Session w/Selected".

After performing the above steps, the queue will contain all the images marked on the order sheets. Since the images will still be 2.0 x 1.5 inches in size, you can change the size of images in the queue accordingly. For example, right click on the preview page and select "Select All" and then click the 4x6 size button to change the print size from 2.0 x 1.5 to 4x6. If the customer marked different sizes, simply highlight the prints one at a time (or multi-select) and click the size button corresponding to the ordered size. Also note that you can quickly and easily increase the number of copies for certain prints by highlighting the desired print on the preview page and then right clicking and selecting "Add Another Copy of this Image".

Example 8: Printing a Text Annotation Under Prints

- 1. Create a document that contains prints using any of the methods described above. Using "Center Placement" is recommended.
- 2. So Using the arrows under the page preview on the main window, locate the page that contains the image(s) you want to annotate.
- 3. Click the "Edit Page" tool button.

- 4. When the page editor opens, right click on the image you would like to annotate.
- 5. Select "Text Annotation" from the drop down menu.
- 6. Enter your annotation in the text box provided and click "Ok".
- 7. Repeat for other prints if you like.
- 8. Close the page editor and return to the main window for printing.

Note: you are not limited to the above single line text annotation. When using the page editor, you may also right click on prints and add "Floating Text" using a number of text styles. The text may be placed anywhere on the page, including on top of existing prints. See <u>Floating Text</u> for more info.

Example 9: Creating a Layout that Specifies Custom Image Sizes/Locations (in this example, one 4x6 and four 3x2 prints)

- 1. Click the placement tool button below the preview page and select "Center" placement.
- 2. Keep Click the "Auto Cropping" button on the "Size" tab just below the preview page. Make sure that the button is depressed/on. This tells Qimage that it is ok to crop some of your images in order to obtain exact print sizes.
- 3. Make sure that the "Image Lock" button under the preview page is not depressed (unlocked). This tells Qimage that it is ok to automatically rotate your images to obtain the best fit inside the frame size.
- 4. Click the "Portrait" tool button to orient the printed page in portrait format.
- 5. Scroll to the bottom of the thumbnails displayed (if any) until you see the last (blank) entry that says "[Template]". Click once to select the [Template] thumbnail.
- 6. Go to the size dropdown in the "Print Properties" auto-popup panel and select 4x6 (may also be labeled 6x4).
- 7. In the "Copies to add" box above the thumbnails, enter "4".
- 8. Go to the size dropdown in the "Print Properties" auto-popup panel and select 3x2 (may also be labeled 2x3).
- 9. To customize the size and locations of your 5 templates, click the "Edit Page" tool button. When the page editor opens, simply click and drag the middle of prints to move them and the corners to resize in the usual Windows move/size fashion.
- 10. Close the page editor and return to the main window.
- 11. Make sure "Freehand" placement is selected using the tool button under the preview page. This disables the auto-arrange feature so that each page appears exactly as designed.
- 12. Glick the "Save" tool button from the top tool bar and then select "Layout" from the save dialog. Enter a file name and click "Save" to save the layout.
- 13. You have now saved this custom 5 print template to a file that can be loaded/used later. See the next example to learn how to load/use the template that you created.

To load the custom template in the future: choose "Custom" as your size in the "Print Properties" auto-popup panel and then select "Layout: predefined page set", click "OK" and select the filename used in step 12 above.

Example 10: Printing Using Custom Templates Created in Example 9

- 1. Click the size dropdown in the "Print Properties" auto-popup panel and select "Custom".
- 2. Select "Layout: predefined page set" and then click "OK".
- 3. Select the file name that you used in example 9 when you created/saved the custom template. Click "Open" or double click on the file name and the Custom Layout will appear as it did when you created it.
- 4. Navigate to a folder that contains images using the folder browser directly above the thumbnail grid on the main window. If the folder browsing panel above the thumbnails is not visible, you can show the panel by clicking on the bar labeled "Folders" above the thumbnail

- grid. When you have selected a folder that contains your images using the folder browser, the images/file names in that folder will display under the folder tree.
- 5. Optional: You can hide the folder browser by clicking again on the bar labeled "Folders" if you like in order to have more room for viewing thumbnails.
- 6. Click the small "+" on thumbnails to fill the templates one at a time or multi-select thumbnails and click the add "+" button above the thumbnail grid.
- 7. Click the "Print" tool button.

Note: you can set "Copies" above the thumbnail grid to the number of prints on the page if you want to fill each page with the same image. For example, set "Copies" to 5 and each time you double click on a thumbnail, the entire page of 5 templates will be filled with one image, creating a photo "package" for each thumbnail. Example 7b above gives more detail on how to use packages.

Example 11: Creating a Single Multi-Purpose Crop that Works for Multiple Print Sizes (in this example, a 5x7, 4x6, and 3.5x5 print)

Notes: In example 3a above, we show how to adjust the crop on each *print* separately. Qimage also offers the ability to crop the *image* itself in such a way that cropping individual prints is not necessary. Understand that creating a crop on the image itself places a crop filter on the image so that parts of the image are discarded for all operations including printing, slide shows, etc. until the crop filter is removed. We may want to crop portions of the image to exclude unwanted details or in order to print many copies of the same image at different sizes (and aspect ratios) when we do not want to "decide" on the cropping of each individual print as we did in example 3a above. The following example explains how to create an image crop that can be carried over to multiple print sizes.

- 1. First, add the image to the page by clicking the small "+" on the thumbnail or highlighting the thumbnail and clicking a print size.
- 2. Rext, double click on the image on the preview page to open that image in the image editor.
- 3. Crop Wizard Next, click the "Crop Wizard" button on the right side of the window.
- 4. Check the print sizes that you plan to use when you print this image in the future. In this case, we select the 5x7, 4x6, and 3.5x5 boxes because we know that these are the print sizes we are interested in.
- 5. Next, tell the wizard whether a portrait (taller than wide) or landscape (wider than tall) crop is more appropriate for the photo. This decision can be made by looking at the image in the background. Looking at the image displayed behind the Crop Wizard window, does a wide crop include more of your subject(s) or does a tall crop best fit the subject(s)? If a wide crop would better suit the photo (which would be the case with a group photo for example), select landscape. If a portait crop best fits the subject in the frame (which would be the case with a single subject standing upright in the photo), select portrait.
- 6. Finally, tell the wizard what edges of the photo are more important (to preserve). For example, looking at the photo in the background, if your subject is right-side-up with his/her head toward the top of the photo, the top/bottom edges are the most important because you don't want the subject's head to be "chopped off" in the photo. In that photo, what appears to the left/right is probably less important. In this case, you would choose top/bottom since that is the part of the photo that must not be cropped off.
- 7. Use the recommended crop ratio Now click the "Use the recommended crop ratio" button.
- 8. When you are returned to the image editor the largest possible crop that suits the conditions defined in the wizard will already be in place. You may move this crop window by sliding the window, resize the crop area to crop a smaller portion of the image by dragging its corners, etc. Qimage will keep the cropped area locked at the appropriate proportions. Make sure that your final crop selection includes all of your subject(s).
- 9. After the crop has been placed, click the "Done" button on the lower right side of

the window. This will close the image editor window and return you to the main window of Qimage.

Notes: After performing the above steps, your image is now ready to be printed at the sizes you selected in the Crop Wizard. From this point forward, you need not worry about what size prints you are creating and how those sizes will affect your print cropping (as long as you only create prints at the sizes you selected in the wizard). Simply add the image at various sizes (with a process similar to example 3) and Qimage will always ensure that the important parts of your image are not cropped off, while giving you the exact sizes chosen.

Example 12: Downsizing Images for Web/E-mail

Option 1: use option 1 when you simply want to send a few images from the current folder via e-mail

- 1. Select one or more thumbnails in the thumbnail grid by clicking on the image(s) with your left mouse button (use the Ctrl and Shift keys to multi-select in the standard Windows fashion).
- 2. Right click in the thumbnail grid and select "Send via Email".
- 3. Click one of the size (resolution) buttons.
- 4. New (e-mail ready) images will be saved in a folder named {Q}e-mail under the current folder, and your e-mail client will open with the images attached to a new message. Simply type your message in the message body and click "Send". If your e-mail client is not MAPI compliant or will not accept attachments due to an e-mail client error, an e-mail message will be opened along with an explorer window showing the files ready to dragged/dropped into the message manually.

Option 2: use option 2 for more advanced creation of downsampled JPEG images

- 1. Navigate to a folder that contains images using the folder browser directly above the thumbnail grid on the main window. If the folder browsing panel above the thumbnails is not visible, you can show the panel by clicking on the bar labeled "Folders" above the thumbnail grid. When you have selected a folder that contains your images using the folder browser, the images/file names in that folder will display under the folder tree.
- 2. Optional: You can hide the folder browser by clicking again on the bar labeled "Folders" if you like in order to have more room for viewing thumbnails.
- 3. Use the "+" on each thumbnail to add thumbnails one at a time to add to the queue, or multi-select thumbnails and then right click in the thumbnail grid and select "Add to Queue".
- 4. Right click on the preview page and select "Create e-mail/web size copies" from the menu.
- 5. The default resize it a 640x480 resize. If you would like a different resolution, simply enter the resolution or click the appropriate resolution button.
- 6. Click the "Go!" button. Progress will be displayed at the bottom of the window. Click "Cancel" **once** to stop processing if you need to abort the procedure.
- 7. When processing is complete, you will be returned to the main window. The downsized versions of your images will be in a new folder named {Q}e-mail below the current folder. Note that this {Q}e-mail folder should be considered a "temporary" folder so if you would like to keep the created files (as opposed to a one-time e-mailing), you should copy/move the created files from the {Q}e-mail folder to another folder.
- 8. If you have the "Send via mail client when done" box checked, a new mail message will appear with the images already attached. Simply fill in the "To" field to specify the recipient of the e-mail and click "Send" to send the pictures via e-mail. See the help on "Create e-mail/web copies" for more info on invoking your mail client.

Note: E-mail/web copies are always saved in JPEG format. If the aspect ratio of the images does not match that of the selected size, the image will be fitted into the given size such that the entire image is visible. When making e-mail/web copies of images that are

different aspect ratios or are in a different orientation, Qimage will match one side and calculate the other. Note that all e-mail/web copies are saved with the proper ICC profile embedded so that the images can be viewed accurately should anyone wish to view the image outside the realm of e-mail/web using ICC aware software.

Example 12a: Upsampling Images to Increase Resolution

Notes: This example shows how to resample images to achieve higher resolution images. If you want to resample images for the purpose of preparing prints for another printing service (such as an online printing service), use example 25a instead since that example is geared toward preparing pages to print. This example simply illustrates how to increase image resolution without making other changes to the image(s).

- 1. Navigate to a folder that contains images using the folder browser directly above the thumbnail grid on the main window. If the folder browsing panel above the thumbnails is not visible, you can show the panel by clicking on the bar labeled "Folders" above the thumbnail grid. When you have selected a folder that contains your images using the folder browser, the images/file names in that folder will display under the folder tree.
- 2. Optional: You can hide the folder browser by clicking again on the bar labeled "Folders" if you like in order to have more room for viewing thumbnails.
- 3. Use the "+" button on each thumbnail to add to the queue, or multi-select thumbnails and then right click in the thumbnail grid and select "Add to Queue". Note that if you plan to resample multiple images in batch, it is best to try to select images that are the same size (resolution). For example, select several 2048 x 1536 images that you would like to resample to 3000 x 2250.
- 4. Double click on an image on the preview page in the upper/right of the main window to bring that particular image into the image editor.
- 5. Note that the resolution of the image currently being displayed is listed on the lower/right of the image editor window under "Resolution".
- 6. Simply enter the new/desired resolution in the "Resolution" entry. For example, if your original image is 2048 x 1536 and you overwrite the 2048 with "3000", the resolution will automatically update to 3000 x 2250 (this is based on the dimensions of the original image).
- 7. You may click the "I" button next to the resolution values to change the interpolation method used for the resampling.
- 8. At this point, you have two choices for saving the upsampled/interpolated image(s). You can click "File", "Save As" from the menu if you would like to save the current image with a different name. When the image is saved, it will be interpolated to the resolution entered above. You can also click the "Done" button and when the filter application window appears, click "Create New Images" and select the file format for the new/interpolated images (JPG, TIF, etc). Click "Apply the filter to all images in the queue" at the top of the window if you would like upsampled copies of every image currently in the view/print queue, otherwise only the current image is processed. If you choose this second method of applying the interpolation to images in the queue, the interpolated copies of the images will appear in the same folder as your originals with a {Q} prefix on the file name unless you specify otherwise on the filter application window prior to clicking OK to process the images.

Example 13: Converting Images (in this example, Nikon D1 NEF Images to TIF) - not available in Lite edition

- 1. Navigate to a folder that contains images using the folder browser directly above the thumbnail grid on the main window. If the folder browsing panel above the thumbnails is not visible, you can show the panel by clicking on the bar labeled "Folders" above the thumbnail grid. When you have selected a folder that contains your images using the folder browser, the images/file names in that folder will display under the folder tree.
- 2. Optional: You can hide the folder browser by clicking again on the bar labeled "Folders" if you like in order to have more room for viewing thumbnails.
- 3. Use the "+" button on each thumbnail to add to the queue, or multi-select thumbnails and then

- right click in the thumbnail grid and select "Add to Queue".
- 4. Right click on the preview page and select "Convert Images".
- 5. Click the radio button next to "TIF (lossless)".
- 6. Click "Ok" and Qimage will convert all the images in the queue. The converted images will be in the same folder(s) as the original NEF's, but will have a {Q} prefix on the file names. For example, if pic0001.nef, pic0002.nef and pic0003.nef are in the queue and you told Qimage to convert all images in the queue, you will now have images named {Q}pic0001.tif, {Q}pic0002.tif, and {Q}pic0003.tif.

Note: Images of any type can be converted to JPG, TIF, BMP, or GIF files with the above procedure. Simply add images of any supported file type to the queue (you can mix types) and use the above procedure, telling Qimage whether you would like to save the converted images in JPG, TIF, BMP, or GIF format in step 5 above. All images in the queue will be converted to the file format specified in step 5.

Example 14: Viewing and Printing Raw Images

Qimage treats raw images like any other format. There is no need to develop, convert, or create new images from your raw files. Use, view, and print your raw photos as you would a JPEG or TIFF.

Section II: Making Changes

Example 15: Changing the Size of Existing Prints (in this example, changing a 6x4 print to a 3x2 print)

- 1. Let's assume that you have followed Example 2 and have a number of 4x6 prints appearing on the preview page in the upper right of the main window.
- 2. First, select the print that you would like to resize by left clicking on a print on the preview page (upper right of main window).
- 3. Go to the size dropdown in the "Print Properties" auto-popup panel and select 3x2 (may also be labeled 2x3). The size of the print will change to 3x2.

Example 16: Changing the "Auto Cropping" setting of Existing Prints (in this example, turning off "Auto Cropping" on a 6x4 print)

- 1. Let's assume that you have followed Example 2 and have a number of 4x6 prints appearing on the preview page in the upper right of the main window. If you followed the example, you should have 4x6 prints on the page. Unless you selected images that are a 6:4 aspect ratio, part of the images will be cropped to achieve the 4x6 size. In this example, we will remove the cropping and force Qimage to print the entire image instead.
- 2. Select the print that you would like to "uncrop" by left clicking on a print on the preview page (upper right of main window).
- 3. The Auto Cropping button under the preview page on the "Print Properties" auto-popup panel should be in the down position indicating that the selected print has auto-crop turned on.
- 4. Click the Auto Cropping button and the auto-crop will be released on the selected print.
- 5. IMPORTANT: If the above steps succeed in removing the crop and refitting the image, STOP now. If you performed the above steps and Qimage still shows a cropped image or you notice that the size did not change by the refitting, you may have placed an associative crop on the image as outlined in example 11. If so, there is still a crop "filter" on the image itself that needs to be removed. If this is the case, proceed to the next step.
- 6. To remove a crop that has been placed on the image via an associative image edit, start by right clicking on the print on the preview page again to bring up the drop down list of functions.

7. Select "Delete Filter(s)".

- 8. ✓ Check the "Crop" checkbox, indicating your desire to delete the crop from the image.
- 9. Click the "Remove Selected" button. The associative crop will be removed and the entire image restored.

Example 17: Rotating Existing Prints on the Page

- 1. To rotate a print on the printed page, first select the print by left clicking on a print on the preview page.
- 2. Click the "Rotate Left (CCW)" or "Rotate Right (CW)" button on the "Print Properties" auto-popup panel to rotate the print 90 degrees counter-clockwise or clockwise respectively.

Example 17a: Rotating Images so that the Thumbnails/Images Always Appear Upright When Displayed on Screen

- 1. Select one or more thumbnails in the thumbnail grid using the standard Windows multi-select functions of Ctrl-mouse click or Shift-mouse click. Multi-select all the thumbnails that need to be rotated in the same direction.
- 2. Right click in the thumbnail grid and select "Predefined Filter".
- 3. Select and open "Rotate 90 Clockwise", "Rotate 90 Counter-clockwise" or "Rotate 180" as appropriate. The images will be rotated by the specified amount.

Note: applying a filter using "Predefined Filter" always adds to whatever filters already exist. For this reason, if you perform the above steps and select the "Rotate 90 Clockwise" filter and then repeat the steps, selecting the "Black and White" filter, you will have thumbnails that are both rotated 90 degrees clockwise and are now black and white. Also note, however, that since different "types" of filters can be added, using the same filter more than once will have no effect because it will overwrite any existing value for that filter. For example, "Black and White" and "Brighten" can be used in combination but selecting "Brighten" twice will not result in twice the brightening because you are using the same filter twice.

Section III: Working with ICC Profiles

Example 18: Using ICC Profiles with Original Images from a Digital Camera (in this example, a Nikon CP990)

Note: this is a "legacy" example that is typically no longer necessary.

- 1. Let's assume that you have acquired an ICC profile for your particular camera model and want to "connect" that ICC profile in Qimage so that you get the most accurate color to view/print.
- 2. First, select "Edit", "Preferences", "Color Management" from the top menu of the main window. The color management window will open.
- 3. Initially, the table of input devices at the top only lists an entry/row for <unknown device>. This is a "fallback" line that must always exist in the table. Since we want to add a new row to the table, click the "Insert" button first.
- 4. Left click anywhere in the new/blank row that was inserted into the table to activate that row.
- 5. Click "Select ICM Profile" and browse to and select the profile for your camera. If you purchased the CP990 profile from the Qimage ICC Profile page and followed the instructions for saving the profile for example, you would select the file \windows\system\color\cp990.icm. Once selected, you will notice that the path and filename were filled in under "ICM Profile" in the table.
- 6. Next, click "Extract EXIF Model Name" and browse to and select an *original* image from your camera (in our example, the CP990). Since this function extracts the camera name from an image file, the image file you choose *must* be an unmodified original JPG or TIF downloaded from the camera's memory card. If you select a modified image, the EXIF information may have

been stripped from the modified image and may no longer exist. Once you select an original image, Qimage will extract the EXIF model name for the camera and will place that name in the column labeled "EXIF Model" in the table (in this case, the value will be "E990").

- 7. Make sure that there is a "Y" in the right column of the table indicating that the new row is enabled, and then click "Ok" to save the information in the table and close the window.
- 8. You have now successfully associated your camera profile with original images from your camera. From this point forward, whenever Qimage opens an *original* image from the CP990 camera, it will know which ICC profile to use. Note that if the EXIF information is not present, Qimage will fall back to the profile selected under <unknown device>. For a method of identifying which profile to use when your images do not contain the original EXIF tags, see example 19 below.
- 9. Repeating the above process for different camera models allows Qimage to "auto assign" the correct profiles to different camera models automatically so that you do not have to worry about selecting which profile goes with which camera.

Example 19: Using ICC Profiles with Modified Images from a Digital Camera (in this example, a Nikon CP990)

Note: this is a "legacy" example that is typically no longer necessary.

- 1. In this case, since we are dealing with modified images, the EXIF information that contains the camera model may no longer be present. If the EXIF model name is not embedded in your image files, the method used to assign a camera profile in example 18 will not work. Qimage does, however, provide another method of assigning profiles to images. We can associate a profile to an image based on image resolution.
- 2. First, select "Edit", "Preferences", "Color Management" from the top menu of the main window. The color management window will open.
- 3. Initially, the list of input devices at the top only lists an entry for <unknown device>. This is a "fallback" line that must always exist on the list. Since we want to add a new row to the table, click the "Insert" button first. If you performed example 18 above, there will be two lines in the table: one for <unknown device> and one for "E990". You should leave the "E990" line in the table. Don't delete or disable it because you still want Qimage to recognize your camera's originals.
- 4. Left click anywhere in the new/blank row that was inserted into the table to activate that row.
- 5. Click "Select ICM Profile" and browse to and select the profile for your camera. If you purchased the CP990 profile from the Qimage ICC Profile page and followed the instructions for saving the profile for example, you would select the file \windows\system\color \cp990.icm. Once selected, you will notice that the path and filename were filled in under "ICM Profile" in the table.
- 6. Click in the "X Res." column and enter 2048.
- 7. Click in the "Y Res." column and enter 1536.
- 8. Note: leave the "EXIF Model" column blank.
- 9. Make sure that there is a "Y" in the right column of the table indicating that the new row is enabled, and then click "Ok" to save the information in the table and close the window.
- 10. The above steps will cause Qimage to use the "cp990.icm" profile on every image that is 2048 x 1536 resolution. Obviously, this method will only work on uncropped images since it is based on the resolution of a full size Nikon CP990 image. Also, if you have another camera (or other images from another digital camera) that are exactly the same resolution (for example, the Olympus C3030Z), Qimage will place the Nikon 990 profile on those images as well because they are the same resolution.
- 11. What if you don't know the resolution of images from your camera? Simply go back to the main window and hold the mouse pointer over an image from that camera and watch the status bar at

the very bottom of the window. The resolution will be displayed there.

Final note: As an alternative to using Qimage's input table to associate ICC profiles with image types/resolutions, you can also embed the proper profile into JPEG/TIFF images saved by Qimage up front. By embedding the ICC profile into the JPEG/TIFF itself, you can specify exactly what profile is to be used with that image in the future, thus eliminating the need for Qimage to look in it's input table. See **Example 26** for more details.

Example 20: Identifying Which Monitor and Printer Profile to Use

- 1. Although typically Qimage will know which color space (profile) belongs to your images, if it does not know what profiles to use for your *monitor and printer*, there is no way to "convert" the color space from one device to another. A simple analogy would be telling someone, "Go north on Route 95 until you get there" without telling the person where "there" is. Knowing that we cannot profile from a known space to "nothing", we need to take the following steps to identify what color space our devices use.
- 2. First, select "Edit", "Preferences", "Color Management" from the top menu of the main window. The color management window will open.
- 3. ✓ Check the box that says "Enabled" under the "Monitor" tab.
- 4. Click the selection button in the "Monitor" group. If you have a specific profile that describes your specific brand/model monitor, browse to and select that profile (ICM file). On most systems, these profiles are stored in the \windows\system\color folder. If you do not have a specific profile, browse to the folder where Qimage is installed (normally \program files\qimage) and select "sRGB.icm". sRGB should be good enough for most generic monitors.
- 5. ✓ Next, check the box that says "Enabled" under the "Printer" tab.
- 6. Click the selection button in the "Printer" group. If you have a specific profile that describes your specific brand/model printer and the paper/media you are using (perhaps you created one yourself with a profiling tool), browse to and select that profile (ICM file). If you do not have a specific profile, browse to the folder where Qimage is installed (normally \program files\qimage) and select "sRGB.icm". IMPORTANT: the sRGB profile was NOT designed for printers and results of using sRGB color space on a printer may vary depending on whether or not the printer is designed to accept sRGB data by default, etc. For this reason, selecting sRGB as the color space used for your printer is *not* "industry" practice nor is it recommended. It may, however, be better than not using a printer profile at all, in which case the raw data from your camera will simply be "dumped" to the printer. For truly accurate color, we recommend obtaining a specific profile for your printer/media/ink combination or developing a profile yourself using a custom profiling tool.
- 7. Click "Ok" to close the color management window and return to the main window.
- 8. If you followed this example and have selected appropriate monitor and printer profiles, you have now activated color management in Qimage and your images will automatically be profiled for view/print.

Example 21: Verifying that the Proper ICC Profile is Being Used for your Camera

Note: this is a "legacy" example that is typically no longer necessary.

- 1. In examples 18 through 20, we have given Qimage a method of specifying how color data is described in images saved by your camera, and how to "translate" that data to the specifications of your monitor and printer. To run a simple test to verify that the correct profile(s) are getting selected for the correct camera(s), perform the following steps.
- 2. First, visually inspect the lower right panel on the main window (Print Processing) and make sure that there is a "Printer ICC" identified. A profile name should appear and NOT the word "OFF".
- 3. Navigate to a folder that contains images using the folder browser directly above the thumbnail grid on the main window. If the folder browsing panel above the thumbnails is not visible, you can show the panel by clicking on the bar labeled "Folders" above the thumbnail

- grid. When you have selected a folder that contains your images using the folder browser, the images/file names in that folder will display under the folder tree.
- 4. Optional: You can hide the folder browser by clicking again on the bar labeled "Folders" if you like in order to have more room for viewing thumbnails.
- 5. Double click on a thumbnail. The image will be added to the queue and one line will appear in the queue.
- 6. If your association in example 18 and/or 19 is functioning properly, the profile for that camera should appear at the end (right side) of the line in the queue. To continue with example 18 and the Nikon CP990 camera, you should see "cp990.icm" listed on the very right of the line in the queue.

Example 22: Using a Camera Profile to Profile Images for the Web

Note: this is a "legacy" example that is typically no longer necessary.

- 1. In examples 18 through 21, we have been concerned with how produce accurate color *within* the Qimage application. Although the above will ensure that Qimage always produces accurate displays/prints, we may need to profile originals from our camera so that other programs display them properly or so that they appear on the web with accurate color using generic browsers/monitors. If you make changes to, or filter images in Qimage, resaving the filtered images as new images using a process similar to example 12, the newly created/filtered images are not automatically profiled. That is, your camera profile is not used. This is because by simply creating modified images, we have not yet identified what medium they will be viewed or printed on. To use a camera profile to profile your images for web display, follow these steps.
- 2. Navigate to a folder that contains images using the folder browser directly above the thumbnail grid on the main window. If the folder browsing panel above the thumbnails is not visible, you can show the panel by clicking on the bar labeled "Folders" above the thumbnail grid. When you have selected a folder that contains your images using the folder browser, the images/file names in that folder will display under the folder tree.
- 3. Optional: You can hide the folder browser by clicking again on the bar labeled "Folders" if you like in order to have more room for viewing thumbnails.
- 4. Use the "+" button on each thumbnail to add to the queue, or multi-select thumbnails and then right click in the thumbnail grid and select "Add to Queue".
- 5. Right click on the preview page and select "Convert Images".
- 6. Leave the "JPG" radio button selected.
- 7. Check the box that says "Perform a Profile to Profile (ICM) Conversion".
- 8. Click the selection button next to the "From" profile and select the profile for your camera. In the CP990 example from above, that would be "cp990.icm".
- 9. Click the selection button next to the "To" profile and select sRGB.icm. The sRGB space is located in the folder where you have Qimage installed (normally \program files\qimage).
- 10. Click "Ok" and Qimage will convert all the images in the queue. The converted images will be in the same folder(s) as the originals, but will have a {Q} prefix on the file names. For example, if pic0001.jpg, pic0002.jpg and pic0003.jpg are in the queue and you told Qimage to convert all images in the queue, you will now have images named {Q}pic0001.jpg, {Q}pic0002.jpg, and {Q}pic0003.jpg.
- 11. Note that you can downsize images for the web (example 12), and profile them at the same time! To do this, simply follow the above example and between steps 6 and 7, check the radio button for "Add to/replace existing filters". When the filter dialog appears, enter "640" in the width under "Resolution" at the bottom of the filter window and click "Done". This operation will insert a 640 resize filter into the above process so that resulting images are downsized and profiled accordingly. Note that if you are working with images with different resolutions, Qimage performs a relative downsizing (downsizing all images by the same percentage), unlike the absolute resizing in example 12. As a result, the final resolution using this resizing method may vary depending on the resolution of the originals.

Example 23: How to Avoid "Double Profiling"

The latest versions of Qimage have made double profiling a thing of the past in most cases. The only way to get into trouble with double profiling is to activate a printer profile in Qimage's color management settings while also activating the "ICM" mode in the print driver. Having ICC profiles turned on in both the print driver and Qimage can, in some cases, cause double profiling that can result in oversaturated colors. To avoid double profiling, simply ensure that ICC profiles (or the "ICM" option) is only activated in Qimage or the driver, not both.

Example 24: Creating a Scrapbook Page

- 1. After deciding on which images to print and their approximate sizes, follow an example such as <u>Example 3</u> to add the images to the document with one IMPORTANT exception: when following example 3, you should make sure that the "Auto Cropping" button in step 2 is off instead of on (button up/not depressed). Auto cropping of prints can interfere with the print rotation in step 6 below. When finished, each page should contain the images that you would like to be printed on that page.
- 2. Using the preview page on the main window, go to a page that you would like to arrange and double click on one of the prints to bring that print into the image editor. Let's assume you clicked on a print that you would like on the upper left corner of the page.
- 3. Cutout: Click the "Cutout" button located under "Image Effects" in the filter parameters on the right.
- 4. Click the small picture icon at the top of the cutout preview window. This will refresh all the cutout thumbnails.
- 5. Double click on a cutout icon such as "Ripples". You will be returned to the image editor with the cutout previewed on screen.
- 7. Click the "Done" button on the far right side of the window. This tells Qimage that you are done editing the filter and you would like to save it and close the filter window. Note that you have placed an associative filter on the original image. As a result, any time this image is viewed, printed, or added to a page, it will have the same appearance (rotated counter-clockwise with the "Ripples" cutout to produce rippled edges). Removing the filter and reverting to the original is simple, however: select the print on the page or the thumbnail in the thumbnails window and right click, selecting "Delete Associative Filter(s)".
- 8. Click "Ok" to associate the filter with the original image.
- 9. You will now be returned to the main window and the preview page will update. You can repeat steps 2 through 8 until all your prints have the desired cutouts and rotation applied. To customize your page by relocating or moving/resizing prints on the page, see example 25 below.

Note: See the help on Floating Text to learn how to add text anywhere on the page.

Example 25: Visual/Manual Placement and Sizing of Images

- 1. Using the preview page on the main window, locate a page that you would like to rearrange.
- 2. Click the "Edit Page" tool button to open the full page editor.
- 3. Simply click in the center of any print and drag that print to the new location on the page.
- 4. Repeat step 3 until all the images are in the desired locations.
- 5. To change the size of prints visually, simply click in any corner and drag that corner to resize in the typical Windows sizing fashion.

Note: you may also click/drag prints on the small preview page on the main window but the full page editor as used in example 25 offers higher precision.

Example 25a: Preparing Pages of Prints to be Sent to an [Online] Printing Service

Notes: in addition to using Qimage to create professional quality prints directly to your local or network printer(s), Qimage can also be used to prepare print "jobs" for external printing services. You can easily prepare multiple pages of prints for a printing service using the same built in professional quality print algorithms. The job is prepared via saving pages as image files. The workflow for accomplishing this task is outlined in the steps below.

- 1. From the main Qimage window, click "File", "Print To" and select "File". This tells Qimage that you intend to prepare a job for printing by another service.
- 2. The "Print to File: Page Definition" dialog will appear, which will allow you to specify the size and resolution of each printed page. Enter the appropriate values and click "OK" to accept. You may update this page definition at any time by clicking "File", "Printer Setup". The values that you should use here depend on the type of equipment being used by the printing service. A quick call or e-mail to the printing service where you intend to send your images should be all that is needed here. For example, many online printing services request that image files be 8x10 at 300 PPI resolution (this equates to image files that have a resolution of 3000 x 2400).
- 3. Use Qimage as you normally would, adding and arranging prints.
- 4. When you are ready to print, simply click the print button on the top/right of the main window.
- 5. The "Print to File" dialog will appear. Here, you can specify the range of pages to print and the JPEG quality to use (if you save your files as JPEG files). When you have specified the range of pages to print, click OK.
- 6. The save dialog appears, asking for a file name to use when saving each page. Select the folder and file name for the output and click OK. If multiple pages are being printed, multiple files will be created with a numeric suffix such as MyPageName(0001), MyPageName(0002), etc.

Final note: Note that printing to file(s) is no different than printing to a printer. The only difference is that when you print to a file, you are "rerouting" the output to be stored in files instead of sending the images to the printer. As such, all printing options are still valid and may still be used when printing to files: print interpolation levels and interpolation type, smart sharpening, and "Printer ICC" profile. If you have a "Printer ICC" active on the bottom right of the main window, be aware that all images (of your pages) will be saved in that color space and that color space will be embedded in each page file. Some online printing services specify the color space they would like to be used for your images (sRGB, Adobe, etc.). When in doubt, ask your printing service what color space they "assume" for images so that you can match that in your "Printer ICC" for the most accurate color. Since Qimage automatically embeds your "Prtr ICC" profile into each printed image (page), the print service where you send your images will easily be able to identify and use the proper color space when processing your images/pages.

Example 26: How to Create TIFF images with your Camera's ICC Profile Embedded

Notes: Since ICC profiles are available for some cameras and in general, cameras do not embed profiles in original images, it can be beneficial to create copies of images that have the proper ICC profile embedded. If we take an original JPEG from a camera for example, and create a TIFF copy of that with the proper ICC profile embedded in the TIFF, other photo editors and ICC aware applications can open this TIFF with accurate color rendition. In addition, Qimage will recognize this embedded profile when the TIFF image is opened

in the future. To do this, we take original JPEG/TIFF images from the camera and use Qimage to create TIFF images that have the proper ICC profile embedded in them. Note that this does *not* change the image data itself! We are just tagging the created TIFF images with the ICC profile, which is a description of how to interpret the RGB data in the TIFF file.

- 1. Navigate to a folder that contains images using the folder browser directly above the thumbnail grid on the main window. If the folder browsing panel above the thumbnails is not visible, you can show the panel by clicking on the bar labeled "Folders" above the thumbnail grid. When you have selected a folder that contains your images using the folder browser, the images/file names in that folder will display under the folder tree.
- 2. Optional: You can hide the folder browser by clicking again on the bar labeled "Folders" if you like in order to have more room for viewing thumbnails.
- 3. Use the "+" button on each thumbnail to add to the queue, or multi-select thumbnails and then right click in the thumbnail grid and select "Add to Queue".
- 4. Right click on the preview page and select "Convert Images".
- 5. Check the "TIF" radio button so that new images will be created in TIF format.
- Click "Ok" and Qimage will convert all the images in the queue. The converted images will be in the same folder(s) as the originals, but will have a {Q} prefix on the file names. For example, if pic0001.jpg, pic0002.jpg and pic0003.jpg are in the queue and you told Qimage to convert all images in the queue, you will now have images named {Q}pic0001.tif, {Q}pic0002.tif, and {Q}pic0003.tif.

Final note: Qimage can also embed ICC profiles into JPEG images as well. You can use the above example to create a JPEG with embedded profile by following the above steps and simply checking "JPG" in step 5 instead of "TIF".

Example 27: How to Associate ICC Profiles with Individual Images Using the image editor

Notes: There may be times when you would like to simply "tag" particular images with an ICC profile without embedding the actual profile into the images. You can associate an ICC profile with image(s) by setting the "ICC" parameter in the image editor. Associating an ICC profile with an image using the image editor will override all other methods of identifying an ICC profile for that image (including the embedded profile if the image has one). Note that since this method simply associates an ICC profile to images via an associative filter, it will also allow you to associate ICC profiles with file types that do not allow embedded profiles (such as BMP, TGA, and even GIF). The following example shows how to use Qimage's image editor to associate an ICC profile with image(s).

- 1. Navigate to a folder that contains images using the folder browser directly above the thumbnail grid on the main window. If the folder browsing panel above the thumbnails is not visible, you can show the panel by clicking on the bar labeled "Folders" above the thumbnail grid. When you have selected a folder that contains your images using the folder browser, the images/file names in that folder will display under the folder tree.
- 2. Optional: You can hide the folder browser by clicking again on the bar labeled "Folders" if you like in order to have more room for viewing thumbnails.
- 3. Use the "+" button on each thumbnail to add to the queue, or multi-select thumbnails and then right click in the thumbnail grid and select "Add to Queue".
- 4. Now that you have added the images to the queue that you want to associate with a particular ICC profile, double click on a print on the preview page to open the image editor.
- 5. Locate the "ICC" association in the "Auto Correct" group on the right side of the window and click the "Open" button to the right of this entry to locate/open a profile.
- 6. Browse through the folders on your system that contain ICC profiles and select a profile by double clicking on the profile name.
- 7. Close the image editor window.

- 8. Answer "Yes" to indicate that you would like to apply the filter on your way out.
- 9. At the top of the next dialog, under "Scope", tell Qimage whether you want to associate this ICC profile with the image you were just editing, or ALL images that you placed in the queue.
- 10. Click "Ok" and Qimage will associate the ICC profile with the image(s).

Final note: Please note that the profile selected in step 5 above must be available to Qimage whenever viewing/printing/converting images. If the selected ICC profile is later deleted or the filter is used on another system that does not have the same profile located in the same folder, Qimage will not be able to perform the association because the ICC profile specified in the filter is missing. If this happens, the association is ignored. Also note that once the above association is made, all ICC profiling operations/rules in Qimage still apply. Associating a profile with an image only specifies how color for that image should be interpreted. If you have your monitor ICC turned off, do not expect to be able to evaluate the association on screen because no monitor profile has been specified and therefore no "to" profile exists (only the "from" profile). Similarly, if your printer ICC is turned off, the image ICC profile association will make no difference in prints since you must specify a printer profile to be able to profile "from" the image profile "to" the printer profile. Finally, when saving/converting images that have associated profiles, you must specify a "to" profile on the filter application menu and check "Perform Profile to Profile Conversion". For example, if you have 10 images in the gueue, each with a [potentially] different ICC profile associated, and you would like to convert all of these images from their associated profiles to sRGB for display on the web, perform the following steps:

- 1. Since you've already added the filtered (ICC profile associated) images to the queue, simply right click on the preview page and select "Convert Images".
- 2. ✓ Check "Perform Profile to Profile Conversion".
- 3. On the top "From" profile line, delete any text in that field. The word <input> will appear. Leave this text intact. This tells Qimage to "look up" and use whatever profile is associated with each individual image.
- 4. Click the selection button next to the "To" profile and select the sRGB.icm profile from your Qimage installation folder (normally \program files\qimage).
- 5. Click "Ok" and Qimage will create sRGB profiled copies of all images in the queue.

Qimage Functions

(Click on a line to go to the appropriate page)

Add Another Copy of this Image

Add to Queue

Albums

Antialias setting (for downsampling)

Auto Preview (image editor window)

Auto Rename

Blemish/pixel corrector

Borderless overspray/expansion

Borders around prints

Browse Selected Image's Folder

Canvas printing

CCD Noise Filters (dark current, shadow noise, and high ISO filters)

Context Sensitive Help

Color Management (ICC support)

Comparator

Copyright/signature

Cropping Images (to fill print size exactly)

Curves Filter

Cutouts (framing images)

Dark Frame Subtraction

Defaults (for print size and fit)

Delete Filters

Edges

Editor Functions

Edit Images

Edit IPTC Image Info

Edit Page (Full page editor)

E-mailing photos

EXIF Hotbar

EXIF info (view image info)

Exposure compensation

File Dropdown Menu

Filters (managing associated filters)

Flash Card Copy/Move

Floating Text

Folder History

Freehand - manually placing images on the page

Fringing Filter (purple/green fringing)

Full screen view

Global Filter

High Quality Work Image (image editor window)

Hyper Processing

Image Fitting

Image Lock

Image Placement

Instaview

Info Stamp

Interface (filenames versus thumbnails)

Levels Filter

Lossless JPEG Transforms

Margins

Mirror

New Session w/Selected

Optimizing layouts for certain size prints (4x6, etc).

Page Background Color

Page Orientation (portrait/landscape)

Page Preview

Page/Paper Size (changing)

Photo Editors (using with Qimage)

Plugins

Preview (while adding images to queue)

Print Filter

Print Image Information (under each print when printing)

Print Info/Annotation Font

Print Interpolation and Spooling Options

Print/Job Logging

Print/Job Logging and Tracking Paper/Ink Usage

Print Proofs

Print Rotation

Print To (printer or file)

Printer Setup

RAW Format Options

Red Eye Correction

Reordering Prints

Scrapbooks

Search IPTC Image Info

Selected Thumbs/Files (Copy, Move, Rename, Auto Rename, Delete, Recycle)

Selective Color Filter

Slide Show (to view images in the queue full screen)

Soft Proofing

Sort Prints

Templates (creating manual templates and retaining image positions)

Test Strips

Thumb Builder

Thumbnail Font

Thumbnail and Raw Cache - Managing Disk Space

Thumbnail Quality

Units (of measure)

Unsharp Mask

Utilities (file manager, Flash card copy/move)

White Balance Filter

Add Another Copy of this Image - Sometimes you may be looking through images that you have already placed on the preview page and decide that you want more copies of certain images. To accomplish this, select image(s) on the preview page and then right click on the preview page and select "Add Another Copy of this Image". Qimage will add another copy of each image to the preview page (queue). You may repeat this command as many times as you like to increase the number of copies in the queue indefinitely.

Add to Queue - add the images selected in the thumbnail grid to the queue at the current (last used) size. As alternatives, you may click the small "+" icon on a thumbnail one at a time, select thumbnail(s) and then press the insert key, or drag the selected thumbs onto the preview page in the upper right corner of the main screen. When you drop the images, they will be placed on the page/position where you dropped them.

Access:

• Right click in the thumbnail view with thumbs selected. When the popup menu appears, select "Add to queue".

Alternatives:

- Press the insert key with thumbnails highlighted.
- Drag directly to the preview page (upper right).
- Press the small "+" icon that is displayed on every thumbnail.

Albums - Qimage Ultimate allows users to create albums and store photos in those albums for the purpose of quickly locating certain types of photos. For example, a nature photographer might find it useful to create an album called "Roses". Once the "Roses" album is created, the photographer can easily add images to the "Roses" album from any folder on any available disk drive. When the "Roses" album is opened at a later date, it will show thumbnails of all the roses added to that album regardless of what folder/drive they reside in. Note that the album simply points to photos in various locations so photos are not duplicated and the photos in an album must remain in their original locations (where they were when the photos were added to the album). Here is a brief overview of functions related to creating and managing photos in albums:

- Creating a new album: New albums are typically created "on the fly" as needed by simply selecting a number of thumbnails, right clicking, and selecting "Add to Album". When the album dialog appears, you may select an existing album or click the "New Album" button to create a new album. After clicking "New Album", a dialog will appear asking for the filename of the album followed by a second dialog requesting a one line description for the album.
- Adding photos to albums: Simply select one or more thumbnails from the thumbnail grid, right click, and select "Add to Album". You may double click on any album in the list or select an album on the list and click the "Select" button to add the selected images to the album.
- Removing photos from an album: To remove photos from an album without deleting the photos themselves, simply select one or more thumbnails from the thumbnail grid, right click, and select "Remove From Album".
- Opening an album of photos: There is an "Open Album" button (looks like an open book) conveniently located just above the thumbnail grid. Simply click that button and double click on the album in the list that you wish to open. Thumbnails from that album will appear in the thumbnail grid.

Antialias filter for downsampled images - Click "Edit", "Preferences", "Printing Options" to access the interpolation settings. Move the antialias lever to control the strength of the antialias prefilter that is applied when downsampling images and prints. Note that this setting affects not only prints (usually those being printed at very small sizes) but also images downsampled via the image editor, e-mail/web conversions, etc. Also note that the antialias setting *only* applies to images that are being *downsampled* (resolution is being decreased) and the setting has no effect whatsoever on images being upsampled (resolution is being increased).

Aliasing is an artifact that can be visible in areas that have small, repeating patterns such as brick walls, stripes in a shirt, fence posts at a distance, etc. Sometimes called "moiré", the artifacts may look like heat waves. See the example below to see the aliasing caused by a brick building being downsampled, and how the "Med" antialias setting removed the aliasing artifacts.





Straight downsize

w/antialias at "Med"

Auto Preview - The "Auto Preview" option is located on the "View" menu in the image editor window. If enabled, auto preview causes a small filter preview window to open whenever a filter change is

being made. For example, when adding contrast, click on the up/down arrow next to the contrast parameter. As soon as the contrast is changed, a small preview window will open showing the change in real time. When finished, the changes can either be accepted (by clicking OK) or canceled (by clicking Cancel). When auto preview is turned off, the preview window can still be activated manually by right clicking on the image. To preview filter changes in real time with auto preview off, simply right click anywhere on the displayed image to activate the preview window and then make the desired filter changes.

Auto Rename - Auto rename provides a method for renaming files to the stored image date/time, etc. There are two ways to auto rename in Qimage.

Method 1 - When you use the Flash Card Copy/Move Utility (accessed by clicking "File" from the top menu bar on the main screen and then clicking "Flash Card Copy/Move"), you can rename files as they are moved from one folder (or flash card) to another folder. Click "Edit", "Settings" on the Flash Card Copy/Move dialog and check the auto rename box if you'd like files to be auto-renamed when downloading photos from flash cards.

Method 2 - You can auto rename files that already exist without copying/moving them. To auto rename existing files, simply navigate to the folder containing the files and select the thumbnails to be renamed. Then right click in the thumbnails area and select "Auto rename" from the dropdown menu.

Changing the auto rename format - To change the format for renaming files, click "Edit", "Preferences" and "Auto Rename Options" and change the renaming parameters.

Renaming note: Qimage will use the date/time stored in the EXIF header if one exists. If no EXIF header is present, Qimage will use the date/time stamped on the image file itself (file date/time). Qimage will never overwrite a file when auto renaming. If a file already exists with the given rename format, the next image renamed will be succeeded with an occurrence number. If for example, you had three images with the same date/time (not likely), you would have something like this:

```
1999-06-15 13:46:20.jpg
1999-06-15 13:46:20(0001).jpg
1999-06-15 13:46:20(0002).jpg
```

Limit: Qimage does have a limit of 9,999 files when auto renaming, so if you reach (9999) for example, the remaining images will simply not be renamed.

Blemish/pixel corrector - Blemish correction is an alternative to cloning that is faster and more efficient. Use this option to remove blemishes, red eye, unwanted small objects, or stuck pixels from your photos. To access the blemish corrector, double click on an image in the thumbnail grid or on the preview page. You can then check the "Blemish/pixel corrector" box to enter pixel locations manually, but most of the time you will want to visually "melt away" the blemish. To do this, perform the following steps:

- Once you have your image in the image editor, right click on the blemish in the image and a zoomed window will appear.
- Using the zoomed window, click in the center of the blemish and drag to the right just past the edge of the blemish. To blend away abnormalities in photos (freckles, sores, etc) always drag from the center toward the right. This will cause the edges of the defined area to be blended inward. To remove red eye, click in the center of the pupil and drag left just past the edge of the pupil (into the iris of the eye) to darken the pupil and remove the red color.
- The blemish and correction radius will be added to the blemish list (you'll see the list to the right).
 Qimage uses negative radius numbers to indicate red eye correction and positive radius numbers to indicate normal blemish removal.
- If the next blemish is the same size, you can simply single click on the center of the blemish and Qimage will use the last radius you selected. If the new blemish has a different radius, you can

click and drag as before.

Summary of the two methods of blemish correction:



Consider the above icon. It is a reminder to always drag from the center toward the **left** to correct **red eye** and from the center to the **right** to **fill in** blemishes. Remember that Qimage will "pull" the edge color inward to fill in blemishes when dragged to the right. In contrast, it will perform a darkening of pupil when dragged to the left.

Borderless Overspray/Size Expansion - Many print drivers offer a "borderless" or "no margins" mode that allows printing from edge to edge and top to bottom with no white border. If you would like to print a 4x6 print on 4x6 paper for example, you would expect the 4x6 print to align perfectly with the edges and top/bottom of the paper. Unfortunately, printers do not load paper precisely enough to cover exactly 4.0 x 6.0 inches of paper with a 4.0 x 6.0 inch print simply because the paper loading and positioning process is not exact. To compensate and insure that you don't get small slivers of white on the top, bottom, left, or right of your print, most print drivers artificially "expand" prints so that they are larger than necessary and so that part of the print actually oversprays onto a sponge behind the roller. When printing your 4x6 on 4x6 paper for example, the driver might see the 4x6 print and expand it to 4.2 x 6.2 so that 0.1 inches of the print overspray the left, right, top, and bottom, thus insuring that you have full coverage as long as the paper loads within 0.1 inch of the expected location. This expansion/overspray characteristic is a common feature of most print drivers, however, the artificial expansion of print sizes and overspray off the edge of the paper create problems of their own.

While expanding a 4.0x6.0 print (as selected in your printing software) to 4.2 x 6.2 might be acceptable in most cases, this "size expansion" can cause other issues. If you are printing three 4x6 prints to a borderless 8.5 x 11 page for example, you will find that your 4x6 prints are a little larger than 4x6. Overspray can also cause unwanted cropping since part of the image might actually be oversprayed beyond the edge of the paper, making your prints look like they are missing some of the edges. There may be times when you would like to use borderless mode but you also want to insure that you get the exact sizes you ordered and you want to insure that parts of your prints are not oversprayed past the edge of the page. In these situations where exact print sizes and minimizing overspray are important, click "Edit", "Preferences", "Print and Page Formatting" from the Qimage main window and select "Borderless Overspray/Expansion" and choose "Disable Overspray and Size Expansion". This will allow you to print exact print sizes and also minimize overspray off the page. Such an option is important, for example, if you are creating a layout of multiple photos on an 8.5 x 11 borderless page and you simply want to use as much space as possible on the page but you still want exact print sizes and you don't want part of your prints to be clipped at the edges of the page. Note that when you disable expansion/overspray, however, you are subject to the accuracy of the paper loading mechanism so you may still find that you have a 1/32 inch white border on the left and 1/32 inch clipped on the right simply because the paper didn't load perfectly. If the paper loading error is consistent (always 1/32 border on the left and missing 1/32 of the image on the right), you can compensate by using "Edit", "Preferences", "Print and Page Formatting", "Page Margins". In this example, enter a margin of -1/32 inch on the left and 1/32 inch on the right: -0.03 left and 0.03 right.

NOTE: Disabling borderless overspray/expansion will only affect jobs printed to a printer. This option (the allow/disable selection) will have no effect when you are printing to file. Normally when printing to a file, you are preparing a job for a printer that is not available/connected so the printer cannot be queried for capabilities to allow for accurate disabling of borderless overspray/expansion. As a result, the setting (allow/disable) for the overspray/size expansion is ignored when printing to file.

Borders - Borders may be added to prints to create edge effects, add spacing for photo mats, and more. Borders of any size and color may be added by using the "Brdr" parameters in the "Print

Properties" auto-popup panel that appears whenever you select a thumbnail or print on the main window. Note that these controls are also available in the full page editor by clicking the "Size/Loc" button. Two borders may be added to each print: border 1 is the border closest to (touching) the print and border 2 is a second border on the outermost edge of the print. To activate a single border around a print, simply enter the size (thickness) of the border in inches or millimeters (depending on your setting for "Units") in the left box labeled "1" under the print sizes. To change the color of the border, click the small color patch marked "1" next to the left edit box. If you would like a second border which will appear around the first border, repeat these steps for the right edit box and the color patch marked "2".

The "B" and "B+" radio buttons allow you to specify whether you want your borders inside the selected print size or outside. As an example, if the "B" radio button is selected and you choose a 4x6 print size, the *final print* will be 4x6 with borders included on the *inside*. If the "B+" radio button is selected, the *photo* will be sized to 4x6 and then the borders will be added *outside* that photo size, making the final print larger than 4x6. Simply put, use "B" when you would like your borders to show inside a specified frame size. Use "B+" when printing photo mats where you want the photo to be the specified size with the borders extending beyond that size. Note that in order to prevent sizing problems, Qimage may switch from "B+" to "B" if it determines that the borders will not fit on the page. For example, when using 4x6 borderless paper and a print size of 4x6, Qimage will not allow use of the "B+" border and will automatically use the "B" option since the "B+" option would create a print larger than 4x6 that would no longer fit on the 4x6 page.

Application of borders: You may set up border parameters prior to adding images to the queue and each print will contain the specified border as it is added to the queue. You can also change the borders on an existing print by first clicking the print on the preview page. Once you have selected a print (or prints) on the preview page, simply change the border parameters on the "Print Properties" auto-popup window and the prints on the preview page will update with the new border parameters.

Canvas edges: Qimage Studio Edition allows mirrored and stretched borders in addition to solid color borders. Mirrored and stretched canvas borders can be used to create a continuous appearance when mounting canvas prints so that the wrapped edges appear to blend with the photo. To mirror or stretch edges for canvas mounting:

Via the custom "wizard":

- 1. Select the thumbnail of the photo that you would like to print on canvas.
- 2. Drop down "Size" in the "Print Properties" auto-popup panel on the main window and select "Custom".
- 3. Check the bottom sizing method labeled "Canvas print with wrap".
- 4. Fill in the print size, the side and back wrap depths, the side wrap border style (Solid, Mirror, Stretch), and check "Fold Marks" if you want center/fold marks (see notes below).
- 5. Click "OK" on the custom "Special Sizes" dialog and your photo is ready to print.

Via manual selections:

- 1. Select the thumbnail of the photo that you would like to print on canvas.
- 2. Make sure the cropping (scissors icon) is ON in the "Print Properties" auto-popup panel on the main window.
- 3. Click on the color patch to the left of border 1 and select "Canvas Edge (Mirror)" or "Canvas Edge (Stretch)".
- 4. In border 1's size, enter the size you want for the canvas edge (.5 inch, 1 inch, etc. depending on the thickness of the canvas mount)
- 5. In border 2's size, enter any additional "back" wrap needed.
- 6. Make sure "B+" border is selected.

- 7. Drop down the size on the "Print Properties" auto-popup panel and select the size of your canvas as you normally would, not counting the wrap.
- 8. Add an image to the queue by clicking the small "+" icon on its thumbnail.

Note about canvas edge previews: Mirrored edges will show darker than the main print on Qimage previews in order to highlight the separation between print and border. The mirrored border will NOT appear darker in actual prints since the border is only darkened to help with visual placement/cropping of the print on screen. If you would like to preview the page as it will print (without the darkening of the mirrored border), go to the full page editor (button under the preview page on the main window) and click the "HQ Preview" button to preview the page in high quality.

Canvas printing notes:

Canvas Edge (Mirror): Simply mirrors the edge of the photo out to the border size

Canvas Edge (Stretch): Mirrors a smaller portion of the edge of the photo (one eighth of the border size), stretching it out to the border size.

Canvas printing tip 1: You can test these effects such as edge marks to see which you like best by printing small test prints on a sheet of plain paper, or by printing to file and opening the printed file. You can also turn on the "Preview" option in your printer driver so that your printer driver displays a preview of the page before the printing starts. You can then accept/cancel printing.

Canvas printing tip 2: There are two typical ways to create canvas wraps. Using the wizard method above, these are:

- 1. The most versatile canvas printing method is to print your canvas with a specified mirrored wrap and another outer (solid) border that will appear on the back of the canvas mount. A white back wrap, for example, is useful because it provides a nice area for printing fold marks and center marks for alignment. In addition, why use more ink than you need? No one will ever see the back of the canvas! Unlike example 2 below where we want to wrap the mirrored image onto the back of the canvas. you may want to have a small white border on the outside of your mirrored wrap/border. On a 20x30 canvas on a mount with 1x1 boards, you could enter 20x30 as the size, 1.1 as the side wrap (an extra tenth of an inch to ensure no white is showing on the sides) and a .5 inch back wrap. Check "Fold Marks" here and your .5 inch outer/solid back wrap will contain inward facing fold marks and center marks. Since these will appear on the back of the canvas, they won't be seen but will help with alignment. They also provide the space needed for stapling without wasting ink on the back of the canvas like example 2 below.
- 2. A less popular yet just as effective method is to use a value in "Wrap (sides)" that is large enough to cover the depth of the canvas plus enough to wrap over the back for stapling. As an example, suppose you have a 20x30 canvas with 1 inch stretcher bars. You'd enter 20x30 for the print size and 1.5 inches for the side wrap, entering zero for the back wrap. If you use a mirror border, this will give you enough mirror border to wrap over the sides of the canvas mount and a half inch onto the back: enough for stapling. There is no need for a "back wrap" here because you've used enough side wrap to extend onto the back of the canvas mount. Note, if your back wrap is zero and you check "Fold Marks", the fold marks and center marks still appear inward from the edge of the print so the outer 1/8 inch (3mm) of your mirrored border will contain markings. As a result, be sure you've allowed enough side depth so that these marks print on the BACK of the

canvas mount and are not visible on the sides!

Browse Selected Image's Folder - Qimage allows images from different folders (or even drives) to be present in the queue at the same time. If you would like to quickly browse thumbnails in the folder where a certain image in the queue resides, simply highlight a print on the preview page and then right click on that print and select "Browse Selected Image's Folder". Qimage will go to the folder that contains the selected image so that you may review other images in the same folder using the thumbnail grid. This is useful if you have forgotten to add an image and would like to locate other images from the same folder as an image already in the queue. Note that if multiple images are selected, Qimage will go to the folder for the first selected image.

Color Management (ICC) Support:

Qimage supports ICC profiles for input devices (cameras and scanners) as well as your printer and monitor. Color profiles are used to ensure accurate and consistent color for output devices. You can access Qimage color management by selecting "Edit" from the top menubar on the main screen and then "Preferences", "Color Management".

Intro:

Accurate color management requires that you address the three devices in your digital imaging workflow equally: your camera (input device) and your monitor and printer (output devices). Since color management requires that you have: (a) an ICC profile that describes the color response of your camera, (b) an ICC profile that describes the color response of your monitor, and (c) an ICC profile that describes the color response of your printer, it can be argued that there is no need to attempt color management or to work with ICC profiles unless you have data (profiles) for all three variables: camera, printer, and monitor. Using ICC profiles to manage color is like using a road map. You need to know the starting point and the ending point and then you can describe how to get from point A to point B. In the world of ICC profiles and color management, this means specifying an input/camera profile (starting point) and a monitor or printer profile (ending point). Your software (in this case Qimage) can then translate how your camera "sees" color into how your monitor or printer "sees" color. What you need to do to manage color properly is described below.

Details:

Device Profiles

First, define the color profiles for your output devices (monitor and printer). Click "Edit", "Preferences", "Color Management" from the top menu bar and then:

• To set up a monitor profile: Click the "Monitor" tab and then check the "Enabled" box and click the "..." selection button to browse ICC profiles for your monitor. If you do not have a specific ICC profile for your monitor (most systems have some generic monitor profiles located in the C:/WINDOWS/SYSTEM32/spool/drivers/colo folder), you can select the generic sRGB profile from your Qimage folder. Please note that selecting sRGB or even a manufacturer supplied profile can lead to results that vary widely from monitor to monitor, system to system. This method of selecting a "generic" profile may work reasonably well in some cases, and not well at all in other cases. As a result, although it can't hurt to try an existing/generic profile as a first step, results may vary and may or may not be acceptable. sRGB should provide a reasonable middle ground for most monitors and for web display, however, sRGB will not match any particular monitor perfectly! It is best to use a monitor colorimeter (small device that attaches to your monitor with suction cups) to actually measure the response of your monitor. Although there are visual calibration utilities available that walk you through a visual inspection/calibration process, these programs provide nothing better than an educated guess for calibration and can often result in images not being accurately displayed. Also note that if you do not use a hardware colorimeter to create a profile specific for your particular monitor and use a generic

color profile like sRGB, you may see too much red in your images, shifts of some colors, other color casts, etc. Note that even monitor profiles supplied by manufacturers can often be inaccurate, as these (although they may be labeled with your monitor model) are often developed for a whole line of monitors and are too generic to describe the response of the monitor sitting in front of you. Therefore, buying and using a colorimeter to produce an accurate profile is *always* recommended for the most accurate color possible. The colorimeter (most are between \$200 and \$300 in price range) will create a custom ICC profile for you that you can then activate in Qimage under "Edit", "Preferences", "Color Management", "Monitor". It may seem like a bit of an investment, but there is really no need to buy expensive digital cameras or scanning equipment if you have no way to calibrate your output devices to ensure that you are getting accurate color!

- To set up a printer profile: Qimage offers three methods for printer color management:
 - 1. **Printer/driver manages color (default)**: If you do not have a profile (ICM file) specifically designed for the printer, paper, and ink you are using, it may be best to let the printer/driver handle color. In its default "out of the box" configuration, Qimage will allow the printer/driver to determine how to adjust color based on the paper type and quality selections made in the print driver. If you have made other selections for the printer profile in the past and would like to instruct Qimage to revert to allowing the print driver to manage color, simply select "Edit", "Preferences", "Color Management" from the main menu in Qimage, check the "Enable" box on the "Printer" tab and then press the "Let Printer/Driver Manage Colors" button. If the button is disabled, Qimage is already allowing the driver to manage colors. While this mode of operation will ensure good color even with the "ICM" checkbox unchecked in the driver, it is best to select the "ICM" option in your print driver if that option is available. Also, if your driver offers settings under the ICM heading, be sure to select "Applied by Printer Software" or its equivalent (do not select "no color adjustment"). Note that this option is considered the "normal" mode of operation if you do not have a printer profile or you do not want to take control of color management. Do not disable printer color management entirely (by unchecking the "Enable" box in the color management dialog) unless you are performing special printer testing or other tasks (see "OFF" below).
 - 2. Qimage manages color (preferred): If you have a printer profile appropriate for the printer, paper, and ink you are using and you know the driver settings that are appropriate to use with this profile, it is always best to allow Qimage to manage color rather than letting the driver manage color as with the first option above. Qimage has access to all the information needed for full color management including the color space of the image, the printer profile, the rendering intent, and the status of black point compensation so it is always best to allow Qimage to perform the color management operations whenever possible to ensure the highest quality results rather than trying to pass this information to a printer driver that may or may not be able to handle the job of high quality color management. To allow Qimage to manage color, simply select "Edit", "Preferences", "Color Management" from the main menu in Qimage, check the "Enable" box under "Printer" and then click the "..." button to browse for your printer profile. Once a printer profile is selected, Qimage will manage color rather than the printer driver. At this point, you must ensure that the printer driver options are set as required for the profile. This normally entails selecting "no color adjustment" in the driver or "none" for print type plus selecting the proper paper type, quality, and other related settings. See note below for more details on driver settings required when Qimage is managing color.
 - 3. **OFF**: If you do not have a paper-specific profile for your printer, it is best to

use option 1 above where the printer/driver manages color. Only disable printer color management (by unchecking the "Enable" box under "Printer" in the color management dialog) if you want to send raw data to the driver. This option is useful when you want to print targets to be used for creating custom printer profiles. Printing photographs with your Prtr ICC turned OFF can result in inaccurate or shifted colors.

A note about using/selecting your own printer profiles and allowing Qimage to manage color: Please note that most printer profiles only apply to one media type, therefore it is extremely important that: (1) you have the right profile selected for your current media type and (2) your printer properties (under "File", "Printer Setup") are set to the exact parameters required for the profile. For example, most printer profiles are designed for the "no color management" mode in the driver since you are performing color management outside the driver. If so, you'll need to make sure that your driver settings are set appropriately. Please refer to either the software users guide if you created the profile yourself, or the instruction from the web site where you obtained the profile. When in doubt, set the print driver to the most "plain vanilla" settings as possible, i.e. the highest quality settings but NO color management. Remember that when you allow Qimage to manage color, you do not want to have the "ICC" box checked in your print driver unless your driver requires you to select "ICM" first in order to select the "no color adjustment" mode from within the ICM selection. If you do, you'll be doubling up on the profile (Qimage will profile it once and then your print driver will profile it again). As with calibration of your monitor (above), there is really no way to guarantee a color match unless you use profiling software to create a custom profile that describes exactly how your printer responds. Printer profiles that are available on the web are often too generic in nature to be 100% accurate and may be designed to be used with some other printing software. Once again, a little investment in money and time can ensure an accurate match for your printer. If you want a perfect match for your prints, you'll need custom printer profiling software, and you'll need to follow the instructions below entitled "Instructions for using printer profiling tools with Qimage".

• To customize profile settings on a print-by-print basis: When printing photographs using a printer ICC profile, it is sometimes necessary to select the rendering intent on a print-by-print basis in order to achieve the best color. Qimage allows customization of printer profile properties, making it possible to select a different rendering intent or even a different profile for each print on the page. When images are first placed into the queue, they take on the general printer profile characteristics present on the "Job Options" tab on the main window. To modify these initial settings on a print-by-print basis, simply select the print(s) on the preview page and then right click on the preview page and select "Custom Color Mgmt Settings". You may then make changes to the color management settings for the selected prints and click "OK" to apply the changes. Customizing color management settings on a print-by-print basis is useful for testing different rendering intents or even different profiles to select the best fit for your photos.

Next, define the color space used by your input devices (digicam, scanner, etc):

• About the image (input) profiles: You can associate multiple devices with ICC profiles using the grid under "Input profiles" on the color management dialog. The first line in the grid is always a "fall back" selection to be used when a specific device profile cannot be matched. You can add as many lines after this first entry as you like, specifying either the device model name (based on EXIF model number) or the resolution of the images. Using the grid to "tag" your devices with specific ICC profiles allows you to define the color spaces used by different devices. Most

cameras and scanners, although their images may look acceptable without profiling, do not normally deliver images that truly conform to any known color space. If you have ICC profiles that define the color space used by your output devices like your printer and monitor, you need an input profile that describes the color space of your camera or scanner to be able to accurately display or print images. For example, if you have an ICC profile that describes the color space used by the Nikon CP990 camera, you could add a new line in the table, enter (or browse to) the profile name to that row in the table by clicking the "Select ICC Profile" button. Next, while still on the same row in the table, click the "Extract EXIF Model Name" button and select an ORIGINAL image (JPG or TIFF) from the CP990 camera. The model name "E990" will be entered in the table. It's that simple. Qimage will now use the specified ICC profile any time an ORIGINAL CP990 image is displayed or printed (provided you enabled the monitor and printer profiles - see above). We all know that EXIF information is not always preserved after modifying originals, so you can also specify the resolution as a last resort. For example, if you leave the EXIF model name blank and enter 2048 and 1536 in the X res and Y res columns respectively, Qimage will use the specified profile on all 2048 x 1536 images. Note that the only reason we need to have an input table that "tags" certain types of images with certain profiles is that most cameras do not embed the ICC profile inside the images they save. If you have a camera that saves the embedded profile information inside its images, there is no need to do this "external tagging": see "About embedded profiles" in the next bullet.

Some places to find profiles specific to your camera model:

- Manufacturer: Some of the latest model cameras are supplied with ICC profiles on the software/driver installation CD. If you search those CD's for files with extension "ICC" or "ICM", you may be able to find a profile designed for your camera by the manufacturer. At the time of this writing, this is the exception rather than the rule. Most cameras are supplied with no ICC profiles to describe color response.
- Camera itself: Some newer cameras allow you to select a color space (profile) for saved images and may, for example, allow you to select Adobe RGB or sRGB as the profile used to store images. If your camera allows you to specify the profile to use, it may be a generic profile such as Adobe, sRGB, etc. If so, you already have your camera profile. Just browse to \program files\qimage (default) and select the proper profile from that location.
- DDI profile: The developer of Qimage (Digital Domain Inc.) may have developed a
 camera specific profile for your camera. The list of cameras that DDI has tested and
 supplies profiles for is available on the ICC Profiles Page. These profiles can be
 purchased for a very small fee, however, due to the amount of testing required to
 develop profiles, a profile for your specific model may not be available.
- Custom profile: You could use a tool like <u>Profile Prism</u> to create a custom profile for your camera. Custom camera profiles often work well when shooting in raw capture mode and using a raw conversion utility. Custom profiles generally do not work well when shooting in JPEG/TIFF capture mode as these images have already been processed.
- Generic profile: Depending on the camera model, it may be possible to get a
 relatively reasonable color match by using a generic "working space" profile. If your
 camera offers the sRGB/Adobe RGB color space settings, Qimage will most likely
 recognize the proper profile automatically. If you are unsure, it is best to stick with
 sRGB for photos from your camera.
- About embedded profiles: Qimage supports embedded profiles which means that if there is an
 embedded profile, Qimage will automatically recognize it. Images modified in high end photo
 editors will normally be saved with the editing space (profile) saved in the image so Qimage
 should have no problem recognizing the proper color space. Note that if a profile is embedded
 in an image, the input table under "Color Management" is ignored and the embedded profile is

used instead.

How ICC Profiles are Handled at a (Windows) System Level

What about profiles associated with monitors/printers at the system (Windows) level?

• Some versions of Windows allow you to associate specific ICC profiles with your display and your printer(s). For example, you can associate an ICC profile with your monitor by clicking on your "Display", "Properties" and clicking the "Color Management" tab, adding an ICC profile to the list and activating it as the default. Note that this is simply a method of specifying which ICC profile is associated with your devices. Windows does not do anything with this information "internally", nor does it change anything about the appearance of your display at a system level as a result! This entry is nothing more than a placeholder that allows you to specify what ICC profile "belongs" to your monitor/printer. It is up to individual applications to utilize this information. Note however, that due to inconsistencies in how different Windows operating systems function (not all Windows versions even support color management), Qimage will ignore the entries entered here (at the system level, tagged to your devices). Instead, in Qimage, we use the "Monitor ICC" or "Printer ICC" entries to do this association.

About display "auto loaders"

• Most monitor calibration utilities have two steps: (a) a step that allows you to get your monitor into a known working condition, and (b) a step that creates an ICC profile to be used in photo applications. The small "auto loaders" that change the appearance of your display when you boot your computer are designed only to get your monitor into a set of know working conditions. This loader does not load or utilize an ICC profile. The auto loader is used as a kind of pre-calibration that ensures that when the ICC profile is utilized, that it will work properly. These bootup auto loaders should not be confused with ICC profiles, nor should they be thought of as a true "calibration" of your monitor at a system level.

Other ICC Profile Related Issues Applicable to Qimage

About working spaces:

• Working spaces available in your Qimage folder: Most of the popular working spaces (such as Adobe, sRGB, etc) are located in the Qimage folder - usually c:\program files\qimage). If you have the need to convert to/from or use working color spaces, simply click the "Utility Profiles" button on the color management dialog when opening a profile.

Profile to profile conversions:

- Converting from one color space to another: You can convert images from one color space to another color space whenever you use the image editor or the image converter (right click in the queue, select "convert images"). The simplest way to convert from one color space to another is to add images to the queue and then right click on the preview page and select "Convert Images". You can then check "Perform a profile to profile conversion" at the bottom of the window, entering the "from" and "to" profiles.
- Converting multiple files from multiple cameras: If you enter <input> in the "From" box,
 Qimage will select the appropriate device input profile using the information in the grid under
 "Edit", "Preferences", "Color Management". Using this parameter will allow you to convert a
 batch of Adobe RGB and ProPhoto RGB images from their respective color spaces into sRGB
 for example.

Appearance of thumbnail and draft images used in printout previews, etc.

• Thumbnails and draft images: The images that you see in the thumbnail grid and on the small preview page will appear different depending on your settings at the time the thumbnails were created. When you enter a new folder or select "Refresh Thumbs", the thumbnails are saved

using the current settings under "Edit", "Preferences", "Color Management", "Monitor". In other words, if you have monitor color management turned OFF and you select "Refresh Thumbs", your thumbnails will continue to appear as they do with color management OFF until you refresh them again with monitor color management ON. Similarly, thumbnails will appear as they do with color management ON if they were created that way and have not been refreshed. Qimage uses this method to speed up thumbnail display since profiling numerous thumbnails "on the fly" would slow down program operation.

Instructions for using printer profiling tools with Qimage:

The following tips apply to generating your own printer profiles for use with Qimage. If you are using profile generators such as our own Profile Prism or others like WiziWYG, Monaco EZ Color, etc. the following will help ensure that you get the most accurate color possible when printing with Qimage.

- 1. In your profiling generation software, use the "Save TIFF" option to save the target as a TIF file.
- 2. Exit the profiling software and go into Qimage and print the test target that was saved in (1) and print it using Qimage on a portrait page, filling the page. Make sure you use the exact same Qimage and print driver settings that you will be using after you create the profile: print driver color correction turned off, "Max" resolution in Qimage's "Job Properties" panel, etc.
- 3. Now go back into your profiling software and create your profile using the test target printed by Qimage.
- 4. Now that you have a profile and want to use it in Qimage, when you print through Qimage, simply ensure that your print driver settings are the same as when the profile was created and use the profile that your profiling software saved under "Printer" in Qimage's own "Edit", "Preferences", "Color Management" section. Of course, just as important is to ensure that Qimage's input color profile "manager" is pointing all your cameras to the right *input* profile. Fortunately, that's simple to do: just look at the entry in the queue and the input profile that is connected to all of your images is displayed on the right of every line in the queue.

Even if you don't use Qimage and use another package to print, we would always recommend using the package that you will be using *after* the profiling to actually *print* the color targets for profiling. Simply "dumping" the printed target to the printer like most profiling packages allow is not recommended. You should be using the same printing tools on both ends otherwise more variables creep into the equation.

Context Sensitive Help: Remember, you can get help on any function in Qimage by holding the mouse pointer steady over that function for at least two seconds. To turn this feature on/off, click "Help", "Context Sensitive Help". Note that tool buttons always have their hints activated regardless of the context sensitive help setting.

CCD Noise Filters - Qimage provides filters specifically designed to remove anomalies associated with CCD's in digital cameras. These filters can easily be applied to one or all images in the queue by checking the box(es) found in the image editor window.

Dark current filter - Use this filter to remove unwanted "specks" of falsely-lit pixels from night shots or shots with long shutter duration. This filter needs no dark frame reference so it will work under any conditions.

Shadow noise filter - Use this filter to eliminate shadow noise found in most 2.0 or higher megapixel cameras. This filter will eliminate most 'background' or 'shadow' noise while maintaining a high level of sharpness.

High ISO noise filter - This adaptive filter works by comparing signal-to-noise ratio of each RGB channel and filtering each channel appropriately. Use when noise appears in an image (usually at high ISO values over 200).

D1 ISO noise filter - Specifically designed for the Nikon D1 digital camera, this filter will remove both banding noise and high frequency noise (dots) from images at high ISO. Note that this filter will ONLY work on original images (JPEG or TIF). This filter will NOT work if you have already modified the original image in any way (smoothing, despeckle, etc).

Dark frame subtraction - Use this filter to subtract hot pixels from long exposures. You may simply subtract dark frames from images, or interpolate hot pixels based on the dark frame. Try both options to see which works best for your shooting conditions. If you select a folder, Qimage will look through the entire folder until it finds an image that has the same camera model, shutter speed and ISO speed. If an match is found, the image is subtracted from the original. If no match is found, the filter is not performed and the original image is returned (without dark frame subtraction). If you select an individual image, that image will be subtracted from original(s) regardless of EXIF information match.

To access these filters, double click on any thumbnail or print to bring up the image in the image editor. The noise filters are located on the middle/right side of the window.

Image Comparator - Qimage can be used to compare two images side-by-side. Simply add two (or more) images to the queue and right click on the preview page and select "Comparator". If you have more than two images already in the queue, you can compare any two images by selecting the two images first. After right clicking on the preview page, select "Comparator" and Qimage will display the two images side-by-side.

The images are initially loaded at a 1:1 ratio (1 screen pixel = 1 image pixel) so that you can scroll both images to see details, however, by right clicking on either image, you can zoom in/out, rotate the image or brighten/darken the image(s). Note that this screen displays EXIF information above both images. Also be aware that the brighten and darken function are only available as an aid to assist in comparing the two images. Any filtering or editing should be performed first using the image editor.

To scroll the image when the image is larger than the display box, you can left click and drag the image with the "hand" or scroll using the scroll bars on the bottom and right of the image.

Useful image comparing tips:

- Use your mouse wheel to zoom in/out.
- Right click and use the "Lock" feature to lock both sides so that they zoom/scroll together
- Concentrate on one image and repeatedly press Ctrl-S (this swaps the left/right images) to detect subtle differences between two very similar images.

Copyright/Signature (only available in Studio Edition) - Select an image on the preview page, right click, and choose "Copyright/Signature". Select a copyright/signature image and a location for the copyright/signature and Qimage will print the copyright/signature on the print at the identified locaiton. You may create a copyright of any size by using your photo editor and defining the image size (in inches or cm). Your copyright/signature will be stamped on the image at the size identified in the copyright/signature image. For example, if your copyright/signature image was defined as 1.5 inches across by .25 inches tall, your copyright/signature will be stamped at that size on all prints regardless of print size. The recommended resolution for copyright/signature images is 300 PPI. Since Qimage reads the embedded image size from your copyright/signature file, it is similar to using a "rubber stamp" on your desk to stamp the photos that you print.

Note that each copyright/signature image can have an associated mask that works similar to the masks used in Qimage cutouts. The difference is that with the copyright/signature mask, your mask is separate from your main image, giving you much more freedom. Your copyright mask should be the same file name with "-mask" appended to the file name. For example, if you choose "my copyright.tif", the associated mask should be "my copyright-mask.tif" *in the same folder*. The mask should contain a level of transparency from black (transparent or "all image") to white (translucent or "all copyright") or any value in between to give various levels of transparency from 0 to 255. You may open the

copyright sample included with Qimage in your photo editor as an example. Note that copyright/signatures are normally stored in the "Signatures" folder under your Qimage install folder but Qimage will accept images from any accessible folder.

If you would like your copyright/signature to appear on each photo automatically whenever you add photos to the queue, you can select "Edit" from the Qimage main menu, "Preferences", "Automatic Signature/Copyright", and select "On". Once you select "On", the copyright/signature dialog will open and you can choose a file. Once you've chosen a copyright/signature file, that copyright will automatically be added to each print when adding images to the queue/preview page. To turn off the automatic copyright, simply use "Edit", "Preferences", "Automatic Signature/Copyright" and select "Off".

Cropping - You may have noticed that you sometimes cannot fit an entire picture within a "commonly used" frame. For example, there is no way to fit a 1600x1200 image into a 6x4 frame without cutting off (cropping) some of the image. You would normally do this by printing the image a little too large and trimming the edges that overlap the frame. Qimage can do this for you automatically and without wasting ink by printing larger than necessary. If the image fitting button (scissors icon) located on the "Print Properties" auto-popup panel is depressed, Qimage will crop out the middle of the photo, discarding a portion of either the top and bottom or left and right to force the image to fit in the size selected whenever necessary (when the image aspect ratio is different than your selected print size). In contrast, if the image fitting button is not depressed, Qimage will not crop any of the image. Instead, it will shrink the image so that the entire image fits in the frame selected, allowing some white border to show on the edges if necessary. It is important to note that the image fitting button located on the "Print Properties" panel applies to both new images being added to the queue and can also be used to change the image fitting of existing prints on the page.

Note that when "Crop to Size" is turned on (scissors button depressed), you have given Qimage permission to crop some of the image to force it to fill the entire frame. Qimage will automatically default to cropping out the exact center of the image. If you would like to crop a different section of the image instead of accepting the default center cropping, you can easily move the crop for each print using the cropping tool on the page editor (see example 3a in the Learn by Example section) or even create a multi-purpose crop that is placed on the image itself and applies to multiple print sizes (see example 11 in the Learn by Example section of the help).

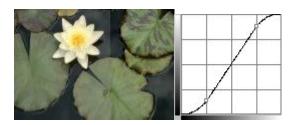
The two types of cropping in Qimage

Print cropping - If you just want to adjust the crop for certain size prints, simply click the "Edit Page" button under the preview page on the main window and click on the "Cropping" tab on the right of the page editor window. Using the cropping tool in the page editor, you can visually adjust the portion of the image that gets printed. As an example, if you have selected a 5x7 print size and you have auto cropping turned on (scissors button on the main window is in the down position), Qimage will automatically crop out the center portion of your image to create prints that are exactly 5x7 inches in size. Sometimes the center may not be the best crop, however, so to adjust the area that is getting cropped, just use the cropping tool in the page editor and you can click on the small image in the cropping tool and drag it left, right, up, or down until it shows the portion you would like to include in your 5x7. You can also use the zoom lever to zoom in on an important part of the photo. Once you are done, Qimage will always remember the chosen crop/zoom for that particular image at the current size (5x7). In the future, each time you add that image to the queue at a size of 5x7 you will get the same crop, making it unnecessary to redo your crops each time you decide to reprint at the same size! Note that each time you choose a *new* size that you have not previously cropped (such as 4x6), Qimage will always default to a center crop and you can adjust from there as necessary. Since Qimage remembers your preferred crop for each print size separately, it is possible to fine tune all your crops for different sizes to look best at that given size.

Image cropping - Sometimes it is desirable to crop off certain portions of an image if you never want them included. For example, in a family photo, you may have a trash can on the left and an open door on the right. If you would like to crop the image so that the trash can and the open door never show

and are effectively removed from the image, you can use the image editor to apply a crop to the *image* itself, placing your crop around the family members only, cutting off the superfluous objects on the left/right. To do this, we add an image to the queue and then double click on that image on the small preview page to open the image editor. The image editor will open and you can create a crop rectangle by clicking/dragging on the image from the upper left corner to the lower right corner. Once your "crop box" has been highlighted, move your cursor inside that box to black out all areas outside the crop so that you can see what the cropped image looks like. Once satisfied, click "Done" and then "OK" to associate this crop with the image. Note that when you associate a crop in this fashion, the original image has not been changed: Qimage simply saved information telling it to honor the crop each time the image is opened. As far as Qimage is concerned, the cropped area is now all that exists for this image (until/unless you delete the crop in the image editor). For convenience, note that Qimage allows you to click "Crop lock" and specify a certain aspect ratio for the crop. Clicking "Crop lock" and entering 4 and 3 next to the check box, for example, will ensure that your cropped area always matches a 4:3 or 3:4 aspect ratio.

Curves - The most common use of the curves filter is to change the contrast of different parts of an image. The following illustrates a common example for use of the levels filter in the image editor.



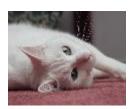
The thumbnail above represents an image with contrast that is a bit too low (left side of image). We can use the curves filter to create a typical contrast enhancing "S" curve which will darken the shadows and brighten the highlights. Instead of a straight line from bottom left to upper right which would indicate no change, we have grabbed a point on the graph about 1/4 from the left and dragged that point downward a bit. In addition, we grabbed a point about 3/4 from the left and dragged that upward to create the above "S" curve. The difference in contrast is visible with the original on the left side of the thumbnail above, and the increased contrast on the right. Notice that the gray haze caused be low contrast has been removed from the right/filtered side of the image.

Note that up to 17 individual points can be added to define the shape of the curve, so very complex curves can be created for other purposes. To add a new point to the curve, simply click in the area on the curve to reshape and drag up/down. To move an existing point, just click on that point and reposition it up/down. To remove a point from the curve, simply right click on that point. To see where a particular color in an image falls on the curves, click the dropper and then click on the image to place [red] points on the curves that correspond to the clicked area of the image.

With "lock all" checked, curves apply to all colors equally. You can uncheck "lock all" and apply different curves to individual colors by using the "Apply to" color at the bottom of the window. More information regarding general use of curves can be obtained via any Internet search tool using the keywords "image" and "curves".

Cutouts - Use cutouts to add a "scrapbook" effect to your printouts.

When an image is printed, it is normally printed as a rectangular print like the one below.



Cutting out a portion of the image can add personality to your prints. The "Oval" cutout was used on the print below.



Cutouts can also be used as a blending effect. The "Fade-oval" cutout was used on the print below.



Access: To use cutouts, you must apply the cutout to the image(s) using the image editor. As with all image edits that you choose to associate with originals, you are using a mask which is placed on top of the printed image. To use a particular cutout on an image::

- 1. Double click on a thumbnail or print to open that image in the image editor.
- 2. In the "Image Effects" box, click the dropdown box to select a cutout by name or click the "Cutout" button on the left to select a cutout by viewing thumbnails. Note: if no thumbnails appear after clicking the cutout button, click the third button at the top of the "Cutout Preview" window to regenerate the thumbnails.
- 3. After selecting a cutout, the screen will update to show you what the effect looks like.
- 4. Note that cropping and cutouts go hand-in-hand so if you crop off an area, you'll see how the cropping affects your cutout area.
- 5. Click "Done" on the lower right of the image editor window.

That's it. The images will remain in the selected cutouts for both display (in the slide show) and on printouts until you remove the associated filter.

The Power of Cutouts!

Note that although some cutouts are provided with Qimage, there is no limit to the cutouts that you can design yourself. Cutouts are a very powerful feature and once you understand how they are created, you can create your own designs. The section below described how to create your own cutout designs.

The simple story: Cutouts are located in your Qimage folder under a subfolder named "cutouts". If you accepted the defaults when installing Qimage, your cutouts will all be located in the "c:\program files\qimage\cutouts" folder. To add a cutout to the list of available cutouts in Qimage, you need only create an image file (in any format) and copy it to the "c:\program files\qimage\cutouts" folder.

How to create a cutout image: To create a cutout, just use your favorite image editor and create a new image in 24 bit (16 million) color format. The image can be anything you like, however, Qimage treats all shades of pure gray as a transparency level: 0,0,0 is 100% transparent and 255,255,255 is opaque and will show as white on the printout. In other words, the original image will "show through" the cutout for any pixel in your cutout that has RGB value 0,0,0. A gray shade of 128,128,128 will show your image "half faded" to white. A value of 255,255,255 in your cutout will show as white in the resulting image (none of the original image will come through).

All other shades of pure gray can be used to specify how much of the original image makes it through to the result, with 0,0,0 showing the original image and 255,255,255 having the original image completely "blocked" (white). Given this, if you look at the first oval cutout above, it is no more than an all white image with a circle in the center filled with RGB color (0,0,0). Why is the image above an oval cutout and not a circle? Because the cutout is always stretched first (distorted) so that it fits over the target image exactly. This is handy because if you look at the oval cutout supplied with Qimage (which is actually a circle), the top, bottom, left and right edges always touch the edge of your photo giving you the maximum possible area inside the oval! The second, faded oval, is a cutout with 0,0,0 near the center, fading through 1,1,1, 2,2,2, 3,3,3, etc to the edges where the 255,255,255 completely masks the original image.

The obvious question at this point is, "What if I want a shade of gray to appear as part of the image (in my cutout)"? You might want to do this if, for example, you want to add some black text in the white (masked) areas outside the oval above. Just remember that Qimage will only use RGB values as transparency masks if they are *exactly* equal in all three RGB channels. So, if you want black text, just set the color of your text to 0,0,1 instead of 0,0,0. Seeing that the blue value is 1, Qimage will not treat the text as a mask and the true color (0,0,1) will show on the cutout rather than the underlying image. Since the difference between 0,0,0 and 0,0,1 is negligible, no one will ever be able to tell that your text has 0.4% blue, and nearly all printers will print that color as completely black. Other shades of gray can be achieved in a similar fashion, for example, middle gray could be very closely approximated by using 128,128,129 instead of 128,128,128.

Complexity: It doesn't take long to realize that you can get pretty complex with your cutouts. Just be aware when creating new cutouts that they are always stretched to fit the image and THEN stretched again to fit on the paper. For this reason, always create cutouts of high enough resolution for the application. If you create a circle cutout that is only 50×50 in resolution, obviously the cutout itself will look jagged when printed (but the underlying image may not). Cutout resolutions of at least 1000×1000 are recommended.

Creating copyright "stamps" with cutouts: Using your photo editor, simply create an image that is filled with color RGB(0,0,0). Then, in the lower right corner (or wherever you like) add text at a different color (green, yellow, black, white, etc). For example, if you regularly work with images that are 2048 x 1536 resolution, create an image that is 2048 x 1536 that is filled with the color RGB(0,0,0). Then, in the lower right corner, if you want white text that says "Copyright 2003, Your Company Inc.", simply make sure the text color is 255,255,254. Save that image in your cutouts folder and apply it to a batch of images. When applied, you will see the copyright notice where you typed it. It's that simple! And remember, although you can associate the cutout as a filter to be applied to originals, you can also (with any filter) apply the filter to create new images so that the images can be used on the web, etc. To see an example of how professional you can get with copyright stamps, try the "copyright" cutout included with Qimage. This is a copyright "sample" cutout that will show you how to create semi-transparent effects in your copyright stamps!

Frames: cutouts that don't mask part of the image

You may wish to place a cutout *around* your images, ensuring that the entire image displays inside the cutout. Cutouts are normally used as a mask that is overlayed on the image, however, you can specify that you would like to use a cutout as a frame that surrounds your images by simply adding ".frame" in the cutout's file name. For example, a cutout showing a wood frame may be named wood.tif or

wood.frame.tif. If the name of the cutout file is wood.tif, the frame will appear over your image, masking out part of the top, bottom, left, and right of the image. If, however, you change the file name to wood.frame.tif, Qimage will place your image in the center (black) rectangle and "shape" the frame around the image. Note that Qimage "detects" the inner black rectangle within the frame, so frames work best when you have a rectangular black area in the center of the cutout; odd shapes will not "fill" properly.

Fading to colors other than white

While neutral colors from 0,0,0 (transparent) to 255,255,255 (opaque) have special meaning in that they dictate the amount of transparency, it is possible to fade to colors other than white (the default fade color). Simply add the fade color enclosed in square brackets as part of the file name. For example, fade-oval.tif fades from transparent in the center to white at the edges. The same file with the name fade-oval[0,0,0].tif will fade to black at the edges instead of white. Naming the file fade-oval[0,255,0].tif will cause a fade to green at the edges, and so forth. Note that regardless of the fade color, 0,0,0 still indicates 100% image and 0% fade color and 255,255,255 indicates 0% image and 100% fade color. Also note that if you would like your prints to fade into the color set as the page background color, do not use the file name fade override as it will override the fade color without considering the page background color.

Dark Frame Subtraction - Used to remove "hot pixels" or to remove color/brightness bias from frames

The dark frame subtraction filter serves three purposes, and therefore has three options:

- (1) Simple subtraction: When taking long exposure shots of say 8 seconds or more, CCD's will normally produce visible specs of light in the image called "hot pixels". These hot pixels can deter from your image. The simple subtraction method of dark frame subtraction is to subtract a reference (black except for the hot pixels) frame from your original image, thereby subtracting the bright pixels from the original image. To do this, simply take a shot at the same exposure with identical camera settings and the lens cap on the camera. For example, if you take a 16 second shot of a night scene, simply put the lens cap on the camera and take another 16 second shot with all settings identical. The result of the second image is the dark frame: the only image "data" that it will have are the hot pixels. You can then subtract that second frame from the first (which contains your image). This is a common method of removing hot pixels and it normally works well since the exact same pixels are usually "hot" in every frame if the camera settings have not been changed.
- (2) Hot pixel interpolation: In very long exposures such as 30 seconds or "bulb" exposures, pixels can be so "hot" that they clip. In other words, they can be too hot to subtract with good results because the hot pixel has "topped out" at maximum brightness in at least one of the color channels (a value of 255). The simple subtraction method doesn't work well in these cases because the hot pixels have maxed out and contain NO image data at all. As a result, when you subtract these pixels from your original image, the pixels will end up black or missing the red, green and/or blue channels resulting in dark (rather than bright) specs in your image. Using hot pixel interpolation, however, you can avoid this problem since hot pixels will be identified in the dark frame and interpolated using data around the hot pixels.
- (3) Frame equalization: This is a new method that is not technically related to "dark" frames. Most imaging systems have some level of frame bias due to slight vignetting, electronic interference, etc. For example, many have noticed a very slight green cast toward the left of all images using the Fuji S1 camera due to some internal electronic interference. In addition, even on the most expensive lens and camera systems, most lenses do not pass an equal amount of light in the center of the image when compared to the edges. This is a well known and normal aberration of lenses called vignetting and can be seen in images as a darkening at the edges of the picture or darkened corners. Fortunately, effects

like these are normally consistent from shot to shot, at least when using similar focal lengths (zooms). Frame equalization allows you to completely remove these effects by using a single test shot to remove any color/brightness bias across the image. Note that this will NOT work to remove fringing since fringing is based on chromatic aberration and depends on image content. To use this feature, simply take a shot of a white piece of paper where the paper is evenly illuminated and covers the ENTIRE picture. Take the picture slightly out of focus and make sure that the paper is smooth with no specs or other discoloring. Use an uncompressed (TIF) mode if possible and turn camera sharpening OFF for the shot. This becomes your frame equalization reference. It is not necessary that the paper be exactly white or even that white balance is perfect, only that the shot is not over or underexposed. If the shooting conditions are as prescribed, the resulting image **should** be a frame of one smooth color that covers all areas of the image. In other words, the RGB values across the image should be relatively the same. You will probably notice, however, that due to inefficiencies in the camera and/or lens system, that the color is not smooth across the entire frame. The corners may be slightly darker than the center, etc. When you use the frame equalization filter, Qimage will use this reference frame to "reverse" the bias in the image to produce a smooth, evenly lit scene.

NOTE: In all three methods above, Qimage allows you to select a folder rather than a single image to subtract. If you supply a folder of images rather than an individual image to subtract, Qimage will look through the folder and select (based on EXIF information) the image that matches the closest to the original in exposure time, ISO speed, resolution, etc. Using this feature, you can create a folder of dark frames at different exposures such as 2 seconds, 4 seconds, 8 seconds, etc. This allows you to take all of your dark frames once and refer to them later without the need to take the dark frames in the field as you go.

Default size - identifies the default print size to be used when adding images to the queue without specifying a size (without clicking the size dropdown to select a size).

• Since Qimage allows you to add images to the queue without specifically choosing a print size when you click the "+" icon on a thumbnail or drag a thumbnail to the preview page, it must have a default size for those images. The default size is the last size used when adding images to the queue and is listed in the size dropdown on the "Print Properties" panel. To change the default size used when using the one-click "+" or drag/drop, you can right click on the "+" on any thumbnail. That will bring up the "Print Properties" popup where you can select a new default size.

Delete Filters - Qimage offers a quick way to remove associative filters (image edits) and revert to the original image. To quickly remove associative edits from images, simply select one or more thumbnails or prints and then right click and select "Delete Filters".

Mark Edges - Click the "Job Properties" tab on the bottom/right of the main window and check "Edges" to produce crop marks or a thin outline around each print to aid cutting.

The two options below produce lines that extend past the edge of prints to aid cutting. Be aware that since crop marks and guide lines extend beyond the edges of prints and into "unused" portions of the paper, they should not be used if you intend to reuse/refeed the paper into the printer at a later time in order to use more of the paper.

- Crop marks*: crop lines that extend 1/4 inch from all four corners of each print.
- Guide lines*: guide lines for cutting extend from all four corners of each print all the way to the
 edge of the printable area on the paper.

* Note: crop marks and guide lines will not print on corners/edges that are too close to the printable margins of the paper. Unless borderless printing is selected, your printer will not be able to extend the crop marks/guide lines all the way to the edge of the paper due to physical printer limitations.

The remaining four options produce hairline borders *on* the edge/corners of prints. Since these options produce lines that do not extend beyond the edge of existing prints, they do not use more paper unlike crop marks and guide lines above.

- Solid black line: Produces a solid black hairline border around prints.
- **Solid line: use border color**: Produces a solid hairline border around prints in the color currently chosen for "border".
- Dashed black/white line: Produces a dashed hairline border around prints.
- Mark corners: Produces a solid black hairline border 1/4 inch in length from each corner of prints.
- Mark corners: use border color: Produces a solid hairline border 1/4 inch in length from each corner of prints in the color currently chosen for "border".

Edit Images - The image editor can be accessed via double clicking on a thumbnail or a print on the preview page.

You may edit your images by changing the filter parameters on the right side of the window. To assist in the design of your filter, the following functions are available within the image editor window:

- After changing any number of parameters, you may click the "Apply" button on the bottom of the panel to view the filter on the current image. Note that depending on the complexity of the filter, it may take a few moments to apply the filter.
- To switch between the original and filtered images, select "View" from the top menubar and select "Original Image" or "Filtered Image".
- To preview the filter in "real time" (when moving one of the sliders for example), simply right click on the image and open the zoom/preview window. If you leave this window open while changing filter parameters, the zoom/preview window will update as you make changes.
- If you do not want to save the edits right now but simply want to save the filter parameters so that they can be loaded quickly in the future, click "File", "Save Filter Parameters".
- Note that if you would like to edit a batch of multiple images, add the images to the queue (preview page) first and then double click the first image on the preview page to edit that image. When you click "Done", you will have the opportunity to apply your edits to just that one (first) image or to all images in the queue.

Full Page Editor Functions

To access the Full Page Editor, click the "Edit Page" button under the preview page on the main window.

All - apply selected bounds to all images in the gueue (document).

Bounds - size of the selected print(s). See "Defaults" under main screen functions for more info.

Click/Drag - click and drag any corner of the selected image to resize the image visually. Click and drag the center of the image to move the image visually (will set image positioning to "Freehand" mode automatically).

Cropping Tool - click/drag the image in the crop window (accessed via the "Cropping" tab) to adjust the location of the crop. Note that Qimage automatically remembers the crop you prefer for each image based on the aspect ratio of the print so once you identify your preferred crop for a 4x6 print of a certain image, Qimage will honor that crop every time you add that same image at a size of 4x6, 3x2, 8x12, etc.. If you specify a different crop for an 8x10 size of the same image (since that is a different aspect ratio), that crop will be honored for 8x10, 5x4, 16x20, etc.

Details - click details to view embedded image information such as shutter speed, flash, zoom, etc.

Go To - select a page and the page editor will display that page.

HQ Preview - click the HQ Preview button to refine the view of the current page (high resolution print preview) - applicable unless you are already using "All Images" under "View" (see below).

Location - enter a specific location on the page based on distance from the left, right, top, and bottom edges of the paper.

Print Page - click this button to print only the page being viewed. Return to the main menu if you would like to print the entire document.

Right Click - right click on the page to activate a list of functions that apply to the selected image on the page, including text annotations, copy/cut/paste, etc.

Selected - apply the selected bounds to the highlighted image only.

Soft Proof - simulate the color of the current page when printed with the current printer ICC profile (both Mntr ICC and Prtr ICC must be enabled).

Swap - rotate the "picture frame" (bounds) 90 degrees. The effect of this function depends on the "Image Fitting" function (see main screen functions).

View - select the level of detail desired on the page preview.

• Select "Templates Only" to show only the name, position and orientation of each image on the page (fastest).

Select "Selected Image" if you wish to show the actual image only for the highlighted image.

Select "Cached/Small Images" to load images only if they can be loaded quickly.

Select "All Images" to view all images on the page (slowest). The "All Images" option will show you exactly what your printout will look like.

Edit IPTC Image Info - Qimage allows you to enter IPTC data such as a title, author, copyright, etc. to be stored in the image file. To edit/add IPTC information to an image, simply select image(s) from the thumbnail grid and then right click in the thumbnail grid and select "Edit IPTC Image Info". You can then edit the available IPTC data fields and save the information to images as you go. Note that IPTC information can only be added to JPEG/TIFF files.

E-mailing photos - Typically, most of your photos will be high resolution original images straight from your camera. Since these are maximum quality images intended for optimal display/printing, they are generally larger than necessary for the purpose of e-mailing snapshots. To avoid sending very large attachments which can cause long download times for the recipient, Qimage provides a method of downsampling (reducing the size of) photos prior to sending via e-mail. If you would like to send some photos from your digital camera to others, first use the Qimage file browser to locate a folder that contains your photos. Then select the photos and right click in the thumbnail grid, select "Send via E-mail", and choose a size (resolution). You may wish to refer to example 12 for more detailed instructions.

Qimage's {Q}e-mail work folders:

Whether you are using "Send via E-mail" from the thumbnail grid or "Create E-mail/Web Copies" from the queue, Qimage will create/use a folder named {Q}e-mail. This folder will appear as a subfolder under the current folder (the folder where thumbnails are being displayed). The "{Q}e-mail" folder should be considered a "scratch" or temporary folder since the {Q}e-mail folder is cleared each time the "Send via E-mail" and "Create

E-mail/Web Copies" function is used. If you would like to keep the new e-mail/web images created by Qimage rather than just creating temporary/scratch copies for sending via e-mail, you should copy/move the files from the {Q}e-mail folder to another folder to ensure that they will not be erased the next time you use the e-mail/web functions.

Note regarding invoking e-mail clients from Qimage:

Qimage uses MAPI (Message Application Programming Interface) to invoke your e-mail client. Unfortunately MAPI is "hardwired" for Microsoft products and most non Microsoft mail clients do not fully support the MAPI spec. As a result, if you use a non Microsoft mail client, Qimage may not be able to fully automate composing a new e-mail with images attached. If Qimage runs into a problem and detects that your mail client is not responding properly to MAPI commands, it will open your default mail client with a new message ready to be sent but without the images attached. A secondary "Explorer" window will open showing the location of the images in question so that you can manually drag images (files) from the explorer window to your mail message's "attachment" tab and then send the message.

If you are using a non Microsoft mail client and you are having trouble with Qimage invoking e-mail, you may wish to install MS Outlook or Outlook Express just to allow them to set themselves as the default mail client. By allowing MS Outlook/Outlook Express to be your default mail client, you can still use your non Microsoft mail client for all your typical e-mail tasks while regaining MAPI compatibility for programs that "spawn" e-mail tasks.

Qimage also offers the ability to send email directly. See "Edit", "Preferences", "Mail Sending Options" to set up parameters such as your outgoing (SMTP) server, incoming mail server, etc.

EXIF Hotbar - The EXIF hotbar automatically shows image information on the lower status bar of the main screen as you pass the mouse pointer over images. This allows you to quickly examine f-stop, shutter speed, etc. instantly. Note: if you have images that are corrupted or unreadable, you may want to turn this feature off so that Qimage does not try to examine each file as you pass the mouse pointer over the thumbnails. To turn the EXIF Hotbar on/off, click "Edit", "Preferences", "EXIF Hotbar" from the main screen.

EXIF and other image information - Any embedded image information (exposure info, f-stop, etc) can be displayed in the following ways:

- If "EXIF Hotbar" is turned on, the most useful information is shown on the bottom status bar as you pass the mouse pointer over each thumbnail.
- From the thumbnail view on the main screen, right click on a thumbnail. When the popup menu appears, select "View image info". Ctrl-I can also be used with the mouse over a specific thumbnail.
- From the slide show (right click on the preview page and select "Slide Show"), press the
 "Details" button in the upper right. Image information will be displayed for the image currently
 being viewed.

Exposure Compensation - This filter brightens underexposed images by expanding the dynamic range of the image.

To access this filter, double click on any thumbnail or print to open the image editor and then check the "Exposure" box to add the exposure filter and then click "Done".

File - The "File" menu contains functions related to file operations like recalling/saving jobs or settings

and also contains print related functions.

Recall: This function should be used to recall Qimage settings. Anything from just the main window setup to an entire job including images in the queue can be recalled.

Save: This function should be used to save Qimage settings. Anything from just the main window setup to an entire job including images in the queue can be saved.

Flash Card Copy/Move: Use this function to download images from a flash card in a card reader attached to your computer.

Import via Twain: This function can be used to import a scan from a scanner or an image from a digital camera that is tethered directly to the computer.

Print To: Use this function to select whether you would like to print directly to a printer or to image files.

Page/Printer Setup: This function is used to access the print driver settings that control things like paper size, type, print quality, etc. or to set up the page for print-to-file.

Print: Use this function to print the images in the queue (on the preview pages). You may print all pages or just a range of pages.

Open Automated Job Log: Qimage keeps a record of jobs when they are printed. Use this function to view/recall a previous print job.

Exit Without Saving Settings: Use this function to exit Qimage without saving program settings such as the current folder, main window size, current print size, etc.

Exit: Use this function to exit Qimage normally: all settings in Qimage will be saved and recalled the next time you use Qimage.

Filters (Managing Associative Filters) - Methods for managing the filters that you have associated with images.

Qimage offers a number of methods to help identify which images have been edited and have associated filters, view/edit/modify those filters, and remove filters associations.

- What are associative filters An associative filter is nothing more than a small file that describes a set of actions to be performed on an image every time the image is opened. Instead of creating new images every time we want to filter our originals, we can simply create this set of actions so that every time Qimage displays or prints the image, the same set of actions is performed on the image. This associative filtering has a number of important benefits: (1) You can change the appearance of your original without using space to store a second copy of the image, (2) You maintain the integrity of your original image since the image itself is not modified, (3) You can open the filter actions at any time and view what those actions are, changing them as you like, i.e. you don't lose sight of what you did to the image, and finally (4) if you would like to save your images that have associative filters as another (filtered) copy so that other imaging applications can "see" the changes, you can do that as well. Note that since associative filters describe a set of actions in a file that is separate from the original image, other photo software will only see the original (they won't know how to associate the filters). Qimage, however, will treat an image with an associative filter just like an original. In other words, you never have to worry about "applying" the filter when you view or print the images because Qimage knows to do that with every image operation.
- Locating associative filters Qimage will display the file name under each thumbnail in red if
 there is a filter associated with that image. When scrolling through a folder and viewing
 thumbnails, if the file name under the thumbnail is black, there is no filter associated with that
 image. If the name is red, however, the image displayed directly above that red file name has a

filter associated with it.

- Removing associative filters A red file name in the thumbnail grid indicates that the image has an associated filter that is affecting the appearance of that image whenever Qimage displays or prints that image. This associative filter is nothing more than a small file that describes a set of actions to be performed on that image every time the image is opened. Deleting the filter file that corresponds to an image will remove this set of actions and therefore restore the appearance of the image. To do this, simply select one or more thumbnails in the thumbnail view and right click in the thumbnail area and select "Delete Associative Filter(s)". Then, simply select "Delete Entire Filter" from the menu. Doing this removes all edits that you have performed using "Edit Image(s)".
- Adding a new associative filter or changing existing filters Once again, filters are simply
 parameters that are created when you double click on a thumbnail or print to edit the image(s).
 To change, add new, or remove existing filters, you can simply double click on the thumbnail or
 print, make your changes, and click "Done".
- Creating new filtered images instead of associating filter actions with originals When applying filters from the image editor window, you can select "Create New Images" instead of "Associate". This option allows you to save copies of the filtered images rather than simply associating the filters with the originals.

Flash Card Copy/Move - This function transfers images from your camera's memory card to your PC's hard drive (or other drive location).

The Flash Card Copy/Move main window

The main window is split into two main sections:

- 1. The source panel: The source panel (top half of the main window) shows the files that exist on the flash card that is currently inserted into your computer or card reader. When Qimage Ultimate is first installed, it is set to recognize flash cards whenever a flash card is inserted and close when the flash card is removed. This behavior can be changed in "Edit", "Settings" on the Flash Card Copy/Move dialog. Note that you can also click on the light blue header labeled "Source" to manually select a source location. Note that the information displayed in the source panel is for reference only: you do not need to do anything in that area although you can double click on folders there to open an explorer window to browse contents if you like.
- 2. The operations panel: the operations panel is where you define which operations are to take place. Files can be copied or moved to one or multiple locations. Note that photos are being copied to two different locations while videos and other files are moved to just one location. The operations here are quite flexible and allow copying/moving files to many different locations in one operation including multiple drives or even different computers on a network! Note that by default, Flash Card Copy/Move is set up so that you can select a "To Folder" of your choice where most of your images reside and a "Subfolder" of that "To Folder" is created based on today's date. These options are configurable of course, but this setup facilitates the "one click and done" feature described below.

Features

One click and done!

Once you define the operations that you normally perform on flash cards, Qimage will remember those operations from that point forward. By default,

Qimage is find your flash card automatically so that when one is inserted, the "source panel" will populate automatically, showing the files on the card. At that point (and after you've set up your desired copy/move commands the first time), you can click the "Go" button and you are done! If move commands are used, the card will be cleared of all data and not only will the data be copied to the specified locations, but the card will also be cleared and is ready to place back in the camera for a new batch of shots. Of course, there are many options to allow users to customize how they transfer or "pipe" data to different places from their flash cards so see the settings section below for more information.

"Pipe" your photos and videos to multiple locations with a single click

No need to open explorer windows, copy, and paste. Qimage's Flash Card Copy/Move function allows you to define as many destinations for your photos and videos as you like. Have a network and need to put photos on 10 machines? No problem. Just like to keep a backup copy in a second folder? Easily done. Simply define each operation in the operation table.

Quick verification

Any "move" operation actually consists of two separate operations: first the file is copied and then the source file is deleted leaving only the new (target) file. Flash Card Copy/Move actually verifies the existence of the target file and the file size to verify that the copy operation was successful prior to deleting the source during "move" operations so your data is safe!

Settings

Program Options

Automatically insert today's date in the operation table subfolder (default=checked): Check this option if you would like to create a subfolder based on today's date. If your "To Folder" in the operation table is "c:\photos" for example and today's date is 9/6/2009, the subfolder will be 2009-09-06 and files will be copied/moved to c:\photos\2009-09-06. Flash Card Copy/Move is set this way by default to facilitate "click once and done". With this option turned on, you can add other text to the subfolder if you wish. For example, you can change the subfolder from "2009-09-06" to "2009-09-06-birthday" if you wish, but the date must be some part of the subfolder name. If you'd rather pick your base photo folder in the "To Folder" and manually type the subfolder name each time, just uncheck this box. If this box is unchecked, you can also leave subfolder blank and simply choose the destination folder in the "To Folder" entry. In other words, if you want to select a destination folder manually each time, just uncheck this option and make sure all "Subfolder" entries are blank in your operations table.

Automatically rename photos by date (default=unchecked): Check this option if you would like destination **photos** to be renamed based on date or your user defined custom renaming criteria (click the "Auto Rename Options" button to define). As an example, _MG_0001.JPG would be renamed to something like "2009-08-06 19.32.32.JPG" in the destination location(s).

Automatically rename videos by date (default=unchecked): Check this option if you would like destination videos to be renamed based on date or your user defined custom renaming criteria (click the "Auto Rename Options" button to define). As an example, 00001.MTS would be renamed to something like "2009-08-06 19.32.32.MTS" in the destination location(s).

Check availability of destination folders on startup (default=unchecked): Check this option if you would like Flash Card Copy/Move to make sure all the destination folders in the operations table are available when the program first starts. All folders that are not available such as folders on an unavailable PC on a network or on a removable drive that is not inserted will be highlighted in the operations grid. This option defaults to off (unchecked) because Flash Card Copy/Move will make this check every time you click the "Go" button anyway to ensure that all destinations are available.

Monitor these drives for photos/videos (default=all removable media drives checked): By default, Flash Card Copy/Move will check all drives that are labeled as removable media drives on your system so that it can find any type of flash card inserted into your computer or a card reader connected to your computer. Most systems with built in card readers use various drive letters for different types of media. A compact flash card might show up as the "I:\" drive while SecureData cards might show on drive "K:\". If you have specialized removable drives, you can tell Flash Card Copy/Move not to check certain drives for inserted media. For example, your drive H: might be an old ZIP drive so you might want to uncheck the H: drive in the list if Flash Card Copy/Move keeps opening and thinking there are photos on that drive. In most situations, you will not have to uncheck any drives

Raw Photos and Miscellaneous Files: The settings in the "Raw Photos" panel and "Miscellaneous Files" panel control how raw photos and non photo/video files on your flash cards are handled. By default, Flash Card Copy/Move has all checkboxes checked which tells the system to copy raw photos into a separate subfolder named "Raw" and to develop them in a separate "Developed" folder. Let's look at an example based on the default settings. Let's assume your "To Folder" in your operations table is "c:\photos" and your "Subfolder" is today's date which is 2009-09-06. Let's also assume that you have some JPG files/photos on the flash card and some raw files as well. In this example, a "Copy", "Photos" operation would copy files to these destinations:

- c:\photos\2009-09-06: your JPG photos will be transferred here.
- c:\photos\2009-09-06\Raw: your raw photos will be transferred here.
- c:\photos\2009-09-06\Developed: your raw photos will be developed into this folder.
- c:\photos\2009-09-06\Misc: all files on your flash card that are not photos or videos will be transferred here.

Floating Text - You can add text to any part of an existing page, including on top of existing photos. To access this feature, locate an existing page by browsing through the pages in the queue using the preview page on the main window. Then click the "Edit Page" button below the preview page to go to the full page editor. Once the page is opened in the full page editor, you can add text to the page by clicking the small "A" button on the right side of the window or by right clicking on the page and selecting "Floating Text" from the menu. Then simply move over to the page and click in the location where you want the text placed. The following outlines some of the options available when placing text on a page in Qimage.

- Placing text: Click the "A" button on the right side of the window or right click on the page and select "Floating Text". Then move to any area of the page and left click to place text at that location. Use the dialog that appears next to enter your text properties (below).
- Moving text: Move the mouse over the small circle next to the text to be moved. The mouse
 cursor will change to a pointing hand indicating that the mouse is over a text anchor. While the
 pointing hand is showing, click and drag the text to a new location by moving its anchor. You will

- be able to view the text as it is being moved. *Hint*: Hold the shift key down before selecting/moving a text label to move all labels that are linked to the same print as a group.
- Color of the anchors (small circles): Since text can be rotated at any angle and can be of any size, small circular "anchors" are used to "grab" floating text. The anchor color is significant because it tells you something about the placement of the text. A green circle indicates that the text is free floating and is linked to the page. A red circle indicates that the text is linked to a particular print and the text will move and be sized in coordination with that print (if the print is resized/moved, the linked text is resized/moved accordingly). A blue circle indicates that the text is linked with the print that is currently selected on the page (the print outlined by a red rectangle).
- Changing text properties: To change text parameters like shadowing, amount of rotation, font, color, etc. simply move the mouse pointer over the text anchor (small circle) next to the text in question. When the pointing hand appears, simply right click and the text properties will appear.
- **Deleting existing text**: There are multiple ways to delete text. First, if the text is linked to a particular print and that print is deleted, the text associated with that print is also deleted. Second, you may delete text by right clicking on the text anchor and clicking the "Delete" button on the text properties window. Deleting (blanking) the text on the text properties window and clicking "OK" will also delete the text label.
- Alignment: There are three buttons that control text alignment at the top/right of the text window. You may use these buttons to align text to the left, center, and right. Note that if your text is linked to a print, the text will be aligned with respect to the linked print. If the text is not linked to a print, the text is aligned with respect to the page itself. Note that the text anchor (little green/blue button on the page) can be moved left/right to allow you to slide the anchor closer to the text if you like, but this will not affect alignment if left, center, or right justify is chosen.
- Linking tip: If you know in advance (before you create a text label) that you want that label linked to a particular print, click on that print first and then right click and select "Floating Text". When you use the right click menu option to add text, the "link to selected print" option is automatically enabled by default. If you use the "A" on the right side of the window, Qimage will assume that you are adding text to the page itself rather than the print and it will not check the "link to selected print" box when the properties window is opened (although you can still check that option if you like).
- **Note on rotation**: You can rotate text to any angle you desire and that rotation with respect to the linked print will be maintained (if the text is linked to a print). Note, however that this only applies to rotating the *print* itself. For example, if you have text linked to a print and you select a print on the main window and then right click and select "Rotate frame/size", the print will rotate 90 degrees on the page, and the text will rotate also. It is important to note, however, that rotations entered through the image editor will *not* cause a similar rotation of the text because by rotating the image in the image editor, you are rotating/modifying the *image* itself, not the print. The text links only link text to prints, not the image content itself.

Folder History - Allows you to quickly navigate to any of the last 16 folders used in Qimage. To access the folder history, simply drop down the combo box located above the thumbnail grid. Note that you may add/remove folders from this list manually by first selecting the folder so that it is the current folder selected in the history drop down, and then right clicking on the arrow on the right side of the drop down box to add/remove that folder from the history list.

Notes on Freehand placement of images on the page

To gain maximum control over the printed page, you may click/drag images on a page even if you are using an automatic placement option such as "Center" or "Optimal". Prints can be resized on the preview page by clicking one of the four corners and dragging to size. Prints can be moved to a specific location on the page by clicking the center of the print and dragging the print to the new

location. For higher precision sizing/moving, use the Edit Page button to open the Full Page Editor. Note that once you drag a print to manually place that image on the page, the page you are working on will switch to "Freehand" placement mode as indicated by the small "F" button at the top/right of the

previewed page being down/depressed. For example, if you are working in "Center" placement mode and have three pages in the queue, manually moving a print on page two will result in page two switching to "Freehand" placement while pages one and three remain in "Center" placement mode (as will any new pages added later). To return a page to the current (document) placement setting and remove the "Freehand" flag, simply click the small "F" button at the upper/right of the previewed page and return it to the "up" position.

Note that you can set the entire document to "Freehand" placement at any time as well, which will prevent Qimage from auto-arranging prints altogether. The Freehand option "locks" the positioning of every image in your document so that they will not be moved automatically. If the entire document is set to "Freehand" placement mode ("Freehand" is selected in the placement tool button below the preview page), you can add images to the page by clicking/dragging thumbnails and dropping them in their initial location on the preview page. The same click/drag-to-add method can be used on individual pages flagged as "Freehand". To move prints after their initial/rough placement on the preview page, you can simply click the center of the print and drag it to a new location on the page or use the Edit Page button to access the Full Page Editor where you can drag the image in higher precision.

Moving and sizing in the full page editor:

Once a rough placement/sizing has been established on the preview page on the main window, you can refine the exact location and size of prints using the Full Page Editor which has additional functions to help place/size images. Just click the 🗾 Edit Page button to open the current page in the Full Page Editor. While prints can be moved/resized by clicking and dragging with the mouse, you may also select a print on the page and manually enter a new size in the size boxes on the right of the window to specify exact sizes. In addition, you may select an exact location for your print on the page by changing the location values under "Location" on the right of the window (if the "Cropping" tab is depressed, click "Size/Loc." to see the size and location parameters). For example, if you would like the image to be located 2 inches from the top of the paper, enter a "2" in the top location box. If you want that image to be 3 inches from the right edge of the paper, simply enter a "3" in the right location box. You may also "nudge" the prints by first selecting the print and then using the arrow keys to nudge the print left/right/up/down. Use the Ctrl key in combination with the left/right/up/down keys to nudge the print to the next nearest edge of other prints on the page for a quick and easy way to align a print with other prints. Use the Shift key in combination with the left/right/up/down keys to nudge the print to the next nearest 0.1 inch increment. Finally, to "snap" any print to the nearest 1/10 inch, simply right click on that print and select "Snap to grid".

Here are some useful tips for using "Freehand" placement:

- Add to add images to the page while in freehand mode, simply go to the page in question and drag the image from the thumbnail grid directly to the preview page on the main window. Note that the image will be dropped at the mouse pointer. If you want to move the image after initial placement, you must click the Edit Page button since the preview page on the main screen is for initial positioning only and is really meant for the rough draft.
- Add a new page to create a new page while in freehand mode, simply click the right arrow under the preview page on the main window until you reach the last page, or drop the page list down and select the last page. The next time you click the right arrow, Qimage will ask you if you would like to create a new page.
- "Bring to front" using freehand mode allows you to place images (all or partly) on top of other images. An image's position in the queue is what causes it to be "in front of" or "behind" other images. The easiest way to think of this is that images are placed on the page in the order that they appear in the queue. Images that are later in the queue will be placed on top of earlier images. You can use the "Bring to Front" command via right clicking on a print in the full page editor to bring a print to the front if another print is overlapping that print and you want the selected print to be on top.

 Nudge: On the full page editor window, select a print and use the arrow keys on the keyboard to nudge the print left, right, up, or down. Hold down the Ctrl key on the keyboard and use the arrow keys to quickly align your prints with other prints on the page. Hold down the Shift key on the keyboard and use the arrow keys to quickly align your prints to the next nearest 0.1 inch increment.

Fringing Filter - This filter removes or drastically reduces green/purple color fringing found in many 2.0+ MP digital cameras. The filter is designed to remove chromatic aberration of lenses, normally seen as a green or purple fringe around objects near the edge of photos. This filter will work well on most fringing, however, it is not designed to remove purple "halos" caused by intense light or overexposure (highlight blowouts).

To access the fringing filter, double click on a thumbnail or print on the preview page to open that image in the image editor. Check the box for "Fringing" under "Auto Correct" and then click "Done" and "OK" to associate the filter with the original image.

Full Screen View - Right click on a thumbnail in the thumbnail view. When the popup menu appears, select "Display Full Screen". Note that this option displays only the thumbnail under the mouse pointer (to view multiple images full screen, use the slide show by right clicking on the preview page). Pressing the space bar while holding the mouse over a thumbnail will perform the same function.

Note: to return to the main window, simply press the Esc key.

Global Filter - Qimage filters can be set as "global filters" without editing individual images. If you set a filter as a global filter, all images loaded by Qimage will be filtered automatically by the global filter (unless the images already contain their own individual filters). For example, you might have a lot of dark images taken without flash. You could set the exposure correction filter globally and all images will pass through the filter prior to all display operations AND prior to all print operations.

To set a global filter - Double click on any thumbnail or print to open that image in the image editor. Set up your filter any way you like and click "File" and "Save Current Parameters to File" on the top menu bar. Use a file name that describes your filter such as "exposure filter". Close the image editor window, return to the Qimage main window and check the "G.Filter" box on the bottom right of the window on the "Job Properties" tab. Pick "Select Global Filter" from the popup and open the filter file that you saved from the image editor: your global filter is now active. Any and all images accessed will pass through this filter. Important: individually assigned filters override the global filter, so if you have images that have filters associated with the individual image file, the individual filter will override the global filter. To remove filters associated with individual files, just add the file(s) to the queue, select all the images in the queue and then right click in the queue and select "Delete Filters".

To deactivate the global filter, simply uncheck "G.Filter" on the main window.

If G.Filter is checked, simply hold the mouse pointer over the G.Filter box for two seconds and the name of the currently active global filter will be displayed.

If G.Filter is unchecked, check the G.Filter box and the global filter last used will be listed at the top of the pop up window.

High Quality Work Image - The "High Quality Work Image" option is located in the image editor window under "View". If enabled, Qimage will display the main/large image using high quality sizing methods to ensure a high quality image at the size displayed on screen. If disabled, Qimage will display the work image using a much faster resizing that will result in faster display updates, however, some "jaggies" may be noticed while using the faster display. Note that this option only affects the

quality of the image displayed while you are working in the image editor window, and has no effect on the quality of the actual filters or the filtered/saved image(s).

Hyper Processing - Hyper processing makes the most of your dual/quad core system by utilizing all available processors (up to four cores). On a dual or quad core system, printing speed and thumbnail building speed can be significantly improved by turning on hyper printing and hyper thumbing. When you first installed Qimage Ultimate, the best settings should have automatically been selected based on your system configuration at the time. When making selections manually, if your system has two or more cores (processors), turn quad core printing on as quad core printing works well on either dual or quad (or more) core systems. Since thumbnail building is more memory intensive, only select the setting that matches your system: turn on dual core thumbnail building or quad core thumbnail building based on your system configuration. If you'd like to be sure you've selected the proper setting, click "Help", "Analyze Current Settings" from the main menu in Qimage. If you've made the right selections, you'll get no conflicts. If there is a better choice, Qimage will notify you.

Image Fitting: Depending on the resolution of your images (whether scanned or from a digital camera), your images may not fit into "common" frame sizes like 5 x 7 because the aspect ratio of your images is different from that of the frame. For example, a 1600 x 1200 resolution image has an aspect ratio of 4:3. Since a 7 x 5 picture frame has a different ratio, namely 7:5, your 4:3 image must be modified in one of two ways so that it fits in a 7 x 5 frame. Qimage supports both of the following methods for sizing/fitting images:

- 1. Fit in frame: One way to fit a 4:3 image into a 7:5 frame is to reduce the 4:3 image in size so that the entire image fits into the frame. Using this "Fit in Frame" method will result in an image that is 6.67 inches wide by 5 inches tall. If mounted in a frame, there would be a small amount of "white space" on the 7 inch side of the frame, but you would be able to see the entire image. "Fit in Frame" fitting is accomplished by ensuring that the scissors button on the "Print Properties" auto-popup panel is in the up position.
- 2. Crop to size: The second way to fit a 4:3 image into a 7:5 frame is to crop a small amount of image off the top and bottom of the 4:3 image to make it a 7:5 aspect ratio. Using this method, you will actually get a print that is exactly 7 inches by 5 inches, but a small amount of your 4:3 image must be cropped (omitted from the picture) to do this. Qimage defaults to cropping out the center of an image when using the "Crop to Size" method, but you can change the crop area if you like since cropping the center of an image may not always be desirable. "Crop to Size" fitting is accomplished by ensuring that the scissors button on the "Print Properties" auto-popup panel is in the down position.

Image Lock: Turning on the image lock (lock button under the preview page) will ensure that images appear in their original orientation (the orientation shown in the thumbnail area). The prints will not be rotated unless rotation is unavoidable due to the fact that the image is too big to fit on a page in its original orientation. For example, if you add a **portrait** thumbnail to the queue at a size of 8x10 and you are using a **landscape** 10x8 paper orientation, the only way to fit the image on the page is to rotate it, so in this case, Qimage will override the lock. Note that for the image lock to be effective, the lock button must be depressed **before** adding images to the queue. Turning the image lock on (locked icon) can be useful if you do not plan to cut your images from the page but would rather all your image appear upright on the page. As a general rule, if you normally cut your prints off the page, leave the image lock icon unlocked. If you do not plan to cut the prints from the page, but prefer to simply insert printed pages into an album, it may be better to lock your images so that they get added to the printout in their original (upright) orientation and do not get rotated to fit the size you selected.

Note: Adding images to the queue with image lock on simply ensures that the initial print orientation is upright on the current page. Once you have added images to the page, you may take manual control of print orientation by selecting print(s) and then clicking one of the orientation buttons on the "Print Properties" auto-popup panel on the main window. Also note that if you are using "Optimal" image placement, turning the image lock on will allow you to manually control (and lock) the orientation of

your prints while still optimizing printed space given the current orientation of prints. Turning image lock off while in "Optimal" image placement mode returns control of print orientation to Qimage so that print space may be fully optimized.

Image Placement - defines how the images are paginated (placed) on each page. To select an image placement method, use the placement tool button under the page editor and select a placement method.

Optimal - Optimal image placement is the default when you first start Qimage. It ensures that the least amount of paper is used by taking control of the orientation (portrait/landscape) of prints and filling "gaps" on each page. Use this option if paper usage is more important than the order and orientation in which images are printed. It is best to use the <u>Sort Prints</u> button just before printing so that prints will be collated and will be easier to cut from the printed page. Note that to obtain truly optimal use of paper, the "Image Lock" button (lock icon below the preview page on the main window) must be in the up/unlocked position. If "Image Lock" is on, you have told Qimage that it does not have permission to alter the orientation of prints (portrait/landscape) on the page in order to obtain the best use of paper. Note that if you are saving sessions where placement of images/text must be the same each time you load the session in the future, use of one of the other placement options is recommended since placement of prints/text may change from one version to the next as the optimal and optimal/spaced methods are improved from time to time.

Optimal/spaced - The "Optimal/spaced" placement method is the same as "Optimal" above, however, prints are spaced as far away from each other as possible given the available slack on the page rather than directly next to one another as with "Optimal" placement. Note that space can only be inserted between prints if there is leftover room on the page that is not being utilized. For example, if the printable area of your page (listed above the preview page) is exactly 8.0 x 10.0 inches and you place four 4x5 prints on the page, there will be no space between prints and "Optimal/spaced" placement will be identical to "Optimal" placement in this case due to the fact that four 4x5 prints use up the entire 8.0 x 10.0 page. "Optimal/spaced" placement should be used when you would like to ensure the highest paper savings while inserting space between prints *only* if space is available. If you *require* that a certain amount of space appear between prints, it is more appropriate to use the <u>Border</u> function to accomplish "hard spacing". Note that if you are saving sessions where placement of images/text must be the same each time you load the session in the future, use of one of the other placement options is recommended since placement of prints/text may change from one version to the next as the optimal and optimal/spaced methods are improved from time to time.

Compact - use the compact option to fit all images as close together as possible in the upper left corner of the document. This option is useful if you want to use the absolute minimum amount of paper so that the unused portions may be used later.

Center - the center option will result in the same number of images per page as the compact option, except the images will be centered on the page and spaced apart so that images do not look crowded. This option is most useful for creating picture albums. For an understanding of the different centering methods (physical centering on the page and centering within the printer's printable area), see the Margins help page.

Manual - the manual option allows you to enter a position (upper left corner) on the page for each image to print. Note that since you are identifying a location on the page, only one image will print per page. This option can be useful for locating an image over other (non-blank) media such as greeting cards, etc.

Template - the template option places each image at a predefined location on the page (grid). The template option is useful for contact sheets or other applications where images need to be placed withing predefined rows/columns.

Template/centered - same as template above, however, images are centered within each template cell instead of upper/left justified.

Freehand - Allows total control over where images are placed on the page. In this mode, you MUST take manual control and place all images on the page yourself. You can start with one of the other (automatic) options and switch to freehand placement later to "tweak" your printout manually. See the Freehand option for more details.

Instaview - Qimage provides a very handy feature called "Instaview" that can be used to access a larger view of images in the thumbnail grid, preview page, or queue. Simply move your mouse pointer over a thumbnail in the thumbnail grid, a file name in the queue, or a print on the preview page and then press and hold your middle mouse button, press and hold down on your mouse scroll wheel, or press and hold the <enter> key on the keyboard. Any of these three methods will display the Instaview window for as long as you are holding the button/key. Release the button/key and the Instaview window will disappear. The Instaview window displays a medium size preview of the image along with some useful data about the image. Note that the size of the image is related to the thumbnail quality chosen under "Edit", "Preferences", "Thumbnail Quality" so the higher you set your thumbnail quality, the larger the Instaview preview image. Also note that like the "display full screen" function accessed by the spacebar, Instaview displays the image and information related to the object currently under the mouse cursor, not selected items. Because Instaview displays information for the object under the mouse pointer, it does not disrupt or change image/file/print selections so you can use this feature to do things like instantly expand thumbnails to a larger size to preview them while browsing through and selecting thumbnails from the thumbnail grid.

Info Stamp - Stamps selected information directly on image(s). Choose from a variety of general info or EXIF info. Simply select the information that you want stamped on the image(s), the location of the info, and the font attributes and Qimage will stamp this information directly on the image. As with all other filters, the info stamp can be "stuck to" the image in an associative way so that the original is untouched or you can create new versions with the stamped information added in directly in the image.

To access info stamp, double click on a thumbnail or print to open the image editor. The "Info Stamp" checkbox is located in the image editor under "Image Effects". When you check the info stamp checkbox, more options will appear. When finished, simply click "Done" and then "OK" to associate the stamp with the image.

Interface - Options that control the appearance and functionality of the main window interface can be found under "Edit", "Preferences" at the top of the main window.

Levels - Access the levels filter by double clicking a thumbnail or print to open that image in the image editor. The "Levels" tab is at the top of the window on the right. The most common use of the levels filter is to redefine black and white points in an image to correct under or overexposure. The levels filter can be used to redefine minimum and maximum brightness for the luminance channel (RGB), or individual color channels separately. The following illustrates a common example for use of the levels filter.



The thumbnail above represents an image that has been underexposed (left part of image) due to light entering a stained glass window in the background. The histogram on the right shows that the brightness of pixels in the photograph is well distributed from dark to bright, however, the camera metered the scene too dark for our main subjects due to the bright window. Since we do not care about detail in the stained glass window as it is not our main subject, we can use the levels filter to

expose the image properly for our main subject. Looking at the histogram, the peak in the graph on the right side is caused by bright pixels in the window, so we slide the highlight (top) slider to the left until we reach the next peak in the graph which in this case represents the white shirt. Moving the highlight slider to this location redefines the shirt as the brightest object in the photo while maintaining detail in that area. Since we have "clipped" the right part of the graph, note that some detail in the bright window will be lost as a result. The difference can be seen in the thumbnail (left side underexposed, right side exposed to retain detail in the white shirt). Note that we could go even further if we are not particularly interested in detail captured in the white shirt, and expose more for the faces in the photo by continuing to drag the highlight slider further to the left. In addition to brightening the highlights in an image, we can also darken the shadows by sliding the shadow (bottom) slider to the right in a similar fashion. The middle slider is the midtone/gamma slider and is used less often. The midtone slider changes the shape of the brightness curve to achieve a non-linear brightening/darkening effect. We would use the midtone slider to bring more detail out in the shadows without affecting the highlights for example.

While the above represents a very common use of the levels filter, some very complex issues can be addressed with this filter as well since it allows adjustment of individual color channels as well as simple brightness/luminance adjustments. It is possible to remove color casts or change the overall tone of the image for example. If you would like more information, we suggest using any Internet search tool to search for the words "image" and "levels" since there is an abundance of information available on this powerful tool.

Lossless JPEG Transformations - You can apply transformations to JPEG format files without any loss of image quality. To perform lossless transformations, add the image(s) to the queue and then double click on an image on the preview page to open the image editor. When the image editor appears, simply click "Lossless JPEG Xforms" from the top menubar. Select the appropriate transform from the drop down menu and you will be prompted to overwrite the originals or create new images. Click "Ok" after selecting "Create New Images" or "Overwrite images" and the new JPEG images will be saved.

Note: EXIF information is also preserved after a JPEG transformation.

Margins - to select new margins for the printed page, click "Edit", "Preferences", "Print and Page Formatting", "Page Margins" from the main menu. For each margin (left, right, top, and bottom), three parameters are shown:

- Fixed: This is the fixed margin that is dictated by the printer/driver and indicates the printer's physical limitations for printing on the current page. A left margin of .12 inches for example, indicates that your printer cannot physically print on the left .12 inches of the paper. Often (depending on the print driver), the fixed margins can be reduced to [near] zero by setting your print driver to borderless mode (see example 1a in the Learn by Example section of the help).
- Additional: This is the "user margin" where you can choose to increase the margin beyond the fixed margin above. Here, we are adding to the fixed margin dictated by the printer/driver. As an example, if your fixed left margin is .12 inches and you enter an "additional" margin of .1 inches, your total margin from the left side of the page will be .22 inches.
- Total: This is the absolute margin from the edge of the page. If you have an absolute margin in mind (for example 1 inch around the entire page), you may simply enter that margin in the "total" parameter. Entering 1.0 inches in all four "total" boxes will result in a page that has a 1.0 inch margin from the physical edge of the paper on all four sides. IMPORTANT: Remember that the "fixed" margin is a physical limitation of the printer so you cannot force "total" margins to be less than the "fixed" margin. If you enter a "total" margin that is less than the "fixed" margin, Qimage will display the margin in red, indicating that you have specified an impossible margin. Qimage will not stop you from entering these invalid or "negative additional" margins because they can be used for special purposes.

Using margins to control image centering in Qimage

1. Centering prints within the *printable area* of the page (all margins set to zero): If you clear your margins (all "additional" margins set to zero), Qimage will center images within the printable area on the page; that is, the printable area defined by your printer and print driver settings. The printable area of the page is defined as the area of the paper that your printer is physically capable of printing on. Since the area of the page that the printer can physically access is rarely centered, you would select this option if you want to center images within the printer's limitations, but don't particularly care whether the prints are centered on the entire page. Since this form of centering makes use of the entire area that the printer is capable of using, this is the best option to use if you plan to cut your photos from the page, trim the page, or if maximum utilization of space is a concern. In those cases, it is probably not important to ensure that prints appear to be centered over the entire sheet of paper. The figure below shows a page for a printer that has a default printable area (in white) that is off center (shifted toward the top of the page). Notice that the print is centered within the white printable area and is not centered on the page itself.



2. Centering prints on the physical/printed page: In contrast to the above option which allows you to use the full printing area of your printer while centering images within that area, you can also center images on the physical page so that prints appear centered on the paper when they come out of the printer. Qimage accomplishes this "absolute" centering by using margins to compensate for your printer's off-center printable area. You would use this option when it is important for photos to appear to be centered on the entire sheet of paper. For example, if you intend to slip an entire 8.5 x 11 page into a sheet protector and display it in a photo album, you may wish to ensure that prints appear to be centered on the entire page. Click "Edit", "Preferences", "Print and Page Formatting", "Page Margins", and use the "Center on Physical Page" button. Your prints will then be centered on the physical page provided you are using an image placement method that centers images (center, optimal/spaced), etc. Note that by definition, forcing images to appear on the center of the physical page means that you will lose some printable area (unless you are printing borderless) due to the fact that some of the area that was used before (in option 1 above) is now used as a non-printable area (margin). This reduction in printable area means that you will be reducing the size of the largest print possible. and you may also be reducing the number of images that fit on a page (such as ability to print three 4x6 prints on a page).



A note about physical centering of prints and print driver settings:

Note that many printers offer the ability to set up your paper for borderless prints, or prints with "no margins". If you find that the size of the largest possible print has reduced when you use the second option above, or that you have lost the ability to print a certain number of prints on a page, you can often modify the printable area using "File", "Printer Setup" to achieve larger print areas by selecting "borderless", "no margins", or "maximum" printable area. Pay attention to warnings generated by the print driver when modifying printable area, however, because print quality can begin to deteriorate when making changes to the printable area. An example of the effect of the above two centering options on print size would be the following. Suppose you were able to print an 8 x 10 under option 1 above, but using option 2, the largest print size possible is 8 x 9.9. Instead of sacrificing print quality by setting your printer to borderless mode, you may just wish to reduce the size of your print from 8 x 10 to 8 x 9.9 so that it will fit on the page and allow physical centering. Again, note that the reduced print size available to you when physically centering prints is a limitation of the *printer*, not a limitation of Qimage.

Manually forcing a print to the center of the page in "Freehand" placement mode:

Instead of using margins to force *all* prints to the center of all pages, you may wish to force an *individual* print to the center of the physical page. To do this, open the page editor using the "Edit Page" button under the preview page, select the print, and then click the "Center" button on the right side of the window under the "Location" group. Use of this "Center" button will force the selected print to the center of the page (if possible) but will not affect placement of other images in the queue.

Mirror - The mirror option can be used to mirror images for the purpose of printing transfers for tee-shirts, etc. To mirror an image, double click on a thumbnail or print on the preview page to open that image in the image editor. Check the "Mirror" box and then click "Done" and "OK" to associate the mirror filter with the original image.

New Session w/Selected - Select one or more images on the preview page and right click on the preview page and select "New Session w/Selected" to clear the queue and start a new session with only the selected images in the queue. This function is useful when making selections from a prior (saved) session. For example, after printing a contact sheet and saving the session for that contact sheet, you can go back and mark only the images from that contact sheet that you'd like to print in final size. You might select 8 images from the 35 that printed on the contact sheet for example and then use "New Session w/Selected" to clear all the unwanted images out of the queue and remove any floating text that might have printed on the contact sheet so that the remaining 8 images are ready to be resized and printed.

Optimizing Space - If placement is set to "Optimal" or "Optimal/spaced", Qimage will always make the best use of space on the paper. In "Optimal" or "Optimal/spaced" mode, for example, Qimage will always be able to fit three 4x6 prints on a page that is at least 8x10 in size, whether the page is set up in portrait or landscape mode. This is because the "Optimal" placement setting is designed to make the best use of paper with no concern for the orientation or location of prints on the page. If "Optimal" placement is selected, there will be no space between prints. If "Optimal/spaced" is selected, Qimage will space prints as far as possible from each other given the amount of "slack" available on the page, allowing more room for error when cutting photos from the final page.

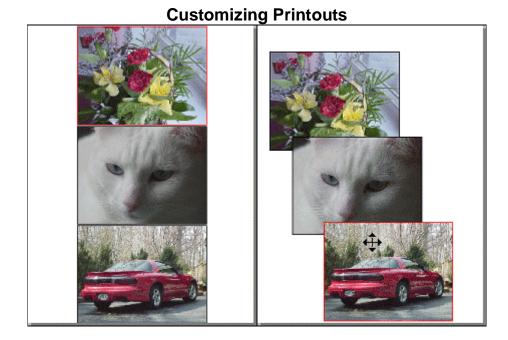
Note that when using either "Optimal" placement method, Qimage will not fill gaps by rearranging the **order** of prints in the queue unless you tell it to. For example, it will not fill a 3x2 "hole" on page one by moving a 3x2 print from page 4 unless the <u>Sort Prints</u> option (available via right clicking on the preview page) is used. The <u>Sort Prints</u> function will not only fill gaps in the printout by moving images in the queue, but it will also collate prints from largest to smallest size, making cutting prints from the page much easier. Note that to obtain truly optimal use of paper, the "Image Lock" button (lock icon below the preview page on the main window) must be in the up/unlocked position in addition to selecting

"Optimal" or "Optimal/spaced" image placement. If "Image Lock" is on, you have told Qimage that it does not have permission to alter the orientation of prints (portrait/landscape) on the page in order to obtain the best use of paper.

In all other placement modes (other than "Optimal" or "Optimal/spaced"), Qimage paginates images into rows so that they can easily be cut with paper cutters (never requiring partial "swipes" of the blade), you may find that the order and/or sizes in which you inserted images in the queue doesn't always make the most of the space available on the page because Qimage is (1) trying to retain the order in which the images were added to the queue and (2) trying to avoid "random" placement of images onto the page to "fill holes". In other placement modes such as "Center" or "Compact", Qimage may not place three 4x6 prints on a page unless you specify a portrait size (4x6 and not 6x4) and you use a portrait page. In all automatic placement modes other than "Optimal" placement, images are arranged in "unbroken" rows such that each row can be cut straight across the page without intersecting other prints.

Page Background Color - Click the "Page Background Color" tool button under the preview page on the main window to set the background color for all pages in the queue/document. Note that the page background color is set globally and cannot be set on a page by page basis. Also note that using a page background color will use more (of sometimes only one color) ink since all non printed areas on the page will appear in the color selected. Also note that Qimage can only reproduce the background color on the part of the page that is accessable to your printer (the printable area). This means that you will likely still have some white border at the edges of the paper even if you choose a background color. To eliminate this problem, use the borderless printing mode in your print driver setup so that the entire page can be accessed by the printer when printing.

Full Page Editor - use the page editor to preview your document prior to printing and to make any manual adjustments necessary. The page editor will always go to the same page displayed at the top of the main screen in the small preview box. The page editor also allows drag and size of all images, text annotations, etc. Access the page editor by clicking the "Edit Page" button under the preview page or simply double clicking in white space on the preview page (or just outside the preview page).





Original (centered)

Drag to customize

Drag to size

Although Qimage has many options for automatic control of your printouts, there may be times when you simply want to place pictures manually on the page (see the "Freehand" option for details). This can easily be accomplished using the page editor. From the page editor screen you can visually drag all images to any location on the page. All images can be moved manually by pointing in the center section of the selected image and dragging to the desired location. Images may even overlap as they do above. Dragging to change the size of the image can be performed in a similar fashion by pointing to one of the corners of the image and dragging to the desired size (right page above). The page editor window is also the window to use when adjusting the crop for your prints.

LARGER
SMALLER
ROTATE 90 degrees
PUSH to next page
VIEW full screen
COPY to clipboard
CUT to clipboard
PASTE before
PASTE after
TEXT annotation

Additional (non-visual) commands

In addition to the visual placement/sizing of images, there are a number of options available by right clicking on an image. Options such as cut, paste, etc. allow you to remove images, change the location of an image in the queue, etc. Location in the queue is also important for overlapping images. For example, the middle page above shows the car in front of the cat. This is because the car image appears later in the queue than the cat (later images are placed on top of prior images). To bring the cat to the front, simply click the right mouse button on the cat and select "Bring to Front". The cat will reappear **in it's old location** but will now be on top of both of the other images due to it's position in the queue.

Note that you may double click on any image on the page to edit the image itself (contrast, brightness, sharpening, levels, curves, etc.)

Page Orientation - defines whether the document is being viewed/printed in landscape or portrait format. You can quickly change from a portrait oriented document to a landscape oriented document (or vice versa) by clicking one of the page orientation buttons under the preview page on the main window.

Page Preview - The small preview page in the upper right corner can be used for adding/deleting images on the page and to change the size and fit of prints. You may select one or more prints on the page by clicking on them, and then change the parameters on the "Print Properties" auto-popup panel, or right click on the page for other options. Remember that for more complex/visual resizing and manual placement, you should use the page editor (click the "Edit Page" button under the preview page or directly on the right click menu from the preview page). There are many other detailed editing capabilities available in the <u>page editor</u>, including manual placement, text annotations, etc.

Changing Paper Size - Qimage uses the paper size as defined by your print driver. Simply click "File", "Printer Setup" and then click "Properties" to change the paper size associated with your printer. Once you change the paper size in your print driver and return to Qimage, the new paper size will be recognized automatically.

Using a Photo Editor with Qimage - Although Qimage offers a host of "quick fixes" for your images, there may be times that you need to use a full featured editor to correct images, such as when cloning of large areas is needed, etc. Qimage can work in conjunction with your photo editor. Click "Utilities", "File Manager/Photo Editor Setup" and then click the "..." selection button next to "Photo Editor". You can then browse and select the photo editor to use with Qimage by selecting the executable file (normally an EXE extension) from your photo editor's folder. Once you have done this initial setup, you should not have to repeat it again. You can then click on any thumbnail(s) and then right click and select "Edit Image(s) w/editor". This will bring the selected image(s) into your photo editor for manipulation.

Qimage Plugins - Qimage plugins can be obtained from the Qimage Plugin Center at http://www.ddisoftware.com/qimage/plugins. When you purchase a plugin, you will be supplied with a small file via email which you copy to your c:\program files\qimage\plugins folder. Once you drop the ".plg" file into that folder, the plugin will be accessible via the image editor. You can then add images to the queue and filter one/all via the image editor by dropping down the plugin filter box and selecting your plugin.

Preview - To preview a selection of thumbnails prior to adding them to the queue, simply select multiple thumbnails from the thumbnail window (or filenames from the file listing if you have thumbnails turned off) and then right click in the thumbnail area and select "Preview/Add to Queue". The thumbnails/files you have selected will be previewed one at a time. Simply click the "Add" button to add prints as you preview. You can cancel the preview at any time by simply clicking the small "x" in the upper right corner of the preview window to close the window.

Print Filter - Qimage filters can be set as "print filters" without associating the filter with images. If you set a filter as a print filter, all images loaded by Qimage will be filtered automatically by the print filter **after** all other filters (individual image filters and the global filter, if any) have been processed. Activating a print filter allows you to make adjustments to your printed output without affecting other operations such as display of images on screen, conversion of images, etc. Since print filters are applied as the last step just before the image is sent to the print processor, think of print filters as a way to place one final filter on the images just before they are printed. You could, for example, create a set of curves and activate those curves as a print filter to balance B/W prints on your printer. When this print filter is active, all your images are processed normally including application of individual image filters, and then the print filter is applied. For example, suppose you have an image that already has an individual filter that increases brightness and adds sharpening for that image. If you also have a print filter active that contains curves to balance B/W prints, your image will be loaded, the brightness and sharpening filters will be applied to the image and then the print filter will be applied as a second set of filters (on top of the brightness and sharpening filters on the image itself).

One useful application of print filters is consolidation of color and tonal balance between monitor and printer. As an example, if you find that your prints are not as saturated and have a green color cast compared to what appears on your monitor, you could create a filter that increases saturation and reduces the green channel (using curves). When you activate that filter as a print filter, what you see on your monitor will not change but all images going to the printer will have increased saturation and less green since they will pass through your print filter.

To set a print filter - Double click on any thumbnail or print to open that image in the image editor. Set up your filter any way you like and click "File" and "Save Current Parameters to File" on the top menu bar. Use a file name that describes your filter such as "saturation up-less green". Close the image editor window, return to the Qimage main window and check the "P.Filter" box on the bottom right of the window. Pick "Select Print Filter" from the popup and open the filter file that you saved from the image editor: your print filter is now active. Any and all images printed will pass through this filter on their way to the print driver.

To deactivate the print filter, simply uncheck "P.Filter" on the main window.

If P.Filter is checked, simply hold the mouse pointer over the P.Filter box for two seconds and the name of the currently active print filter will be displayed.

If P.Filter is unchecked, check the P.Filter box and the print filter last used will be listed at the top of the pop up window.

Print Image/File Information - check this box (called "Info" on the bottom of the main window on the "Job Properties" tab) to include file name, creation date, resolution, etc. in small text below each printed image on the page.

Print Info/Annotation Font - to select the font used to print image information and annotations, click "Edit", "Preferences", "Print and Page Formatting", "Print Info/Annotation Font" from the main menu.

Print interpolation and spooling options - Access these functions by clicking "Edit", "Preferences", "Printing Options" from the top menu on the main window.

Interpolation - If an image is printed too large for the given image resolution (such as a 640x480 image printed at 8x10 inches), it can become blocky. To increase resolution, you can use one of the seven included interpolation types below. To access Qimage interpolation options, select "Edit", "Preferences" on the top menu bar of the main screen, and then select "Printing Options".

Increasing resolution of printouts - To increase resolution of prints while not affecting original images, simply set the interpolation type and the interpolation level (none through max). Qimage will automatically increase printed resolution for you so that you never have to worry about DPI or resampling originals. Note that an interpolation setting of "Hybrid" and "Max" is fast and produces detailed prints. An interpolation setting (bottom of window, on the Job Properties tab) of "None" can be useful for printing screen shots and graphs where you may not want interpolation at all. The "Triangle" printing method offers reduced interpolation quality but incredibly fast printing speeds.

Increasing resolution of an existing image - Most of the time, you will probably only want to increase resolution of prints, however, you may also want to decrease resolution of images for web pages or increase resolution of images to increase image quality. To increase or decrease resolution of an existing image, double click on a thumbnail or print to open that image in the image editor. You may then change the resolution of the images in the queue by changing the values in the "Resolution" box on the bottom of the filter panel. The images may be resaved or the "filter" may be associated with the original file so that the image is resized prior to each operation in Qimage, however, note that the latter doesn't really make much sense since you almost never want to reduce resolution of an image unless you are preparing it for another medium such as the web, in which case you would want to create new

images and not associate a filter with them. Note that if you apply the resolution to all images in the queue and all images are NOT the same resolution, all images will be changed by the same percentage based on original versus new resolution.

Interpolation Types:

- Hybrid Very smooth, very detailed, minimal artifacts, and relatively fast, this is the #1 choice for most jobs.
- Hybrid SE (only available in Studio Edition) Same as Hybrid except a bit smoother and completely artifact free.
- **Vector** Offers very smooth edges, good sharpness, and low noise. As fast as Lanczos with less noise/artifacts and better edges.
- Pyramid Even smoother than vector interpolation. Pyramid does a great job with "big stretches". Also the slowest method.
- Lanczos A little sharper than vector interpolation, but at the expense of more noise and more jagged edges.
- **Hermite** While faster than vector or Lanczos interpolation, Hermite is not as sharp and also has more noticeable jagged edges.
- **Mitchell** Good sharpness and detail, but not as capable of eliminating jaggies as some of the other interpolation schemes.
- Bicubic Spline Produces smooth edges but also produces results that look soft.
- Triangle Offers a good balance between calculation speed and quality, but leaves some jagged edges behind.
- Bell Relatively fast, but produces a soft image.
- Pixel Resize Simply stretches the image to the new size. This is the fastest option but has the least smoothing.

Print spooling - Qimage offers the ability to control how data is sent to your operating system/print driver. You should always run Qimage in the "All Pages at Once" mode unless you are having trouble with crashes, lockups, or missing prints. Qimage sends more data to your printer than most other software programs due to its high quality printing algorithms. If your system runs out of spool space or has other problems with large jobs, try the "Spool one page at a time" or "Spool with time delay" option so that Qimage will pause after each page. The three print spooling options are listed below.

- **Spool all pages at once**: Data is sent from Qimage to the print driver as a continuous stream with no interruptions. On most systems/drivers/printers, this option is best because it allows Qimage to finish preparing the print job faster and allows your operating system and print driver to handle the data in the background. This is the only method available in most other printing applications.
- Spool one page at a time: Qimage processes one page of print(s) and sends that data to the print driver. Once the page has been sent, Qimage will wait for a signal from the operating system that indicates that the printer has finished printing that page and has returned to an "idle" state. Once the operating system signals that the printer has completed the page, Qimage will send the second page, and will repeat this wait/send sequence at the end of each page. Note that if you are using Windows NT, 2000, or XP, your operating system may not be set up to broadcast the needed information back to Windows programs, causing Qimage to wait indefinitely between pages. If this occurs, see the help/fix tip in the Troubleshooting section.
- Spool with time delay: Qimage processes one page of print(s) and sends that data to the print driver. Once the page has been sent, Qimage will wait the specified length of time before processing the next page. This time delay will be repeated between each printed page. This option can be useful when printing on a network or when conditions exist where communications between the operating system and the printer are severed or not available. In cases where bidirectional communications do not exist, the time delay between pages can give the printer enough time to "catch up" with the data stream and may alleviate problems caused by spooler overruns, print queue limits, etc. To determine the appropriate time delay, you may wish to create a single page of [typical] prints and print that page, recording the time elapsed between Qimage's "Finished Processing" message to the time when the printer has completed printing

- the page. Note that you may also wish to add a few extra seconds for "insurance", especially if you plan to continue using your PC for other tasks while printing.
- Format: The spool format controls whether the "Enable Advanced Printing Features" check box is checked/unchecked in your printer's properties in Control Panel. For most printing, the "EMF" setting is recommended. If you run into problems with partial prints, blank pages, missing pieces of prints, or other print related problems, you may wish to try the "Raw" setting. Qimage will finish processing your jobs significantly faster when using the "EMF" mode, however, the "Raw" setting is generally more reliable when printing very large jobs or very large prints due to operating system and disk space considerations.

Network printing note: If you are printing to a network printer, "Spool all pages at once" will result in a single print job that contains all pages of your document. If your network print queue has a size limit (per job), it may be useful to send each printed page as a separate print job. This can be done by using "Spool with time delay" and setting the time delay to zero. Under those settings, there will be no time delay between pages, however, each page will be sent to the network queue as a separate print job, which may alleviate queue size limitations if a per-job size limit is in place.

Final Print Sharpening - Qimage offers the ability to apply different levels of unsharp mask to the final print. This unsharp mask is applied after all interpolation has been performed (after your print has been resampled to the DPI of your printer). Since this setting affects the sharpness of your prints, a setting should be used that makes your final prints match what is displayed on your monitor with respect to sharpness. The type of printer used and the print driver version can affect apparent sharpness of prints. It is best to leave this setting at the default slider position unless you prefer softer or sharper printed images. To make images look sharper, slide the slider to the right. To make images appear softer in print, slide the slider to the left. The following are notes that apply to the two different types of final sharpening available in Qimage:

- Smart sharpening: Smart sharpening uses information such as resolution of the original image, the printer driver PPI, and the final print size to set the parameters of the sharpening algorithm to produce consistent, vibrant sharpening in every print. Smart Sharpening is the preferred setting.
- Normal sharpening: Normal sharpening will sharpen only the finest details in the print since it sharpens the image based only on the print driver PPI. Since this method does not take all factors into account with respect to the appearance of sharpness, the effect of this type of sharpening is more subtle and less consistent, and will depend on the print driver PPI and size of the final print.

Note: The sharpening level (slider) applies to both types of sharpening above and simply controls the level for the selected type of sharpening.

Windows NT/2000 users note: the "Spool one page at a time" option will not work under Windows NT/2000 unless you instruct the operating system to not "hide" messages from the print spooler. For more information, see the help tip in the troubleshooting section.

Print/Job Logging - Qimage can log all print jobs so that the job can be recalled at a later date. By default, Qimage will keep a log of the last 100 jobs, but you may also choose to log all jobs indefinitely or turn logging off altogether by selecting "Edit", "Preferences", "Job Logging" from the main menu. The job logs are maintained in the "Log" folder where Qimage is installed (normally \program files\qimage\Log). To access the job log, select "File", "Open Automated Job Log" from the main menu or click on the blue bullet next to "Job Log" on the "Job Options" tab in the lower right of the main window. Once you have opened the Job Log, you can browse, select, or open any saved jobs in the log.

Sample details for a selected job:

The following shows a print job containing six 4x6 prints on two pages:

- * Qimage v2005.111
- * Printing to: Canon i950
- * Page: 8.00 x 10.68 in. (600 x 600) * Printer ICC profile: Canon i950 MPH
- * Interpolation: Max/High/Vector
- * Print sharpening: On
- * Global filter: Off
- * Job started: 07/14/2003 03:02:24pm * Job finished: 07/14/2003 03:04:47pm
- 1,c:\camera\10d\2003-05-16 23.36.51.JPG,4.00,6.00
- 1,c:\camera\10d\2003-05-16 23.36.05.JPG,4.00,6.00
- 1,c:\camera\10d\2003-05-16 23.34.43.JPG,6.00,4.00
- 2,c:\camera\10d\2003-05-16 23.34.09.JPG,4.00,6.00
- 2.c:\camera\10d\2003-05-16 23.33.34.JPG,4.00.6.00
- 2,c:\camera\10d\2003-05-16 23.31.38.JPG,6.00,4.00

Notice that there are nine header lines (preceded with *) that describe this print job, followed by a log of the six prints that were printed in the job. The format for the lines that describe individual prints (the last six lines above) is as follows:

page number, file path and name, width, height

Again, note that the comma delimited format gives you the flexibility to load the printer.txt file into spreadsheet software. Once loaded into cells, you can perform calculations based on printed size, number of pages used, etc.

Print/Job Logging and Tracking Paper/Ink Usage - Qimage Ultimate can display the total surface area used by printed photographs in one or more jobs. This can give you an idea of how much paper and ink was used by the selected print jobs. You might use this feature, for example, to keep track of approximate ink usage for the purpose of recovering media costs from multiple users printing from Qimage Ultimate. To access this feature, start by selecting "File", "Open Automated Job Log" from the main menu. When the list of jobs appears, you may select one or more jobs using the mouse cursor or shift-click to highlight a range of jobs. Note you can only select a single range, so ctrl-clicking cannot be used to turn off individual files within a range or to create two separate ranges. Once the range of jobs has been selected, right click and select "Paper/Ink Analysis". Qimage Ultimate will total all the prints in the selected jobs to tell you how much surface area was actually printed. For example, if you select a single job that contains five 8x10 prints, the result will be 8x10 = 80 times 5 prints for a total of $80 \times 5 = 400$ square inches printed. Note that only the photographs in the job are counted and any floating text does not count toward the total.

Keep in mind that while you can only select a single range from the list (you cannot turn off individual files within that range), you can combine the range with the search feature! Example: you want to know how much ink was used in 2011 to print photos for John Doe. You start by clicking the date column to sort by date and you select all 2011 files by clicking the first 2011 job and then shift-clicking the last 2011 job to highlight the entire 2011 range. Now since you know that all photos for John Doe have "jdoe" in the folder name, you click the search button in the top right of the dialog (binoculars button) and you type "jdoe" (without quotes) and click "OK". Now all jobs that contain "jdoe" are marked in green. When you right click now and select "Paper/Ink Analysis", only the files in the selected range that were marked by the last search will be counted (the green/highlighted file names). One final note: the search feature is used to mark files so ALL prints in each marked job are counted toward the total, meaning that the "jdoe" example would only work properly if you don't typically mix multiple customers in one job.

Summary:

 Mark a single job: right click to "Paper/Ink Analysis" to show paper/ink coverage for that one job.

- Mark a range of jobs by clicking/dragging or using shift-click to mark a range: a single job: right click to "Paper/Ink Analysis" to show paper/ink coverage for all prints in the selected range of print jobs.
- Mark a range of jobs and then use the search (binoculars) button to mark jobs with matching text: right click to "Paper/Ink Analysis" to show paper/ink coverage for all prints in the selected range of print jobs that were highlighted (green) by the search.

Print Proofs - Sometimes professional photographers need to print proofs for clients to review. These proofs should allow the client to review and select photos without compromising the photographer's work. The "Print Proofs" function on the "File" menu allows photos to be printed with watermarks which make the photos difficult or impossible to reproduce.

Print Rotation - If the image lock button below the preview page is in the up position, Qimage will automatically rotate prints to find the best fit on the page. Depending on the page layout and other conditions, Qimage will place the print on the page either not rotated (in the same orientation as the original image in the thumbnail grid) or rotated left (CCW) 90 degrees. Once the print is placed on the preview page, if you would like to override the orientation selected by Qimage, you may rotate the print on the preview page to any multiple of 90 degrees. To accomplish this, use the following functions:

- Use the "Rotate Left (CCW)" button on the "Print Properties" auto-popup panel to rotate the currently selected print(s) 90 degrees to the left (counter-clockwise) from the current orientation.
- Use the "Rotate Right (CW)" button on the "Print Properties" auto-popup panel to rotate the currently selected print(s) 90 degrees to the right (clockwise) from the current orientation.
- Once you have selected print(s) on the preview page, right click on the preview page and select "Set Print Rotation (degrees)". You may then select an "absolute" rotation:
 - Don't Care (Auto): Allow Qimage to make the decision about rotation automatically.
 - 0 (Same As Thumbnail): Print will appear in the same orientation as the original image and the thumbnail in the thumbnail selection grid.
 - -90 (Thumbnail Rotated Left): Print will appear in the orientation of the thumbnail rotated left 90 degrees.
 - 90 (Thumbnail Rotated Right): Print will appear in the orientation of the thumbnail rotated right 90 degrees.
 - 180 (Thumbnail Flipped): Print will appear in the orientation of the thumbnail flipped upside down.

Note that once you rotate a print, a small red rotation icon will appear on the print on the preview page and in the page editor indicating that the print has a specific orientation/rotation associated with it. Once the red rotation icon appears on the print, the orientation of that print is "fixed" and Qimage will not auto rotate that print to try to fit more prints on a page. By rotating the print and getting the red rotation icon on the print, you have indicated that you want to take manual control of the orientation of that print. To remove the rotation "flag" and return to automatic rotation so that Qimage has permission to rotate the print as needed, simply point to the red rotation icon on the print until you get a mouse pointer with a ? (question mark). You can then click and return rotation control to Qimage. Another way to return control of rotation to qimage is to select/highlight the print on the preview page and then right click on that print, select "Set Print Rotation" and choose "Don't Care (Auto)".

Printing to file versus printing to a printer - In addition to being able to print your document to your local or network printer (the default mode of operation), Qimage is also capable of printing each page to individual files. To switch all Qimage printing operations so that your document is printed to files (one file per page), simply click "File" on the main window menu and then select "Print To" and choose "File". Once "Print To" is set to "File", all print operations can still be performed as if you are printing to

a printer, however, each page is stored as a file in the name/location you specify at print time. To switch back to printing to your printer(s), click "File", "Print To" and select "Printer". The descriptions below will assist in determining when to use these print modes:

Printer: When "Print To" is set to "Printer":

- Use this option when you would like to print directly to your local or network printer.
- The paper size and "printable area on the page" are defined by your print driver.
- To change paper size and printable area, click "File", "Printer Setup" and change the paper and quality options through your print driver "Properties" for the currently selected printer.
- When "File", "Print" is selected, all pages or a range of pages may be printed. The selected range will print directly to the current printer (defined under "Printer Setup").

File: When "Print To" is set to "File":

- Use this option when you are preparing printed pages to be printed off site (on a printer that is not currently available), such as when sending pages of prints to an online print service.
- The paper size and resolution (PPI) of saved pages are defined manually via user input.
- To change paper size and resolution, click "File", "Printer Setup" and change the options on the "Print to File: Page Definition" dialog.
- When "File", "Print" is selected, all pages or a range of pages may be printed as files. The selected range will print to file(s) under the name specified. If "page" is specified as the file name, for example, and 3 pages are printed, unique image files are created for each page: page(0001), page(0002), page(0003). The image type of saved images may be selected via the save dialog when selecting the file name: simply drop down the "Save As Type" and select JPG, TIF, or BMP.
- Note that all printing options may be used and still apply when Qimage is operating in "Print to file" mode: interpolation level and type, smart sharpening, etc. If "Printer ICC" is enabled, the resulting image/page files will also be profiled with the selected printer ICC profile.
- All printed pages will be tagged with the resolution (PPI) specified for the page and the profile listed in "Prtr ICC" will be embedded in each image/page so that online printing services will know what color space to use.

Printer Setup - click "File", "Printer/Page Setup" to set printer driver properties (quality, paper type and size, resolution, etc) before printing to obtain the highest quality results for finals, or lower quality for drafts/proofs, etc.

Saving and Restoring Printer Setup Properties - Since different printer driver properties are required for different types of paper, it is helpful to have a way to save printer driver properties and later retrieve them. Click "File", "Save" and then select "Printer Setup" at the bottom of the save dialog. Specify a name and click "Save". All print driver settings such as paper size, paper type, print quality, etc. will be saved along with all Qimage related print settings such as the printer profile, margins, etc.. Click "File", "Recall" and select "Printer Setup" at the bottom of the recall dialog at a later time to restore printer driver properties.

RAW Format Options - The following options apply to raw format images from digital cameras.

Sharpness and Adaptive (ISO) Noise Reduction:

- Unsharp Mask: Amount of sharpening applied as a final step to raw image display/conversion.
 See <u>Unsharp Mask</u> for more info.
- Equalizer: Same as the <u>sharpness equalizer</u> in the image editor. Slide this bar to the right and use higher unsharp mask strength to increase '3D effect' or presence in photos by compensating for the fact that saturated colors often appear less sharp than gray (or lightly saturated) detail on cameras that use CFA sensors (almost all modern digital cameras).
- Noise Reduction: If you would like Qimage to apply noise reduction to your raw photos

automatically, increasing the level of noise reduction as ISO speed increases, use the strength slider to tell Qimage how "heavy" the filter should be and at what ISO Qimage should start filtering noise. At its default position, noise reduction begins above ISO 400 and reaches maximum NR levels by ISO 2000. Lowering the strength will start noise reduction at a higher ISO (with all ISO's lower than the threshold left without NR) and raising the strength will start noise reduction at lower ISO speeds. Note that with the strength set to the far left "Off" position, NR will never be used. Also, the position one click to the right of "Off" holds a special meaning: in this position, Qimage will never perform any NR but sharpening (above) will be turned off for ISO speeds of 400 or higher.

- Pattern Noise Filter: Check the box labeled "Pattern noise filter" to balance/normalize the green color channel(s) on the sensor. The default is **on** (checked) since this balancing doesn't cause any degradation of detail or sharpness and should work on the vast majority of cameras. If you observe any unexplained color casts or odd color patterns in your raw photos, try turning this option off as your camera may not be compatible with the pattern noise filter. Note that this option can also be turned on/off by camera model (see below regarding custom settings).
- Camera specific settings: Check this box if you would like Qimage to use custom (camera-specific) sharpness, noise reduction, and bad pixel map settings. When you save custom sharpness/NR settings for a particular camera, those settings override the default settings shown when you open the Raw Format Options dialog. The next two items explain how to save/load custom sharpness and NR settings.
- Creating custom (camera-specific) settings for sharpening and noise reduction: To create sharpening and noise reduction settings specific to a certain model camera, first use the thumbnail grid on the main window to select a thumbnail of a raw photo from that camera. Then use "Edit", "Preferences", "Raw Format Options" and set the sharpness and noise reduction settings that you would like to use for the camera. Finally, click the save button in the lower right of the sharpening/NR group (button w/diskette icon). The file name should already be filled in (the file name was derived from the thumbnail you chose in the thumbnail grid) so simply click the "Save..." button and your settings will be saved. When prompted to apply the new sharpness/NR settings as the defaults after the save, answer "No" if you only want the new settings applied to the one/selected camera. Remember that camera specific sharpness/NR settings are an override so cameras with no specific saved settings will use the default sharpness and NR settings that appear when you open the Raw Format Options dialog.
- Loading/changing custom (camera-specific) settings for sharpening and noise reduction: Use the "Load..." button on the lower right of the sharpening/NR group (button w/folder icon) to load custom sharpening/NR settings for a particular camera. You may then change the settings and resave (see previous).
- Creating a bad pixel map: Qimage will allow you to map out bad (hot or dead) pixels from raw photos. Most image sensors have a few (sometimes dozens of) hot or dead pixels that show as too bright or too dark in every frame. These pixels that are not working properly can be corrected. Simply open a raw photo in Qimage's image editor and use the blemish tool to remove all bad pixels in the photo. When finished, select "File", "Save Current Parameters to File" and when prompted "Save bad pixel map..." answer "Yes". Verify that the name of the file matches your camera model, for example EOS 50D.flt, D300.flt, DMC-G1.flt, etc. and click "OK" to save. From that point forward, Qimage will correct bad pixels in every raw photo from that camera model. Obviously the bad pixel map will only apply to one particular camera so the same model camera with a different serial number will need an entirely different bad pixel map.

Exposure:

• Smart Exposure: Uses a sophisticated algorithm to detect optimal exposure automatically. Note that since no exposure algorithm can be 100% perfect on every image, you can refine the raw exposure manually as needed. Simply hover your mouse pointer over a raw thumbnail, right click, and select "Refine Raw Exposure (Current Thumb)". Click the help button on the dialog if you need help with how to manually refine the exposure. In almost all cases, one click is all that is needed to adjust exposure on the (very) few images that need a change! Note that there is a keyboard shortcut for accessing the "Refine Raw Exposure" function as well: hold the Ctrl key on the keyboard and press the middle mouse button. Note that this "Refine Raw Exposure"

function works like "View Full Screen" in that it applies to the thumbnail currently under the mouse pointer. It is not designed to work with **selected** thumbnails so that you can use this operation without affecting your current selection of thumbnails.

- Auto Level: Uses auto leveling with 1% highlight clipping to set exposure.
- Auto Fill Light: Examines subjects and their location(s) in the frame to determine how to best balance the lighting in the photo. With this option checked, fill light will automatically be added when needed, unless overridden by refining the photo and dragging the fill light to a custom location. Some notes on the auto fill light feature:
 - To enable/disable auto fill light, use "Edit", "Preferences", "Raw Format Options" and refer to the "Auto fill light" check box.
 - Auto fill light will add fill when needed, even for raw photos that have already been refined with white balance or exposure changes.
 - You can override the auto fill light by opening the raw photo in the refine tool, dragging fill to a new position, and saving.
 - Once overridden, fill remains at the custom (user) setting until you right click on the fill slider.
 - With auto fill light ENabled, right clicking on the fill slider restores the automatic fill setting: this could be anything between 0 and 15.
 - With auto fill light DISabled, right clicking the fill slider returns fill to zero.

Working Color Space:

- sRGB: Use sRGB for web display or emailing photos: all raw photos will be converted to sRGB prior to display/conversion/printing.
- Adobe RGB: Use Adobe RGB for a larger color gamut with broader color range when images are to be printed or edited: all raw photos will be converted to aRGB prior to display/conversion /printing.
- Enable custom profiles: Check this box if you want Qimage to look in your "profiles" subfolder (within the Qimage install folder) for custom profiles for your camera model. If this box is checked, Qimage will look in the profiles folder (typically \program files\qimage\profiles) for an ICM file matching the model number listed in the raw file. To find the model number inside a raw file, hover your mouse pointer over a raw thumbnail and press "Ctrl-I" to get image information. The model is listed on the second line of the info dialog. As an example, a Nikon D300 shows "D300" for the model, so the D300 custom profile would be \program files\qimage\profiles \D300.icm. Note that if "Enable custom profiles" is checked but Qimage cannot find an associated profile, the color space selected above (sRGB or Adobe RGB) will be used.
- Creating camera profiles: If you'd like to create your own camera profile for Qimage, you must first put a "placeholder" profile in your "profiles" subfolder using the file name as above. Any standard color space will do. Following the example above with the D300, copy the file sRGB.icm from \program files\qimage\sRGB.icm to \program files\qimage\profiles\D300.icm. Once the D300.icm file is in place, Qimage simply processes your raw file with no color management and tags the file with the D300.icm profile. Note that using sRGB.icm does not mean you are restricted to sRGB colors. You are simply making a placeholder that tells Qimage to turn off color management and tag the image with the profile found. You can then convert your shot of your (whatever type/brand) color calibration target to a JPEG/TIFF/BMP file to use in your profiling software.

Quality for On Screen Views and Small Prints:

- Full: This option ensures that the raw file is decoded in the proper manner regardless of the task you are performing, ensuring color and contrast consistency across all operations.
- Draft: This option loads the embedded JPEG (inside the raw file) for some non-critical operations such as Preview/Add where you want to go forward/back through a list of selected thumbnails quickly. Note that with this option selected, there may be some color/contrast inconsistencies because some operations won't actually open/decode the raw data.

Quality of Thumbnails:

- Lightning raw: Check "lightning raw" (default = checked) to create cached copies of raw files while building thumbnails so that every subsequent access to the raw file is as fast as non-raw formats like JPEG or TIFF! This option allows you to enjoy the benefits of the raw format without the continual slow-down often seen (in other software) when working with raw files.
- Optimize for quality: As above, ensures that the actual raw data is used when creating thumbnails for consistency of color/contrast.
- Optimize for speed: Uses the embedded JPEG (inside the raw file) to build thumbnails. This
 option is significantly faster but you will notice some inconsistencies in exposure/contrast
 between thumbnails and full screen views/prints. While this option is faster, speed is only an
 issue the first time you visit a folder with raw images Qimage has never seen before. After the
 initial visit to the folder, thumbs will load at the same speed.

Confirming/canceling your changes

- Confirm: To confirm/accept any changes made on the Raw Format Options dialog, simply click the "OK" button at the bottom of the dialog.
- Cancel: To cancel changes and revert to the settings that were in place when you first opened the Raw Format Options dialog, simply click the "x" in the upper right of the dialog to close the window.

Red Eye Correction - Red eye/redeye is a condition caused by direct flash photography. When light from a camera's flash bounces off the retina of the human eye, the pupil of the eye appears bright red in the photograph. Red eye can be avoided by using a different flash technique such as bounce flash or changing the location of the flash unit to the side or top/bottom, however, Qimage offers a tool to correct red eye in photos where red eye was unavoidable. Red eye is considered a "blemish" in Qimage and therefore must be removed via the blemish corrector. Removing red eye is no different than removing a blemish, except that the blemish (red pupil) must be removed by darkening the "blemish" instead of blending with surrounding colors. The only thing to remember here is that you must click in the center of the eye (pupil) and drag the mouse pointer to the left when removing redeye.

For more information on how to remove blemishes and info on how to access the blemish correction, see the <u>Blemish/Pixel Corrector</u> section.

Reordering Prints on a Page - You can change the position of a print in the document by moving it up or down in the queue. Simply click on a single print on the preview page and then right click on the preview page and select "Up" or "Down" to move the print backward or forward in the document respectively. Note that after you have selected one print on the preview page, you can also use the up and down arrow keys to move the print as well. When performing this action, the selected print will either advance or recede in the queue and the printed page unless you are operating in "Freehand" image placement mode. In Freehand placement mode, changing the order in the queue only changes which images get printed first on the page but will not change their locations in the document (since all positions are manually specified). Even in Freehand placement mode, however, this function has a benefit: it will allow you to change which print appears on top if you have overlapped two prints intentionally.

Scrapbooks - The power of Qimage allows you to quickly and easily create scrapbooks. You can use the page editor to perform <u>manual sizing</u> and placement and use the image editor to create <u>cutouts</u> for your images.

Search IPTC Image Info - Qimage allows you to search the current folder and all subfolders for certain IPTC data. For example, you may have entered a keyword "bird" on all your bird shots and would like to find a certain bird. Let's assume your main photo folder is c:\images. Simply navigate to the c:\images folder using the folder browser above the thumbnails. This sets the starting point for the

search. Then right click in the thumbnail grid and select "Search IPTC Image Info". You may then check the "include subfolders" box, enter "bird" next to the "search words" parameter and click the "add" button to add "bird" to the list of search words, and then check the "keywords" field to search for the word "bird" in the keywords IPTC field. Next click "Go" and Qimage will find and display all images with the "bird" keyword. Remember that IPTC data only applies to JPEG and TIFF format images so other images like raw images, GIF images, BMP images, PSD images, etc. will not be included in the search.

Selected Thumbs/Files - When you select (mark) one or more thumbnails, you can right click anywhere in the thumbnail display area to drop down a menu of options. Note that the right click menu is separated into a group of functions that apply to the selected thumbnails (top group) and a group of functions that only apply to the thumbnail currently under the mouse pointer (bottom group).

Selective Color Filter - The selective color filter is a powerful tool that allows you to specify separate changes that are applied to each primary color (red, green, blue, yellow, magenta, cyan) plus neutral. For example, the selective color filter can be used to increase/decrease the intensity of only the red colors in the image, reduce a purple tint in blues, increase saturation of greens, etc. Access the selective color filter by opening the image editor window and clicking the "Sel. Color" tab at the top/right of the window.

The values used by the selective color filter are:

Red Chg.	Green Chg.	Blue Chg.		
R 1.0	1.0	1.0		
Y 1.0	1.0	1.0		
G 1.0	1.0	1.0		
c 1.0	1.0	1.0		
B 1.0	1.0	1.0		
M 1.0	1.0	1.0		
N 1.0	1.0	1.0		

The selective color filter allows you to enter changes in RGB value for each primary color plus neutrals (grays). The rows in the table represent the hue of the input color (pixels) while the columns represent multipliers to use against the RGB values of the input image. A value of 1.0 means "no change", so the above filter is a "do nothing" filter since regardless of the color of the input pixel (R,G,B,Y,M,C,N), the RGB values of the input pixels will be multiplied by 1.0 to arrive at the result. In other words, if the hue of the pixel in the image is red, we look at the top row of the table labeled "R" and read across. The red, green, and blue change for red pixels is 1.0, 1.0, 1.0 so the filtered pixel color will be 1.0*R, 1.0*G, 1.0*B. If the "R" values were 0.5, 0.5, 0.5, the filter would effectively reduce the intensity of all red colors to half the original intensity.

Note that the filter extrapolates the weightings in the above table between primaries, so a color that is halfway between red and yellow will be filtered with an average of the "R" and "Y" weightings in the table. The colors in the selective color table are arranged in hue order to help you visualize the change to colors "between" two rows in the table. Also note that as primary colors become desaturated, they shift toward neutral gray ("N" in the table above). The following example illustrates how the values in the table are utilized:

Example: reduce intensity of red colors

To reduce the intensity of red colors, we might enter 0.5, 0.5, 0.5 on the "R" row in the above table. This tells the selective color filter to reduce the RGB values to 50% when the color is red. Let's

assume that this is the only change to the above table, so that all values in the "R" row are 0.5 while all other values in the table remain 1.0.

Pixel	Color Name	Input RGB	Red Chg.	Green Chg.	Blue Chg.	Filtered RGB
1	Pure Red	255,0,0	0.5	0.5	0.5	128,0,0
2	Pure Dark Red	50,0,0	0.5	0.5	0.5	25,0,0
3	Yellowish Red	255,128,0	0.75	0.75	0.75	191,96,0
4	Pure Red - Desaturated	255,128,128	0.75	0.75	0.75	191,96,96

The above table shows what happens to four different pixels passing through our "reduce red intensity" filter.

- 1. The first pixel is pure red with 100% saturation. Since the hue is pure red and the saturation is 100%, the weightings in row "R" of the filter table apply at full strength, so we multiply each red, green, and blue value of the input pixel by 0.5 to arrive at our filtered pixel.
- 2. The second pixel is not quite as *bright* but is still pure red with 100% saturation, so once again, the weightings in the "R" row of the table apply at full strength.
- 3. The third pixel is exactly halfway between red and yellow, so we average the 0.5 weightings in the "R" row with the 1.0 weightings in the "Y" row to get 0.75.
- 4. The fourth pixel is pure red but it is only at 50% saturation. Since 50% saturation is considered halfway between fully saturated (row "R") and neutral gray (row "N"), we average row "R" with row "N" in the table to arrive at our final weighting of 0.75.

Here are a few real world examples that illustrate how to use the selective color filter:

- Image has an overall green color cast in the image: Enter 1.0 for all values in the "Red Chg." column, 0.9 for all values in the "Green Chg." column, and 1.0 for all values in the "Blue Chg." column.
- Blue colors look too purple: In the "B" and "M" rows, enter 0.9 for the "Red Chg.", 1.0 for the "Green Chg.", and 1.0 for the "Blue Chg.". All other values should be 1.0.
- Reds look too orange: In the "R" and "Y" rows, enter 1.0 for the "Red Chg.", 0.9 for the "Green Chg.", and 1.0 for the "Blue Chg.". All other values should be 1.0.
- Yellow colors need more saturation: In the "Y" row, enter 1.1 for the "Red Chg.", 1.1 for the "Green Chg.", and 0.8 for the "Blue Chg.". All other values should be 1.0.

Note: you can increase/decrease the intensity of all of the above examples by leaving all 1.0 values untouched and simply multiplying all non 1.0 values by some scalar multiple. If an image has a severe green color cast for example, you could enter 1.0, 0.8,1.0 instead of 1.0, 0.9, 1.0.

Advanced use of the selective color filter: matrix transformations

A 3x3 matrix may be used for each row (R,G,B,Y,M,C,N) in the table to specify a color matrix transformation for that row. Matrix transformations can be rather complex and should be left to the advanced user who is at least somewhat familiar with matrix multiplication. If you wish to learn how to specify matrix transformations using the selective color filter, please read on.

Color matrix transformations are advanced filtering tools that allow you to modify the color characteristics of an image by supplying nine parameters of a 3x3 array. RGB values for each pixel in the image are then multiplied by the 3x3 matrix to form the final image.

In contrast to entering a single value as a simple weighting in the selective color table, matrices are specified via entering *three* values in each of the three boxes, separated by commas. For example, to specify the "identity" matrix in the "R" row of the table, enter 1.0,0.0,0.0 in the first box, 0.0,1.0,0.0 in the second, and 0.0,0.0,0.1 in the third box. Since a different matrix may be entered for each of the 6 primaries plus the neutral "N" row, you can actually have a filter that specifies seven different matrices, each to be applied to a specific color band. Note that you can make the selective color filter perform

like a single 3x3 matrix by simply entering the same three values in all seven boxes in each column.

The following will serve as background on how Qimage handles matrix transformations. Matrix arrays are used to process RGB values by taking each pixel's RGB values and multiplying those RGB values by a 3x3 matrix. Consider a pixel with red, green, and blue components RGB and an arbitrary matrix:

R a11 a21 a31 R'

G * a12 a22 a32 = G'

B a13 a23 a33 B'

When you multiply an RGB value by the above matrix, the result will be R'G'B' dictated by the following:

R'=(R)(a11)+G(a21)+B(a31)

G'=(R)(a12)+G(a22)+B(a32)

B'=(R)(a13)+G(a23)+B(a33)

The simplest form of matrix transformation is the "identity" matrix which does nothing to the RGB values (RGB in = RGB out):

R 1.0 0.0 0.0

G * 0.0 1.0 0.0

B 0.0 0.0 1.0

Following from above, the identity matrix gives us:

R'=R*1+G*0+B*0

G'=R*0+G*1+B*0

B'=R*0+G*0+B*1

When we simplify:

R'=R

G'=G

B'=B

To enter the identity matrix as a selective color filter in Qimage, simply enter 1.0,0.0,0.0 in all seven entries in the "Red Chg." column, 0.0,1.0,0.0 in all seven entries in the "Green Chg." column, and 0.0,0.0,1.0 in all seven entries in the "Blue Chg." column.

Using different scalar multiples of the identity matrix allows us to perform changes to each color channel. For example, if we want a filter that reduces the green channel because our image has an overall green cast, we might use this matrix to reduce the green channel by 20%:

1.0 0.0 0.0

0.0 0.8 0.0

0.0 0.0 1.0

To use this matrix as your selective color filter, enter 1.0,0.0,0.0 in all seven entries in the "Red Chg." column, 0.0,0.8,0.0 in all seven entries in the "Green Chg." column, and 0.0,0.0,1.0 in all seven entries in the "Blue Chg." column.

Note that these simple matrices are not really useful since the above example can be (much more simply) specified without using a matrix by entering 1.0 in all seven entries in the "Red Chg." column,

0.8 in all seven entries in the "Green Chg." column, and 1.0 in all seven entries in the "Blue Chg." column. So why allow matrix calculations at all? Because they allow you to perform more complex functions that go beyond simple changes to individual color channels. As a simple example, you could enter 0.0 in the first two "R" columns and 1.0,0.0,0.0 in the third column. This will turn all red colors into shades of pure blue. To illustrate a "real world" example, click "Load" on the selective color filter tab and load the "black and white" selective color filter. Implementation of more complex examples is left to the user.

Slide Show - a slide show is available for the purpose of viewing images in a detailed format on screen. This option allows detailed examination of each image in the queue and allows final review prior to printing. To access the slide show, add images to the queue and then right click on the preview page and select "Slide Show". Thumbnails may also be viewed full screen by right clicking on the thumbnail (see Full Screen View for more details).

Slide Show Options - When you first access the slide show, you will notice that a slide show options menu appears first (if you turned this option off, you can access it via "Edit", "Preferences", "Slide Show Options"). The slide show options menu includes the following settings:

- View (full screen or windowed): Select the mode for the slide show. Selecting full screen will
 show all images using the entire screen. When in full screen mode, you can right click to display
 a control menu that includes "Previous", "Next", and "Exit". If you select "windowed", all images
 are displayed in a large window. Note that in windowed mode, there are more options available
 such as rotate image, monitor gamma, remove from queue, etc.
- Stamp on image (number and date/time): Check the appropriate box(es) to have Qimage stamp each image with the information selected. The info will appear in the upper/left corner of the images.
- Flow (user advance or auto advance): Qimage can allow you to manually go forward/backward in the slide show, or you can select auto advance and set the time interval (below).
- Time Interval (seconds): Enter the amount of time to display each image before loading the next (applies only to auto advance).
- Auto advance (Next slide or random): When the time interval expires, Qimage will either load the next image in the queue or a random image.
- Show these options before slide show: Keep this box checked if you change options frequently.
 If however, you have the options set as you like and do not wish the options box to appear each
 time, uncheck this box. Note that if you uncheck this box and want to access the options again,
 simply click "Options" on the top menubar of the main screen and then select "Slide Show
 Options".

Soft Proofing - Qimage allows you to proof the colors in your prints by emulating (on screen) what the prints will look like if printed with the current color management settings. Soft proofing uses the color response defined in three different ICC profiles to simulate the color of your prints on your monitor. It is therefore possible to preview printed color on your monitor prior to creating the actual hard copies. Accurate soft proofing requires that you have a printer profile active in "Prtr ICC" on the lower right of the Qimage main window on the "Job Properties" tab as well as an accurate monitor profile and a known image color space. Soft proofing depends on accurate ICC profiles and proper color management setup. In order to assist you with proper setup for soft proofing, the following describes settings in more detail.

Printer ICC profile (Prtr ICC): A printer profile must be active in order to soft proof because the printer profile describes the color response of the printer. Without a printer profile active under Prtr ICC, soft proofing is disabled.

Monitor ICC profile (Mntr ICC): A monitor profile (preferably a custom profile derived using a colorimeter that attaches to the screen) is recommended. An accurate monitor profile ensures that printed colors can be emulated accurately on screen. If no monitor profile is active, Qimage will still allow soft proofing, however, sRGB color space is assumed for the monitor.

Image ICC profile (image color space): Assuming you have a printer profile active in Qimage's Prtr ICC, the image color space will be listed in the queue when you add an image to the queue. Simply add an image to the queue and look at the right side of the line in the queue for the image color space. The color space listed is the color space associated with the image itself. If no color space is embedded in the image file, Qimage will assume sRGB or will pick an appropriate profile from the "input" profile list under "Edit", "Preferences", "Color Management".

Notice that when we soft proof colors, we are interested in the color response of three different devices: the printer, the monitor, and the device that captured the original image. Having accurate profiles that describe how all three of these devices reproduce color via using an ICC profile for each device as above will ensure accurate soft proofing.

Soft Proofing in Qimage

Soft proofing may be used in two places within Qimage: on a per-image basis or a per-page basis. After ensuring that all color profiles are appropriate as above, you can simply move the mouse pointer over a thumbnail in the thumbnail display and press Ctrl-Space to soft proof the image under the mouse pointer (right clicking on the thumb and selecting "Soft proof" may also be used). In addition, you may soft proof entire printed pages by first adding images to the queue and then going to the page editor (click the "Edit Page" button under the preview page) and clicking the "Soft Proof" button on the right side of the window. We recommend leaving the "View" dropdown on the bottom right set to "Thumbs/Small Images" so that page views are faster and updates can be performed without the added delay of creating detailed soft proofs. Using the "Soft Proof" button allows you to work in a faster mode such as "Thumbs/Small Images", only using the more time consuming "Soft Proof" display when needed. Note that if your "View" is set to a fast display such as "Thumbs/Small Images" and you click the "Soft Proof" button, the soft proof view is only active until you make a change to something on the page. Once a change such as resizing, moving, etc. is made, the view jumps back to what was previously used. The "Soft Proof" button should therefore be used to temporarily convert the currently viewed page to a soft proof. If you don't mind the extra time required to generate page views in "Soft Proof" mode, you can manually select "Soft Proof" by dropping down the "View" box and selecting "Soft Proof" as your permanent view. Note that pages will generate much more slowly in this mode, however, so you may wish to consider doing most of your work in a fast view such as "Thumbs/Small Images" only activating a temporary soft proof view when needed to assess printed color.

The proofing setup such as the profiles being used, rendering intent, etc. can be found on the "Edit", "Preferences", "Color Management" window. Qimage uses the settings on this window (including rendering intent) when generating soft proofs. Since Qimage uses the same window and settings for both soft proofs and print setup, you can always be sure that your soft proofs match your print settings.

When soft proofing individual images via the thumbnail grid, you can right click on the soft proofed image and select "Original" to see the original image (profiled for your monitor) or switch back to the "Soft Proof" to see the emulated print colors. Switching between "Original" and "Soft Proof" can give you an idea of the differences you can expect between the monitor and the printed image. Note that the space bar may be used to toggle quickly between "Original" and "Soft Proof" for easy comparison.

Proofing Accuracy

Remember that soft proofing is designed to give you an idea of printed color by displaying a simulation of your prints on screen. Soft proofing should not be used to judge image sharpness, quality of interpolation, or any facets of image quality other than color. Also note that the accuracy of soft proofing depends entirely on the accuracy of your printer profile, monitor profile, and image profile. In the process of generating a soft proof, two separate profile conversions are being performed, using your image profile and monitor profile once and your printer profile *twice*! Due to the number of conversions required, it is important to ensure the accuracy of all of your ICC profiles and the proper use of color management in Qimage in order to get the most out of soft proofing.

Sort Prints - Qimage always maintains the order of prints in the queue, even when placement is set to

"Optimal". This allows you to refine your printed document by scrolling through page by page and print by print, selecting new fitting and size options without worrying about prints being re-sorted or losing track of where you are in the queue/document. Once the document is ready to print, however, you may wish to let Qimage take control of the placement and order of images in the queue. Right clicking on the preview page and selecting "Sort Prints" will sort prints from largest to smallest, placing 5x7 prints first, 4x6 next, then 3.5 x 5, etc. Having similar sizes grouped together makes cutting photos simpler and also uses less space in many cases. When in "Optimal" placement mode, the "Sort Prints" feature has an additional benefit: it will not only sort by size, but also will look for ways to fill gaps on pages by moving smaller prints to fill "holes", resulting in the most efficient printing possible and the greatest paper savings.

Templates - Note that in addition to the thumbnails of images in the current folder, there is always a blank [Template] at the bottom of the thumbnail list. You can select [Template] as you would a normal image and drag it to the page or add it to the queue (all templates show as red rectangles). Let's say you would like to create a freehand setup that has templates exactly where you want them on the page. For example, some picture frames hold multiple prints of different sizes in different locations within an 8x10 frame. You could add the appropriate number of templates to the queue and manually arrange them on the page to fit in the multi-frame. Next, save the session by clicking "File", "Save" from the top menubar on the main screen and then selecting "Session" on the save dialog. The templates and locations will be saved in the file that you named.

When you load the above session by clicking "File", "Recall" and then specifying the file name, the prior template locations will be restored. If you want to replace the templates on the page with new images while retaining the size and location of the templates, simply drag an image and drop it onto the template on the small preview page (note that all blank templates show up as red rectangles).

Note that dropping a thumbnail on an **existing image** will not replace that image as it does when you drop on a template. Dropping a thumbnail on the left side of an existing image will **insert** the new image before the existing image. Similarly, dropping a thumbnail on the right half of an existing image will **insert** the new image after the existing image. So... is there any way to replace an existing image (not a template)? The answer is yes. Since templates and images differ in their purpose, if you have an **actual image** that you want to replace, you can do this as well by performing these steps:

- In the small page preview in the upper right, click on any image on the page.
- The image will be highlighted on the preview page and the filename will also be highlighted in the queue in the lower left.
- Simply navigate to any new folder/image and click on it's thumbnail and drag the new thumbnail to the queue, dropping it on the highlighted **filename in the queue**.
- The image will be replaced by the new image.
- Repeat for other images.

Note: you do not have to perform the first step above. It is only to assist you in knowing which file in the queue is associated with which image. If you already know the filename, you can simply drag the new thumbnail directly to the filename in the queue and drop it.

Test Strips - Before printing large prints and committing large amounts of paper, printing a small section of the large print can be helpful for the purpose of judging detail, sharpness, and color. There is a "Test strip" function on the full page editor that will allow you to create a small, proportional print that contains a piece of the larger print. From the main window in Qimage, start by adding the photo you wish to print at the desired final size (20x30 inches for example). Then click the "Edit Page" button below the preview page, select the print on the page, click the "Cropping" button on the right and the "Test strip" button will be visible under the small crop window. The test strip button can be used in any of the following ways:

You may repeatedly click the test strip button to make your test strip progressively smaller until
you have a size as small as you like.

- You may click the test strip button once and then change the size of the print manually using the sizing functions on the main window. Once the test strip button is clicked, that print remains a test strip which will conform to a piece of the original size print until you remove the print crop or manually move the crop zoom lever in the page editor. You could, for example, start with a 20x30 inch print, click the test strip button, and then choose a new size of 4x6. Since the print has been identified as a test strip, the 4x6 print will be a 4x6 portion of the 20x30 print! The area of the 20x30 print shown in the 4x6 can be adjusted by simply dragging the crop in the page editor or using the high precision cropping tool in the page editor.
- You may select a smaller paper size (4x6 for example) and add your large print to the queue, specifying that it is OK to create a poster larger than one page. Then simply click the test strip button in the page editor once and the test strip will automatically be resized to the size of your (smaller) paper. The crop can then be moved manually to any part of the print using the cropping tool in the page editor.
- Note that while left clicking on the test strip button will make the test strip smaller, right clicking or Ctrl-clicking on the test strip button will make the test strip larger.

Thumb Builder - The "Thumb Builder" menu item on the main window is active only when thumbnails are being built in the background, as they would be when entering a folder with many images for the first time. If the text just above the folder history dropdown reads "Building thumbs..." followed by a counter, you can use the options on the "Thumb Builder" menu to:

- Stop Stops the background thumb building process: thumbs will be built/processed as you scroll to them in the thumbnail grid. This option can be helpful if you just entered a folder with hundreds of images and you just want to stop thumbnails from building so you can scroll through a few
- Lock Locks the background thumb building process so that it continues to build thumbnails in the current folder, even if you switch to another folder. This option can be helpful if you have a folder with many images where you would like Qimage to continue building thumbs while you visit other (smaller or already-processed) folders. Qimage will continue building thumbs in the folder where you locked it until all thumbnails in that folder are built.
- Unlock If you previously locked the thumb builder onto a folder, unlock will release the lock so that thumbs in the current folder can be built in the background.

Note: Qimage has two thumbnail builders: a *foreground* thumbnail builder (for thumbnails you can see on the thumbnail grid) and a *background* thumbnail builder (for thumbnails that are beyond the current view on the grid). The above functions apply to the background thumbnail builder. When you first enter a folder that you have never visited before with Qimage, thumbnails for the first page on the thumbnail grid (the thumbnails that are visible at the top of the grid) are built first, *before* the background thumbnail builder starts. The background thumbnail builder will start processing thumbnails *after* the foreground thumbnail builder is finished (first page of visible thumbnails is built). The above functions will therefore become active once Qimage has finished displaying the thumbnails that show on the grid and has started building ones you can't see yet (because you have not scrolled to them yet).

Thumbnail Font - Click "Edit", "Preferences", "Thumbnail Font" to change the font that appears under each thumbnail on the main screen.

Managing the Thumbnail Cache - Click "Utilities", "Manage Thumbs and Raw Cache" for options regarding storage of thumbnails and Lightning Raw cache by Qimage. To recover hard drive space used by Qimage, you can choose to delete thumbs/cache for images past a certain "age", simply delete all thumbnails, or open Windows explorer to browse the thumb/cache folders. Note that if thumbnails are deleted, they will reappear with each folder visited, and since Qimage will need to rebuild the thumbnails in those folders, thumbnail loading will be slower the first time the folder is accessed. If you would like to use a different drive to store Qimage application data like thumbs and raw cache, use "Utilities", "Migrate Qimage Application Data" to change the drive/folder that Qimage uses to store this data.

We recommend deleting all thumbnails more than 6 months old about once a year.

Thumbnail Quality - Click "Edit", "Preferences", "Thumbnail Quality", and select the thumbnail quality (default is Best). Setting thumbnail quality to "Low" will result in faster thumbnail building the first time you enter a new folder and less space used in the Qimage thumbnail cache, but may result in images appearing pixelated (grainy) on the preview page from the main window. In contrast, increasing the quality to "Best" will result in slightly slower thumbnail loading the first time thumbnails are built in a folder and increased space requirements for the Qimage thumbnail cache, but with increased quality (less grainy) page previews.

Units - Qimage can operate in full metric/English units, and will remember your last setting. Click "Edit", "Preferences", "Units" to change the default units of measure in Qimage.

Unsharp Mask - Unlike the name implies, this filter is actually a high quality method for sharpening images.

To access the unsharp mask, double click on a thumbnail or print to open that image in the image editor. Enter values for "Radius" and "Strength" and click "Done", "OK" to associate the filter with the original image.

About the Qimage unsharp mask:

The radius parameter equates to the width of the sharpened edges. The larger the radius, the wider the edges will appear. The strength parameter is the contrast of the edges so that the higher the strength, the more contrast the edges will have. Typical values for radius and strength start at about 1/100 or 2/100 respectively so these are good starting points. Note that Qimage does not use a "threshold" parameter since sharpening is performed on the luminance channel only, avoiding noise and color fringing that the "threshold" is meant to address.

USM tone targeting: Due to the way most (Bayer based) image sensors capture images, some colors in the image may appear sharper than other colors. For example, black, white, and gray details may appear sharper than red, blue, or green details because fewer pixels on the sensor are contributing information for those colors. Moving the slider to the right will sharpen saturated colors more than black, white, and gray areas, thereby compensating for the sharpening discrepancy of images captured by most digital cameras. With the slider at max, use a higher level of sharpening such as 2/200 to see the effect. Using a radius of 2 and strength of 100 to 200, you can increase the '3D effect' of your photos because sharpness will be equalized across all colors.

Tone Targeted Sharpening:

• Sharpen/soften certain toned or RGB values: Sharpening/softening a specific subject: By default, tone targeted sharpening is set to equalize sharpness of Bayer based camera images. You can override the default and select a specific color to target for USM so that the selected color gets the vast majority of sharpening without sharpening other colors. Click the dropper in the "USM Tone Targeting" group on the image editor window and then click on a representative color from your subject in the image. Your unsharp mask (USM) will now only affect colors (tones) close to the one selected. Keep the slider at "max" to maximize the effect or slide to the left to reduce the effect. With the slider at the left (off), all tones in the image will be sharpened equally. As you move the slider toward "max", sharpening focuses more on the selected color and less on colors that differ from the selected color. Click the small color panel to the left of the dropper for a list of special options such as the ability to target all colors except the selected color, ability to target saturated colors,

- or the ability to target neutral colors.
- To sharpen the targeted areas, use a positive strength in the USM strength parameter.
- To soften the targeted areas, use a negative strength in the USM strength parameter. Note that when softening, strengths beyond -100 (such as -150, -200, etc.) may cause artifacts.
- To sharpen and soften different areas at the same time, use the bottom option in the dropdown that appears when you click on the color panel in the "USM Tone Targeting" group. It allows you to sharpen the targeted area while softening others or vice versa.
- To reset tone targeted sharpening to the default "sharpness equalizer" setting, simply right click on the dropper button.

Utilities

- Run Photo Editor Click to activate your photo editor.
- Run File Manager click file manager to execute the file manager of your choice. This option can be useful for copying/deleting files, etc.
- Manage Thumbnail Cache click to clean up/delete Qimage thumbnails from the thumbnail cache.
- Manage Print Crops click to clean up crop preferences related to the crops chosen for images via the page editor cropping tool.
- File Manager/Photo Editor Setup use this option to set up your default browser/explorer and photo editor before first use.

White Balance - This filter readjusts the white balance of your image(s).

To access the white balance filter, double click on a thumbnail or print to open that image in the image editor. Next, click the small eye dropper button and click on (what should have been) a neutral area (white or gray) of the image. Note that the area should be at least 6x6 pixels in size (don't click on single pixels of white, etc). One you have clicked on an area that should appear white in the photo, click click "Done" to save.

Notes on white balance:

- Remember that the area that you click on using the dropper should be at least 6x6 pixels (3 to the left, right, top and bottom of the dropper).
- Avoid clicking on "clipped" areas that are 255, 255, 255 in color (watch the "Curr. Color" values
 at the bottom of the parameters) since these clipped values of "brightest white" will not work for
 white balance.
- Try using areas that you know were really white (white sweater collar, white paper, gray t-shirt, etc).
- If you don't think there is any "real" white or gray in your photo, remember that human eyes are almost always close to white (on the outside of the iris of course).
- As a last resort, did you have your camera set to the wrong white balance for an entire shoot?
 Just find any one image in the entire batch that has a known white/gray object, use the dropper
 on that image and apply the white balance fix to the entire set of photos at once. Voila! All your
 photos now have the proper white balance!
- If there really is not white or gray in your photos, you may need to experiment with different percentages for the red and blue bias. You can enter these values (from -100 to 100) for both parameters to see how it affects the image. Proper white balance is normally within + or 10.

Notes regarding color profile plugins, ICC profiles and RAW images:

Proper white balance is key to being able to properly profile a camera for color, therefore if you
are using a Qimage plugin (any camera model) and you suspect that white balance might be

- incorrect, simply correct the white balance using the white balance filter. When you correct white balance and apply a plugin, white balance is always corrected first before the plugin or profile is applied.
- The same applies to RAW CCD images. If you suspect improper white balance, simply use the image editor to reset white balance. This new white balance will "feed into" the RAW image decoder to ensure proper white balance before any other operations are performed on the RAW image (like color correction/profiling).

Qimage Shortcuts

Qimage has a large number of shortcuts designed to give super fast access to critical functions. The following is a list of some of of those functions:

The Main Window

Thumbnail Shortcuts: To access these shortcuts, simply place the mouse cursor over a thumbnail and press:

Applies to thumbnail under mouse cursor (thumb need not be selected/highlighted):

- Middle mouse button, press down on mouse scroll wheel, or press the enter key: <u>Instaview</u>
- Spacebar: View the image full screen.
- Ctrl-X: View the image in the image examiner (zoom in/out/pan/etc).
- Ctrl-I: View the EXIF information for the image.
- Alt-X: View a RAW format image (NEF, ORF, etc) in draft form (super fast). Only applies to RAW CCD format.
- Right click: Access to above via mouse.

Applies to selected thumbnails (must select at least one thumb first):

- Insert key: Add selected images to the queue.
- Ctrl-Insert: Preview all selected images before adding to gueue.
- Ctrl-Del: Delete selected thumbs/images (deleted the images, not just the thumbs!).
- Del: Send selected images to the recycle bin.
- Ctrl-C: Copy selected images to another folder.
- Ctrl-M: Move selected images to another folder.
- Ctrl-R: Rename selected images.
- Ctrl-Alt-R: Auto rename images based on image date/time/etc.
- Right click: access to above via mouse.

Queue Shortcuts: To access these shortcuts, simply place the mouse cursor over the file names in the queue and press:

- Middle mouse button, press down on mouse scroll wheel, or press the enter key: Instaview
- Ctrl-A/Ctrl-Alt-A: Selects/deselects all files in the gueue.
- Delete key: Remove the selected images from the queue.
- Ctrl-Delete: Clear the queue.

- Ctrl-C: Convert images in the queue to another image format.
- Ctrl-X: Use the image comparator to bring up the first two images in the queue side-by-side for comparison.

Dragging and Dropping

- Click and drag one or more thumbnails onto the preview page
 - 1. Drop on the left side of an existing image to insert selected thumbs **before** that image.
 - 2. Drop on the right side of an existing image to insert selected thumbs **after** that image.
 - 3. Drop on "white space" on the page to simply add the selected thumbs to the **end** of the queue/document.
- Click and drag one or more thumbnails into the queue.
 - Drop the thumbnails on "white space" in the queue to simply add the selected thumbs to the end of the queue/document.
 - 2. Drop one selected thumbnail onto an existing filename in the queue to replace that image with the selected thumbnail. This is an easy way to "overwrite" an image on the page. To find your "target" visually, simply click the print on the preview page first and the file name in the queue will be highlighted.
- Click on an image on the preview page and drag it off the page, dropping it on the thumbnails to remove that image from the queue/document.

Double Clicking

- Double click on a thumbnail or a print on the page to open that image in the image editor.
- Double click on a file name in the queue to remove that image from the queue.
- Double click on empty space on the preview page or just outside the page to open the page editor to edit that page.

Other shortcuts

• To create a new page when operating Qimage in "freehand" positioning, simply click on the small red right-arrow under the preview page.

Popular Shortcuts in Other Areas of Qimage

In the Image Editor

- Right click on the image to bring up the small blemish and redeye correction window.
 This window also "doubles" as a real-time update window for filter parameters. As
 long as you leave this small window open, changes to filter parameters can be
 previewed instantly in the preview window.
- When creating new images using the image editor, the edited versions need not be saved with the {Q} prefix. Click the checkbox that reads "Only use {Q} prefix if destination file already exists" on the final filter application dialog (right before

actually saving the filtered images). Qimage will then use the {Q} prefix only if the file being saved already exists (such as if you are saving in the same format and you have NOT selected a different output folder).

Overall operational Notes

Spool space - Qimage preserves full image detail when printing to your printer, regardless of print size. For this reason, your printer may require a very large hard drive "spool" file. Requirements of over 500 megabytes up to several GIGAbytes of spool space are not uncommon when printing a few dozen images in one image document. Please make sure that your print spooler or print driver is pointing to a drive with plenty of free space for spooling high resolution images. In addition, there should be plenty of free space on the drive where Qimage itself is installed (if this is a different drive from the one your print spooler uses).

Qimage performance - The amount of time that Qimage takes to spool a print job is directly related to the settings under "Edit", "Preferences", "Printing Options". The higher your settings, the longer Qimage will take to process them (and the better your prints will look in general). Note that Qimage normally generates much larger spool files and takes a bit longer to process your images than the average printing program due to the super high quality interpolation being performed. Choosing an interpolation setting of "None" under "Print", "Print Interpolation" will cause Qimage to print as fast or faster than other printing programs while generating prints of about the same quality as other software. We recommend, however, setting the interpolation to "Max" or "High" with the interpolation method set to "Hybrid".

Thumbnail storage - Qimage thumbnails are normally stored in a folder called "Thumbs" directly in the Qimage Application Data folder (Use "Utilities", "Explore Qimage Application Data" to see this folder). After periods of extended use (browsing many images), the thumbnails can occupy a large amount of space on your hard drive. You can click "Utilities", "Manage Thumbnail Cache" for options regarding management of thumbnails.

Raw cache - Similar to thumbnail storage, Qimage uses a folder named "RawCache" to cache raw photos for the "Lightning Raw" feature.

Troubleshooting

Troubleshooting Navigator

- Finding the right workflow quickly
- <u>Installation problems</u>
- Errors/crash on startup
- Errors while using Qimage (not printing)
- Errors while printing a job

Trouble finding the proper workflow for what you need to do:

- Check to see if what you are trying to do is already described in detail in the <u>Learn by Example</u> section of the help.
- If you have already located the function you need to use and just need help with that function, try the Listing of Major Functions section and see if the function you are trying to use is listed there.
- If you are unable to obtain help via the above two links, it is likely that your question has already been addressed on an online forum. There are three online forums that have an archive containing a wealth of information on how to do just about everything in Qimage. All of these forums offer a search tool that allow you to search the archives, so if your question deals with a specific issue regarding printing of borderless prints for example, you can just search the archives below for the word "borderless" and you will be able to browse questions and answers regarding borderless printing.
 - Official Qimage Users Group forum at http://www.yahoogroups.com/group/qimage: this forum comprises thousands of Qimage users and is very active. Access to the forum and its archives requires that you sign up for the group, however, if you do not wish to receive daily email from the group and just wish to search the archives, you can set your subscription to "no email". Most likely your question has already been addressed and you'll be able to find it in the archives but even if it has not yet been addressed, you are likely to receive a response from another user in just minutes if you post your question to the group.
 - Forums at <u>DPreview</u>: Just go to <u>DPreview</u> and you can enter your search in the "Search Forums" entry on the main page and click "Go". You do not need to sign up to use the forums at DPreview, however, please note that these are general public forums that cover a wide range of topics so in order to find topics relating specifically to Qimage, make sure to include the word "Qimage" in your search. For example, search for "qimage borderless" to return topics regarding borderless prints in Qimage.
 - Qimage forum at <u>Steve's Digicams</u>: Just go to <u>Steve's Digicams</u> and click "Discussion Forums". You'll find " Printing - Qimage 2003 Support" near the bottom of the page.

Trouble installing Qimage:

Ensure that the downloaded demo is intact and that you downloaded the installation file to a folder with no other files present in that folder. Once the installation file has been downloaded, go to the folder that contains (only) the installation EXE file and run the EXE file using "Start", "Run". The most common problems related to installation are trying to

run the installation file from a folder with other files (possibly leftover remnants of other installs) and trying to manually unzip the files in the EXE when you should run the EXE directly using "Start", "Run" instead. Also note that some software may interfere with InstallShield installations so try rebooting and running the installation before using any other software.

Trouble starting Qimage (errors/crashes on startup):

- If an error message appears on startup or Qimage shuts down or locks up before getting to the
 main window, this indicates that the settings normally stored by Qimage and loaded on startup
 may have become corrupted. You can start Qimage in "safe" mode by holding down the Shift
 key as you start Qimage. This should clear the error.
- If starting in safe mode did not fix the problem, have you tried starting Qimage a second time?
 Startup errors that cause Qimage to fail starting up are usually detected and fixed if you simply start Qimage again.
- If you are unable to resolve the startup problem, the most likely cause is a print driver or settings issue. First make sure you have downloaded the latest demo from http://www.ddisoftware.com/dimage/demo.htm. The best way to ensure a "clean" install of the software is to navigate to your Qimage installation folder (normally \program files\qimage) and delete <code>all</code> files in that folder. Be sure to answer "Yes" if you are asked if you are sure you want to delete certain types of files. Your Qimage unlock information is stored in the Windows registry, not the installation folder, so even when you delete all files in the Qimage folder, your unlock information remains intact. Once you have completely cleared the Qimage installation folder of all files, reinstall using the latest demo from the link above. This "clean install" process normally solves any remaining startup issues.
- If the above steps have already been performed and Qimage is still unable to start, there is a problem with your Windows default printer/driver. Is your default windows printer on a network? If so, you may need to ensure that the printer and network queue are online and operational in order to start Qimage. Network printers that are not available usually do not present a problem if the PC, operating system, and network are configured properly, however, we have found some configurations where the driver does not respond as it should unless the printer/queue are online. If you are not printing to a network, you'll need to check the driver for your default local printer to ensure that the print driver is the latest version and is not having trouble "communicating" with Windows. Once the problem with the print driver is resolved, Qimage will start normally.

Trouble when opening certain folders:

If Qimage reports errors or crashes every time you navigate to a certain folder using the folder browser above the thumbnails, it is most likely encountering a damaged/corrupted image. Qimage has sophisticated error detection to prevent crashes even when images are corrupted, however, since there are an infinite number of ways that an image can be corrupted, it is possible that Qimage may encounter a file that causes trouble and makes it past the file format validation. Remember that Qimage builds thumbnails automatically for every image in a folder as soon as you visit that folder, so any image in that folder could be causing the problem. Try restarting Qimage and clicking "View", "Interface Options", "Thumbs or Files", "Names Only" prior to entering the folder. You will be able to enter the folder without a problem since Qimage will not try to access all images in the folder. You may then examine individual images one at a time using the space bar to display images under the mouse pointer, or simply add all images to the queue and run a slide show. Once the damaged image is located, you can delete the image or move it to a different location. Locating damaged images is much easier when you file your images in different folders. If you have one massive folder called "My Pictures" where you dump all images, locating a damaged image can be difficult.

Some causes of corrupted images:

- Partial/damaged downloads: Images downloaded from the web can be prone to communication errors.
- Software problem: The software used to save the image may have saved it with file formatting errors. Check the web sites for your regularly used scanning, photo editing, and image management software to see if any fixes relate to file saving.
- Progressive JPEG's: If you have been saving JPEG images in your photo software, ensure that "progressive" encoding is not checked in the JPEG options. Some software uses progressive encoding that is not compatible with Qimage.

Trouble when viewing/editing images on screen:

If you get an error message such as "bitmap not valid", "parameter is incorrect", or "error in imagelib.dll", you may be opening an image that is too large for your available memory. If you are opening large images, make sure you have enough RAM installed and also check your Windows virtual memory settings and try increasing virtual memory. If you are running Windows 98 SE and you are encountering these errors often, even when opening images that do not appear too large for the available memory, upgrading the operating system often resolves the issue.

Note that corrupted images can also cause errors when viewing/editing so be sure to check the information on corrupted images above.

Thumbnails appear smudged or do not update properly:

- Your video board may not be able to support video acceleration when set to the high setting. Check http://www.ddisoftware.com/qimage/notice.htm for details on how to reduce video acceleration.
- A video driver bug could also cause this problem. If the above fails, you will need to download a new driver for your video board. Download the video driver from the manufacturer of your video board, NOT the manufacturer of your computer.

Qimage locks up or is unresponsive when applying a filter:

If there is simply no response and you still have the hour glass showing on screen, Qimage is just not finished running your filter. There are many filters available that are time-intensive and these can be combined to create filters that take several minutes (if not longer) to run. For example, running a plugin along with the D1 ISO filter will take about 30 seconds on a 1.0 GHZ Pentium. Adding the shadow noise filter or other filters can double or triple this figure. Just be aware that the more complex you make your filter (the more parameters you change), the longer the filter will take to apply. In addition to complexity, you may have told Qimage to apply the filter to 100 images in the queue, at which point it could be hours before control returns to Qimage.

When applying filters using the batch filter, the "parameter is incorrect" error appears:

- First ensure that you are not asking Qimage to perform a ridiculous task like interpolating to very high resolutions that are beyond what your PC can handle.
- Finally, if you get the "parameter is incorrect" error and you are running Windows 98 SE, you may be low on resources before even running Qimage. Many programs have trouble running under Win98SE and use memory without "giving it back" when you exit. If you are having trouble and you are running Win98SE, we recommend checking out several programs that are designed to clean up your memory as you use Windows. Some good (and free) programs to do this are: MemTurbo and RamBooster. Note that these programs usually only provide a benefit if you are

running an older version of Windows.

An error appears as you move the mouse pointer over the thumbnail or file area:

One or more of the images in the current folder could be corrupted or unreadable for some reason. When you move the mouse over the thumbs/filenames, the EXIF Hotbar attempts to display EXIF information on the bottom status bar. If an error occurs, try turning off the hotbar using "View", "Interface Options", "EXIF Hotbar" and uncheck the option. When starting Qimage, make sure not to move the mouse pointer over the thumbnails until you turn off the EXIF Hotbar. If you are unable to start the program, try starting Qimage in safe mode by holding the shift key as you start the program. You can then turn off the EXIF hotbar and reset the interface to thumbs if you like.

Trouble when printing images:

Trouble that includes an error message could indicate problems with corrupted images or memory: see above. Trouble like partial prints, not all prints printing, blank pages, or anything that deals with missing information in prints (with no error message) is usually related to a data bottleneck in the operating system. Due to its print optimization, Qimage sends more data to your printer than most software, so you may or may not see issues with other software while at the same time experiencing trouble with Qimage. The suggestions below will help eliminate printing problems caused by improper Windows configuration:

- In Qimage, click "Edit", "Preferences", "Printing Options" and set the spool "Format" to "Raw Large Prints".
- If your printer is on a network and has a print queue, make sure that the queue size limit is large enough to accommodate the data being sent by Qimage.
- If problems are still present, try increasing your Windows virtual memory to at least 2 GB.

Printed color or contrast is incorrect when printing large prints:

If your prints appear to have good color for smaller sizes but get too light/dark when you print the same prints at larger sizes, the print driver may be having trouble with its automatic contrast/color feature. Some printers have "enhancement" or "digital photography" features that attempt to auto-adjust contrast and color, however, these automatic enhancement features may fail when printing large prints. Click "File", "Printer Setup" and "Properties" for your printer and browse through all the tabs/features, turning off (unchecking) any features that are described as "auto" or "enhance". With some poorly designed print drivers, auto-adjustment features may not work properly when printing large prints because the driver cannot handle the automatic adjustment when presented with the large amount of data needed for large prints.

Color of prints does not match other software:

Unless you are using PIM, EXIF Print, or some other proprietary printing technology, Qimage can match printed color to any other application. The key in matching printed color is to ensure that the print driver settings are the same in both programs and that ICC profiles are being utilized in the same way. As long as you use the same print driver settings, you load the image using the same color space for the image, and your printer ICC profile is the same (labeled "Prtr ICC" or "Print Space), the color of your prints should be identical in Qimage compared to other "high end" imaging software. For example, both Qimage and PhotoShop render identical printed color as long as the print driver settings and color management settings (ICC profiles) are the same. If there is a difference, your settings are different either in the print driver or in the color management settings, so you

will need to recheck all settings carefully.

Print resolution listed above preview page does not match DPI selected in driver:

This is actually not an indication of a problem. The resolution (DPI) selected in the print driver properties indicates the resolution of the printer itself. Qimage reports the native resolution of the print *driver*, i.e. the PPI that the driver suggests using when passing information to the driver. You may, for example, select 2880 DPI resolution but Qimage reports 720 x 720 over the small preview page on the main window. This is normal since Qimage will send the data to the driver at 720 x 720 and the driver is then responsible for placing the actual dot patterns at 2880 DPI. Simply put, your actual prints *will* be printed with the DPI selected in the driver.

Trouble selecting a page size other than 8.5 x 11:

The page size in Qimage is selected via the print driver. Click "File", "Printer Setup" and change the size of the page from the properties of your printer.

"Stream write error" or "unable to create {q}work.{q}":

Error messages such as "stream write error" or "unable to create {q}work.{q}" may indicate a problem writing to your hard drive.

- Qimage uses the installation folder (normally \program files\qimage) to cache data, so the drive where Qimage is installed should have plenty of free space. If you are running low on drive space, you may want to think about reinstalling Qimage on a different disk drive.
- Some real time virus scanning utilities, tape backup utilities, third party firewalls, and other software that tries to "intercept" writing of information to the hard drive may be interfering with normal operation of your computer. Some "buggy" utilities might interfere with Qimage's caching of files to the hard drive. Try temporarily disabling such utilities to see if disabling them fixes the problem. If so, check the web site for the utility in question to determine if a fix is available for that utility.
- Also ensure that you have write privileges to the folder where you installed Qimage.
 If the installation folder is read-only, Qimage will not operate properly.
- Finally, if you copied any files or restored Qimage from a backup on CD ROM, some files may have been saved in the installation folder as read-only. Ensure that all files in the Qimage installation folder are not marked with the read-only attribute; there should be no files marked read-only in that folder.

"Spool one page at a time" option does not work under Windows NT/2000/XP:

If you are trying to limit the size of print jobs, using the option to "Spool one page at a time" located under "Edit", "Preferences", "Printing Options" can prevent crashes caused by the operating system or print driver not being able to handle large jobs.

Unfortunately, the "Spool one page at a time" option will not work under Windows NT/2000/XP unless you tell the operating system to stop "squelching" print spooler messages. We do this by setting the registry entry named

"EnableBroadcastSpoolerStatus" to a value of 1 instead of 0. This can be done by using "RegEdit" to change the value of the registry entry. Please note that if you are unfamiliar with using RegEdit, it can be dangerous to play with values stored there unless you know exactly what they do. Perform the following steps at your own risk!

To configure Windows NT/2000/XP so that "Spool one page at a time" will work, follow these steps:

- 1. Click "Start", "Run" and type "Regedit" and click "OK"
- 2. Double click to open HKEY_LOCAL MACHINE
- 3. Double click System
- 4. Double click CurrentControlSet
- 5. Double click Control
- 6. Double click Print
- 7. On the right half of the window, you should see an entry for EnableBroadcastSpoolerStatus.

 If the entry does not exist, right click on "Print" on the left side of the window and select "New", "DWORD Value". Then type the name:

 EnableBroadcastSpoolerStatus. Once this entry has been located or added, Double click on EnableBroadcastSpoolerStatus in the right window to change its value data.
- 8. Under "Value data", replace the 0 with a 1
- 9. Click "OK" and close RegEdit

Once the above steps have been performed, Qimage's "Spool one page at a time" should work properly. If you still have trouble spooling with a time delay may be the only option that your system will allow.

Print output is blocky or "pixelated":

You may have print interpolation turned off. Check "Edit", "Preferences", "Printing Options" and make sure that you have the "Hybrid" interpolation method selected and a print interpolation setting of "Max" for maximum quality prints. Also ensure that your print driver settings under "File", "Printer Setup" are set for the proper media type and the highest quality.

Print output is blurry or soft:

Inappropriate print interpolation settings can cause this. Check "Edit", "Preferences", "Printing Options" and make sure that you have the "Hybrid" interpolation method selected and a print interpolation setting of "Max" for maximum quality prints. Also check the sharpening settings on that same window.

Print output has horizontal lines:

This is most likely due to a bad or empty print cartridge. Run your printer through it's nozzle check to determine if the cartridge needs to be replaced.

The size of the print is not what you selected:

- The aspect ratio of your image may not agree with the print size you selected. For example, you are printing an image that has an aspect ratio of 4:3 such as an image produced by most consumer level cameras, however, you selected a print size of 4x6 (which is a 3:2 aspect ratio). Qimage will shrink the print to fit within a 4x6 frame so you end up with a 4 x 5.33 inch print. Your image must be cropped to print 4x6 so in order to give Qimage permission to crop the images to obtain an exact print size, simply press the crop button (scissors icon on the "Size" tab) and ensure that the button is down before adding images to the queue.
- Your print driver may be modifying the size of your prints. If you have "borderless",
 "fit to page", or "no margins" selected in your print driver properties, your print driver
 will resize images and you may not get the size selected. To eliminate this problem,
 always disable "borderless", "fit to page", and "no margins" under "File", "Printer
 Setup", "Properties" prior to printing if you need to ensure exact sizes.

Unable to print borderless prints:

Below are the proper steps for creating borderless prints:

- Click "File", "Printer Setup", click the "Properties" for your printer and check the borderless option (sometimes called "no margins").
- Click the crop button (scissors icon in the "Prints" group) and make sure that the button is in the down position.
- Highlight a thumbnail that you wish to print borderless.
- Click "Custom" near the lower right of the main window.
- · Click "Full Page".
- The highlighted image will be added to the queue in borderless mode.

If you do not get a borderless print after performing the above steps, the limitation is with your printer/driver. Make sure that the borderless option is available for the type of paper you are using as some paper types do not support borderless printing. Also, if your print driver offers an "amount of extension" under the borderless option, try increasing the amount of extension as there simply may not be enough overspray to cover the entire page.

Prints are not centered on the page even when "Center" positioning is selected:

Qimage works within the printable area defined by your printer. The printable area is the area on the paper that the printer is able to address. Due to limitations in paper loading accuracy, type of paper advance, print head design, and other factors, your printer is most likely not capable of printing on the entire page (unless borderless printing is enabled). Instead, most printers print within a defined (smaller) rectangle on the page. This printable rectangle is usually not centered on the paper. Qimage normally centers images within the printable area on the page, thus ensuring that the entire printable area is used. If you would like to center images on the paper itself, compensating for the fact that your printer doesn't print in the center of the page, there are two options:

- Click "File", "Printer Setup" and click "Properties" for your printer. If there is an option called "Printable area" with selections like "Maximum" and "Centered", try switching to the "Centered" mode. This will force your printer to center its printable area and will therefore allow Qimage to print images centered on the physical paper.
- Many print drivers do not offer a "centered" printable area option. In this case, you
 can tell Qimage that you would like to compensate for your printer's off-center
 printable area. Simply click "Page Formatting", "Margins" and then click the "Center
 on physical page" button. This will ensure that prints are centered, however, note
 that the printable area will be slightly reduced.

Obtaining the Latest Release of Qimage

There are two ways to obtain the latest version of Qimage:

- 1. Open your existing version of Qimage and click "Help", "About Qimage" and then click the "Update Now" button. If you see "Unable to contact site" next to "Latest version", Qimage was not able to make a connection with the web site to download the latest version. If you do not have a continuous Internet connection, close the "About Qimage" window, connect to the Internet, and reopen the "About Qimage" window. If you are still unable to connect to the download site, please refer to option 2 below.
- 2. Go directly to the <u>download page</u> and follow the instructions for downloading/installing the latest version manually.