Introduction to Digital Workflow Best Practices

Because they can be targeted to practically any medium, digital images have greatly expanded the possibilities for artists to document and publicize their work. They have also become a required part of the submission process for many shows and exhibitions. By explaining the principles of the technology and introducing some of the software needed to work with these images, this workshop will provide a foundation for taking advantage of these valuable assets.

The goal of this workshop will be to develop a workflow that optimizes and preserves the quality of your original image files and helps you get to them when you need them. We will try to describe ideal practices that will, in the long haul, give you the most flexibility for the least effort. At every level of work, compromises may have to be made because of budget or time constraints. I hope to give you enough understanding of the process to help evaluate how you can best apply your time and budget to get the results you need. Be warned of several old adages though: there is no free lunch, you get what you pay for, quality does not come cheaply, and time is money. They are as relevant in the digital world as ever.

GIGO: Garbage In, Garbage Out

This is another old adage that is relevant. The better you do at capturing your master image, the better your derivatives will be. You will need to gauge the energy you need to put into this step, as not all of your work will require the same level of documentation. Keep in mind that if your documentation is for a competitive position in a show or for a grant, your competitors will be making the same decisions you are, which include whether to hire a professional or not.

One of the myths about digital images that can stop you at the very first step is the myth that Photoshop can fix most problems with an original. The truth is that Photoshop can fix many problems, and Photoshop, in the hands of a skilled worker, can improve bad photography, but in the spirit of offering a guide to best practices, I'd like to offer a list of problems that Photoshop can't solve, and which can only be done best at the time of image capture.

Too much exposure, or too little.
Focus or depth of field issues.
Lighting that fails to articulate form or texture.
Capturing with a file format that provides too much compression.
Capturing with insufficient resolution.
An image that is blurred by camera or subject motion.
A dirty or low quality lens.
Digital noise caused by capturing at low light levels.

This is a partial list, but looking it over should give you time to pause and consider your own capabilities as a photographer, your interest in gaining these skills, or your ability to pay for the required equipment. Each of these failures will produce the "garbage in" that will assure you of a less than ideal derivative.

Targeting and Re-Purposing

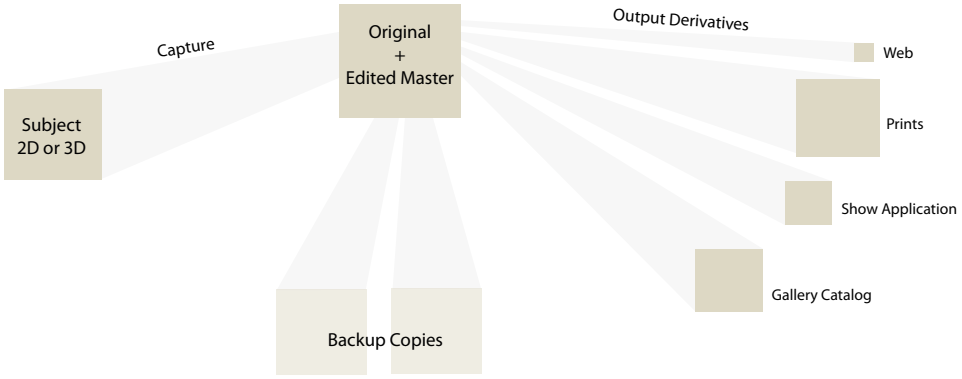
Re-purposing is an awkward word that describes the process of using one digital image in several different later applications. Because digital images can be copied exactly, there is no loss in copying, so when you need to use an image in its original form, there is no problem in doing so—you re-purpose the image by copying it. Often though, the original form is not the ideal form for a later use. A web use requires an image of much less resolution than one that is needed for print. An rgb image headed for an inkjet printer must first be converted to cmyk mode to be printed by the offset process. The process of converting the original to an ideal form for each of these different uses is called *targeting*. It requires you

to take control of each of three main image parameters—image size, color space, and image mode—to produce a derivative that is best suited to a subsequent use.

Although this may seem complicated, re-purposing and targeting are one of the real beauties of working with digital images. In the days of film, making a copy of an original was a laborious venture that always produced a copy that was inferior to the original. With digital images, a few keystrokes or clicks of the mouse produce a copy that is identical. That copy can then be modified to produce a derivative that suits the new use.

This ideal situation depends on several conditions, the most important being that the original image remains in its original condition and that it can be located to use as a master. Satisfying this condition is the topic of a field of practice called digital asset management.

Here is the basic workflow I'd like to suggest, starting with the capture of the image of the original artwork. It is deceptively short and simple. The important part of the diagram is the fact that once you have a master image, all other derivatives come from this master. Although this is same basic process used when working with film, there is a difference that is easy to forget when you are working digitally. The ease with which you can rename, copy, re-sample, transmit, and edit images comes at a cost. With that same ease you can write over an original file or accidentally delete it. A power failure or mechanical failure can render a hard drive unreadable. This makes it very important to establish and abide by a logical workflow.



If you read no more of this paper, try your best to follow these guidelines.

1. Back up your work.

2. Use the RAW file format for images if you can. If you can't, set your camera to shoot tif. If you can't shoot tif, use the largest, finest jpeg setting your camera will allow.

3. Use a tripod, set your camera manually.

4. Don't jpeg a jpeg. (re-compress a compressed file format)

5. Back up your work.

6. Preserve the integrity of your master images at all cost.

7. Name your files uniquely. Use an image database to find them.

8. Convert your RAW images to the .dng format—Adobe's open source digital negative—for long-term access to your raw files and built-in access to your non-destructive adjustments.

8. Back up your work.