

# Digital Darkroom

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Part 1 in the series Digital Workflow. Part 2, Image Management.

## Networking

Welcome to my Digital Darkroom! After several months of planning and rearranging, we've finally put together my ideal working space. Everything is networked together. When we're not on the road, everything is done on our network of Dell computers. Keep in mind that this is an ongoing project which we will update as our setup changes. We will provide you with links to the sites that will help you create your own digital darkroom.

Note: We are planning a major upgrade to our digital darkroom in January 2003. We'll be sure to share the details as we decide on the individual components.

Currently we have Windows XP Professional installed on our desktop & laptop computers. We use Windows 2000 Server Edition on the server because of its stability.

Macintosh Computers Even though I'm a die-hard PC user from way back, I must admit that the Mac is a great computer for graphics. If you would like to network your PCs with a Mac, I highly recommend Dave. This program allows you to see the Mac from our PC's Network Neighborhood and access its image folders.



## Ergonomics

One very important issue often ignored in many offices is ergonomics. While most photographers are used to being very active and on their feet for long periods of time, we aren't accustomed to sitting in front of a computer for long hours. Therefore, it makes sense to be comfortable in order to be more productive. There are several things you must consider when setting up your workstations.

### **Working Posture**

Your monitor should be at or below eye level. Your wrists should be straight with your forearms supported and parallel to the floor. Your thighs should also be parallel to the floor with your feet on the floor or a foot rest.

### **Work Surface Height**

The proper height for a computer work surface is about 3 or 4 inches lower than the average writing desk.

### **Your Chair**

You should adjust your back support so that the seat back's curve is in curve of the lower back. Use a towel or lumbar pad if your chair does not provide adequate support. Adjust the backrest forward or backward so that you can place 2 or 3 fingers between the back of your knees and the front edge of the seat.

### **Monitor Height & Position**

Your monitor should be directly in front of you. The monitor height should be adjusted so that the top row of characters on the screen is at or slightly below eye height. The monitor should be about at arm's length away from your eyes.

These positions are merely starting points. It's a good idea to change positions slightly from time to time. Don't forget to allow time for stretching and breaks. Also, keep in mind that good lighting is essential and soft background music can improve your working environment.

### **Color Management**

In this day of mega-pixel digital cameras, digital darkrooms are becoming more and more of a necessity. We no longer own any traditional film cameras. We are 100% digital. However, we have set up our digital darkroom to accommodate not only digital image management, but slide management as well (we still have thousands of slides).

Whether you use a PC or a Mac, you must make sure your camera, monitor, scanner and printer are properly calibrated. Why? Because if any of these devices are not properly calibrated then the colors will not be consistent and you'll waste hours tinkering with various settings. You need to set up separate ICC profiles for each of your devices - camera, monitor, scanner and printer. When these profiles are set up properly, your camera-to-monitor, scanner-to-monitor and monitor-to-printer color matching will be dead on. I highly recommend ColorVision's Monitor Spyder and either PhotoCal or OptiCal. This monitor calibration and profiling system is most often recommended by top digital photography professionals.

Keep in mind that you should set up a different profile for each type of paper you use as well. The inks are absorbed differently on the glossy than they are on a matte paper. Also, glossy papers from different manufacturers behave differently as well.

### **Capturing Images**

Once we've set up the profiles, we're ready to capture the images. We grab the images from the D1 via either the Lexar USB card reader. Once all the images are transferred, we adjust the levels and contrast/brightness in Photoshop CS2. We always work with copies of the original image. Keep in mind when using JPG image format, that every time you save the image it is compressed and you lose a little bit more of the information. In time, the image quality will degrade quite a bit. Also, if you are using ICC profiles, you must use an ICC compliant program, such as Photoshop CS2 CS.

### **Internet**

If we plan to use one of the images on one our web sites, we first reduce the image resolution to 72dpi and set the dimensions. Next, we use Adobe's Image Ready, which is built into Photoshop CS2, to compress the image so it will load quickly. Image Ready will save this file as a JPEG image. If you would like to create a thumbnail image that links to the image you just saved, be sure to rename it. We typically use a "t" or "\_t" immediately after the file name, which makes it easy to distinguish from the larger image. If you need to create several thumbnail images, try All Thumbs. It's a free program that will create any size thumbnail from your JPEG image. It really saves us a lot of time. Tip - be sure to run the vertical images in a separate batch than the horizontal images.

### **Printing**

If we want to print the image, we reduce the image resolution size to 300dpi. For most uses, your final dpi should be in the range of 300-360 dpi for optimal results. You may need to experiment with your printer to see which resolution is best.

Next, we adjust the image size to slightly less than the photo paper's size. The only exception to this is the Epson 4x6 paper. The paper itself is actually larger than 4x6, so there's no need to worry about it fitting. The Epson Stylus Photo series of printers produce great images and are suitable for most uses. For anything larger than an 8x10, we suggest you use a Custom Fine Art printing service, such as my company - Digital Imaging Group.

If you need more detailed instructions on how to prepare your images for Internet use, please read [Sharing Your Photos](#).

### **Saving the Image**

If we plan to send the image off for publication, we copy the TIF or JPEG file to a CD. For images that are being enlarged for output to our service printer, I copy the image, which has been resized to the correct enlargement dimensions, to a CD or FTP it to our service printer's server. We use Photoshop CS2's image "crop" tool for resizing image sizes up to 20"x30". We use Altamira Group's Genuine Fractals Print Pro for images exceeding 20x30.

If you do plan to use a service printer for your digital images, don't forget to ask them if they have an ICC profile that you can download.

### **Managing your Images**

Once you have all of your images ready, you need to sort, label & file them. For conventional slides, we have used Norton's NSCS Pro for numbering & labeling our slides. NSCS Pro offers one of the best labeling systems around. You can enter as many keywords as you'd like for each image. Thumbnail images may also be attached. NSCS Pro also comes with client management and submission tracking.

For those of you who do a lot of freelancing, Cradoc's newly released fotoBiz is well worth looking into. fotoBiz comes with fotoQuote built-in. fotoQuote can be a life-saver at times when you're not sure of how much to ask for a particular image. This is a very nice complete package.

When it comes to managing digital images, Digital Pro is by far the best image management system available. Read our review of Digital Pro.

<http://www.wildlifephotonet.com/reviews/>

Programs like ACD See, FotoStation, ThumbsPlus & CompuPic Pro will also work. While these programs differ slightly in the features they offer, each of these viewers provide you with the tools you need to quickly sort, edit and name your files. These programs also offer such features as Create a Web Page of thumbnail images; Compile a Slide Show and Print out a Contact Sheet.

We label our digital images basically the same way we label our slides. We use the same coding system with the only difference being that we insert a "D-" before the first letter. Next we number them sequentially by species. For example, our code for the Great Blue Heron is BWH-GB. We would name (or label) the first GBH digital images: D-BWH-GB-0001.jpg This allows us to edit and file our digital images while out on photo shoots.

### **Backup**

Last but not least: Backup. There are numerous ways to backup or copy your image files. Whether you choose to save copies to another hard drive on a

different computer or to copy to a portable medium such as an external hard drive, tape or CD - you must backup and backup often! There are several programs on the market today run in the background. Never be caught without a good backup.

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