Scanning and Formatting Basics for Illustrators

This is a really basic, 'easy reader', simplified kind of tutorial that will hopefully take a little of the mystery out of how to scan and format an illustration in Photoshop to get it ready either for printing or uploading to the web somewhere. So many of us who work in traditional mediums feel helpless when it comes to this step of the process. We make this beautiful piece of art, then have to depend on someone else to take it the next step of the way. Now, with a good scanner and Photoshop you can do it yourself most of the time, and often have the results be better than if you'd sent it out to be done! You will also save a lot of money and time being able to do it yourself. I've used these basic skills to format work that's been printed in magazines, books and book covers, the Directory of Illustration, and PictureBook. And it's all looked perfectly fine.

If ***I*** can do this, ***anyone*** can.

Note: I'm using a Mac, so everything will be from that perspective. PC users might have to adjust a little here and there, so I apologize for that.

I this little tutorial we'll learn how to take a piece of artwork and:
Scan it into the computer
Open it up in a program (here we'll do Photoshop)
Do stuff to it like:
- Change the actual size as well as the resolution
- Fix the color (make it brighter, change that red, tone down that yellow, etc.)
- Clean it up (make a dirty black and white drawing look better, take out those icky smudges around the edge, make the whites really white, etc.)
- Save in different formats
- Make copies of it
- Add type to it, etc.

All making it ready to be:
- sent out to be printed
- emailed
- uploaded to a website

General Terms

There are some general terms and abbreviations that get used when talking about formatting art to send out. Your art director might say "We need a 350 dpi cmyk tiff" or the directions for uploading to an online portfolio site might say "Make the images 72 dpi jpgs, long side not to exceed 80 pixels, total file size not to exceed 250 MBs". What the ????? are they talking about?

DPI is **dots per inch**. Sometimes they'll call it **PPI** (pixels per inch) which is slightly different, but not enough to worry about with what we're doing here. It literally means how many little tiny pieces your image is broken up into (either to be printed or displayed on the web), and is measured in 'pieces per inch'.

The larger the dpi number, the finer the resolution of the image. Good printing requires **300 to 600 dpi** (or higher even, but not usually with what we do), while web images are usually **72 dpi**. Small sized, "low res" web images take less time to download (a good thing) and also don't look great printed out or enlarged so it makes it less tempting for people to steal your art off a website and use it somewhere. (Try it yourself: find a website with art ~ on a Mac click 'Option' then click the mouse over an image ~ a box will come up asking you what you want to do with the image. Download it to your desktop and then open it up and see how crappy it looks when you try to enlarge it.)

TIFF, JPEG (or JPG), EPS, PSD, **GIF** etc. are all names for different kinds of files. You can save your scanned image as any of these, and a few others as well. These are the most common for what you'll be using. They all do different things, which I'll admit I don't fully understand. **TIFF**s are higher quality because they retain all of the information in the image. **JPEGS** are slightly less desirable because they lose information every time you reformat them (change the size or whatever) but are the most common, especially on the web. **EPS** files are often requested by printers, and have something to do with them being able to make color separations from them ~ I think. **PSD** stands for PhotoShop Document, and is how an image will save itself automatically if you've tinkered with it in Photoshop. **GIF**s are also used on the web a lot, more for flat shaped or simple images.

You don't need to know all the gory details of what all these do at this point. You ask your art director what kind of file they'd like, and they'll tell you "save it as a ____". If you're emailing sketches, send a jpg. Just follow the instructions of whoever's asking you to send whatever. **Note**: Art that's going to a printer is usually formatted into Quark or another page layout program after its been formatted in Photoshop. I'm not talking about you doing that stage of the process. Just get your art together to send to the art director, then he or she can take it from there.

RGB and **CMYK** are color formats. **RGB** is what the web uses (Red, Green, Blue), and **CMYK** is what printers use (Cyan, Magenta, Yellow and Black inks). RGB is always brighter than CMYK. CMYK adds black, which can really dull things down. Most of us are used to seeing our work in RGB color because that's what our monitors show us, and so that's what our desktop printers print in as well. That's also why seeing something printed "for real" can be a shock the first time, because the color looks so different.

GRAYSCALE is just what is sounds like. You can either scan an image in Black and White or Grayscale (it depends on the scanner), or take all the color out of an image in PS (Photoshop) by just changing the mode to Grayscale. Taking out the color information reduces the file size (which again, is a good thing, especially if you're emailing) and just makes sense if you're doing sketches, or want to have a value study of something.

SCANNING

I use an **Epson Perfection 1240U** that has a transparency adapter. I've scanned every kind of art with it ~ watercolors, pastels, colored pencil, pen and ink, photos, etc. as well as slides and 4 x 5 transparencies with the adapter, and they all look great. I always use the manual mode (also called

TWAIN), which overrides the automatic scanning thing and lets me format everything exactly the way I want it.

Whatever scanner you have should have some basic features that let you:
Adjust the dpi (mine goes from 50 up to 9600! I can't imagine what you'd ever use that high a setting for ~ the highest I've gone is 600 dpi)
Adjust the size (mine lets you adjust by percentage ~ like you can scan something at 27% of its real size if you want ~ or you can tell it specifically what dimensions you want.
Crop the image
Select a scan mode (color photo, b & w photo, text only, etc.)
Mine also has a **Preview** feature so I can see how the piece is going to scan before I actually scan it for real ~ here is where I straighten it out on the scanner bed if it's
really crooked.

After you get all your particulars set, you **press the scan button**. The higher the resolution you've set, the longer it takes to scan (and the lower the hum it makes, at least on mine ~ its kind of cool). Usually it's under a minute, total.

On mine I use the **Scan to Application** feature, so when it finishes scanning it asks me which program I'd like to use to open the image. I've programmed in several, but I don't know why because every single time I pick Photoshop. It takes a minute, Photoshop opens and voila! there's my image, open on the desktop as a Photoshop file!

You'll have to learn your own scanner and figure out exactly what it can do.

THE FUN STUFF

OK, so now you have an image sitting there waiting to go in Photoshop. The first thing you should do is **Save it**, whatever format it's in, so in case you're computer crashes you won't have to rescan it. You can change everything about it as you go along, but you don't want to lose it altogether.

My scanner / Photoshop combo default setting is to save everything as a tiff file to start.
To **Save**, you use the Pull Down menu under the **File** heading along the top of the screen (just click on File and the menu will come down). Click on Save and its saved.

Formatting

If you pick **Save As** instead of just plain Save, a window comes up. There's an area called **Name** where you can type in a new name for the file if you like. Below it is a bar called **Format**. Click on that and a whole list scrolls down of file formats to choose from ~ jpeg, psd, tiff, etc. Choose one and that's the format your file is saved in. It's that easy. It will automatically change the suffix of your file name to match. Like, if it was originally a tiff and named **MyIllustration.tiff**, it will change to **MyIllustration.jpg** if you choose Jpg from the menu.

If you choose Jpg you'll get another box that asks you about **compression** and **quality** (depends on your version of PS ~ 7.0 asks about both). The higher quality you choose, the less compression there'll be, and the larger the file will be. Lower res images that will be on the web or emailed can be lower quality so they will load faster and get sent faster. Just remember that the bigger everything is, the longer it will take to send or download, and you want to be mindful of that. A big file is OK if that's what's needed to print with, however. Just know what you need.

If you don't want to change the file you already have, you can make a copy and change *that* one. Go to **Image** along the top and select **Duplicate** from the pull down menu. It will just add the word 'copy' to the file name, but you can type in any name you want. Once it's named, you do the Save As thing again and save it however you want. You can make a whole bunch of copies and save each of them as something different if you want to.

Along the top of the screen are all kinds of fun pull down menus. Let's look at a few more things we can do with them (don't worry, we'll get to all those Greek looking symbols along the left hand side in a bit.)

Fix It Back to the Way it Was

Under the **Edit** menu the coolest thing is **Undo**. It will do just what it says ~ undo some scary thing you just did to your image. Open your image and change the color or mode or something. Then you'll be able to select Undo (it will know what you just did, and will say "Undo Size", or "Undo CMYK Color", or whatever) and it will undo it. It's like magic. So as you experiment with all the menus and alter things as you go along here remember to hit Undo whenever you hate something you just did.

Let's go back to **Image** for a bit. Most of the things you'll be using to change your image are under there.

RGB or CMYK or Gray?

First, there's **Mode**. It will have a checkmark next to the color mode your image is in. You've probably scanned it in **RGB**, so that will be checked. You can change it to **Grayscale** or **CMYK** just by selecting either of those. If you pick Grayscale it will ask you if you're sure you want to discard all the color information before it does it. If you choose CMYK you'll probably notice some change in color. That's all you have to do to change from one mode to the other.

Fix the Color and make it brighter

Next under **Mode** comes **Adjustments**. There's a lot here! This is where you do all the tinkering with color and brightness and all that. There are three basic areas you can fiddle with: **Levels, Color**, and **Curves**. And **Brightness** ~ OK, four.

First I suggest you select (one at a time) **Auto Contrast** and **Auto Color**, just to see what happens to your image. They will take your image and make changes that they think need to be done ~ generally speaking, **Auto Contrast will brighten things up**, and **Auto Color will balance the color out**.

They may or may not help, depending on what you want to do, but often they can be just the thing. At least they let you see what your image could look like a little different. **Auto Levels is kind of a combination of the two**. Try it and see what happens. It might be a subtle change, or quite dramatic.

Color Balance, **Brightness / Color** and **Hue / Saturation** do similar things. By playing with the slider bars in each one you can really tweak the color in your image. You just have to play with them and see what happens. Don't be afraid. Remember, you can always hit Undo. Click the **Preview** button in each one so you can see what each thing is doing to your image as you do it, and unless you click the **OK** button, nothing will really change. Fiddle with it, then pull the sliders back to the middle, or back to zero, hit **Cancel** and it will just stay the way it was. You can brighten up just the reds in something to make it look more Christmas-ey, or tone everything down, or whatever you need to do. It just takes some practice. Remember you can always make a **Duplicate** copy of your image at whatever stage its in and work on the copy ~ that way you have something to compare to. I've often had several versions of something going at one time, and end up throwing most of them in the trash at the end of it all after I get one good one that I like.

Levels and Curves

These are more of the same, only more mysterious. Don't ask me how they work. I just know that you can adjust color with these and get really really nitpicky. What I use them for mostly is to **help clean up black and white drawings** that look anything but black and white ~ usually they're dark gray on light 'tracing paper gray' with a lot of stray marks I'd like to get rid of.

In **Levels**, play with the slider beneath the graph. Pull the black end toward the middle, and the background gray will start to burn out. If you keep going it will burn out the whole drawing. Click Preview so you can see what's happening as you work. Get it where you want it, then click OK. The other stuff in that window still eludes me, I'm afraid ~ sorry.

In **Curves**, you can **use the eyedroppers to alter your drawing**. Click on the **black eyedropper**, then click on a line in your drawing, and all the black lines will change. Sometimes they'll get really thick and dark and oversaturated, and sometimes they'll turn into exactly what you want. It depends on what kind of drawing you have to begin with. If you do the **white eyedropper** and click on a light area of your drawing, it will change as well. Essentially, the blacks get blacker all over the image (even if it's a full color illustration) and the lights get lighter.

(If using a combination of Levels and Curves doesn't get your drawing clean enough, you can also use the **eraser** and **magic eraser** tools which I'll get to in a bit.)

Desaturate is cool if you need a value rough or need to see what the whole thing looks like in just grays. It will take out all the color and just leave you with a grayscale image.

Posterize is fun too. Try all the rest of the choices under Adjustments and see what you can make them do.

Image Size

This is a nitty gritty tool you'll use a lot. When you select **Image Size** a window comes up. In it are areas to change the **Pixel Dimensions**, or the **Document Size**, either in inches, cm, by percentage, etc. There's also a place to change the **Resolution.**

When you first open up the window it will display what the size and resolution of your image currently are. If you make changes to one, the others will change. See how one affects the other.

If you're **sizing something for print, change the Document Size**. Say you did an illustration that's 8 x 10 inches, but needs to print at 4 x 5 inches. Choose **Inches** from the choices to the right of the box with the 8 in it, change the 8 to a 4, and if you have the **Contrain Proportions** box at the bottom checked, the 10 will automatically change to a 5 (Constrain Proportions keeps everything in proportion to each other.) You could also change the dimension by selecting **Percentage**. If you do, the percentage box will read 100 to start with, then you can change it to 50, and the rest will change accordingly. There are other choices there as you can see.

If you're **sizing something for the web**, generally speaking you'll **change the Pixel Dimensions**. If you're sizing something to upload to a website, and the directions say "longest dimension can be 80 pixels", you find the longest side of your image, whether it be height or width, and change that window to be 80 pixels. Make sure **Constrain Proportions** is checked, and the whole image will change size in proportion. (If you uncheck it, it will stretch the image and look very weird, but this is a neat special effect if that's what you want to do ~ try it.)

Change the **Resolution** by entering a new number in the box. You never want to change UP to a higher resolution, only DOWN to a lower one. So **always scan higher** than you think you need to to be safe, then reduce the resolution if you need to. If you go the other way the image will look really really bad, because you're taking a little bit of information and spreading it out. Reducing the resolution concentrates the image and will keep it looking good.

It's a good idea to **change the Resolution first**, **then change the dimensions** to the correct size. If you size the image first when its at, say, 300 dpi, then change the resolution down to 72dpi, the dimensions will change accordingly ~ the image will then be too small, and you'll have make it bigger, then it'll look bad because you enlarged a low res image.

The **Bicubic** and all that at the bottom is more complicated stuff. I've only used it a few times, and at the special instructions of a printer. Always ask them specifically what they want checked or unchecked here. The default setting in PS is to have the Bicubic box checked, so just leave it that way for most things.

If you need to know the **file size** of an image, just look at the bottom of the image itself. Along the bottom edge there is the following information: the percentage at which you're viewing the image, a little icon that's a SaveAs shortcut, and then the file size (although they call it 'document size' here). This is important to know, especially if you're saving for the web and you have instructions to keep the file size below a certain number. If your file size is too large you can change the dimensions or resolution of an image to get it smaller. If you click the arrow on that bottom edge you can also

check the document dimensions and some other stuff, not all of which you care about at this point, but it's still interesting.

Canvas Size

The only time I use this is when I format and upload images to my Ispot portfolio. They have a special instruction about sizing images with this feature. It lets you put your image, whatever it's proportion, into, say, a perfectly square format, like a slide. You'll see your image with little empty bits along both sides, or the top and bottom, for instance. You can then fill in those areas with the **foreground** and **background color** boxes that are on the left hand side of your screen, in that scary looking box full of symbols. The foreground and background ones are the two obvious looking boxes near the bottom. If you click on either one, the **Color Picker** window will open up with a lot of color choices (if you select "**Custom**" you'll also get to choose from Pantone Coated, Uncoated, etc. etc.)

This feature makes it nice if you want to have all your images end up being the same size on a page. You could choose plain black as the background color for instance, and they'd all float in a little bit of black but overall be the same size. Go look at the Ispot portfolios if you want to see what I mean. Their "leftover space" color is a neutral gray. (http://www.theispot.com/artist/ppertile is mine.)

Rotate Canvas

This one is so much fun! The obvious choices of **Rotate 90 degrees clockwise** and such do just what they say they do. You can flip something upside down, turn it sideways, whatever. My favorite one is **Arbitrary**. Say you scanned in something that's a little crooked. You can type in a percentage, like 5%, and choose **clockwise** or **counterclockwise**, and it'll adjust your image just like that! Sometimes I have to fiddle a little with it and do it a couple of times to get it just right. But it is just the coolest thing.

Bigger or Smaller

One more set of really useful tools I use all the time are the **Zoom In** and **Zoom Out** commands underneath the **View** menu. They let you enlarge or shrink your image down on the monitor, so you can either see what you're doing better or fit a whole bunch of open images on the screen at one time. I use the shortcuts ~ on a Mac, it's Apple-plus sign or Apple-minus sign.

Those are the main things you'll use from the top menu bar when you're formatting things. There are tons of other choices for filters and other things, but you can play with those on your own and see what they do.

Let's move on to the

Tool Palette on the Left

Crop It

The third box down on the left is the **Crop tool**. (It's the box thing with a diagonal line through it.) Select it, then click somewhere on your image and a dotted lined box will appear. Stretch it by pulling on the corners or middle 'handles' and make it go where you want. Either hit the Return button on your keyboard, or select 'crop' from the Image menu to actually crop it. If you click on the crop icon in the toolbar before you crop it will let you decide not to crop it afterall. Also, you can always hit Undo if you make a mistake and it will 'uncrop' it.

Erase It

Three more boxes down from the crop tool is the **Eraser Tool**. It looks like an eraser, so it's pretty easy to find. (If you ever don't know what any of the symbols are, just kind of hover your mouse over one and in a couple of seconds a balloon will come up telling you what it is. The ones with little arrows in the corner can be pulled out to reveal even more choices.)

The eraser does just what it says it does, and has saved my fanny more times than I can count. To use it you just select it, then move over to your image. It will erase an area one mouse click at a time, or in swipes if you use your mouse that way.

You choose the size of the 'click' or 'swipe' by choosing a **brush or pencil size**. In PS 7.0 there's a nifty menu that appears along the top of the screen when you select the eraser that let's you choose a width (in pixels) for your erasing implement. As you erase you can do whole big areas at one time with a bigger brush, then switch to a teensy one and get into all the nooks and crannies, one pixel at a time if you want to. I always use the **Zoom In** tool to enlarge the image so it's easier to work on. You can work your way across the whole surface and get every single little hickey and bloop you don't like. I use it to take away paper grain I don't like, pencil lines that were supposed to get covered up, uneven edges ~ you name it. When cleaning up b & w drawings I often have weird layers of things drawn on tracing paper that were taped over each other, then when scanned they all show up, some looking kind of ghosty. I'll use the eraser tool to take out the ugly shirt or wrong hemline or funky hair that's showing up along with the good stuff.

What you have to remember to do is **select the color you want it to erase to** (most likely white, but not always). Remember those two big foreground and background boxes down farther on the left? Make sure the **background** one (the one behind) is set to the proper color. For a real white, click that box so the color picker window appears. You can drag the little circle all the way up to the very top left corner where the white is to select it. But I've found that the best way to get a really true white is to go to the CMYK boxes on the right side of the box, put 0 in each one, and click OK. It will erase to white. If you want all your eraser strokes to be a color (which can be cool), just select a color and see what happens.

IMPORTANT!!! When you want to Undo the eraser, **you can only undo what you've done since the last time your unclicked your mouse**. Like, if you erase a little bit, then unclick the mouse and move to a different part of the image, then start up again, you can only Undo that most recent part. You can't undo everything you've erased. So be careful and undo as you go. It's really easy to get erasing real fast and then not be able to fix a mistake.

Magic Eraser

I think this is my favorite thing of all. Pull out the eraser icon to reveal the **Magic Eraser**, and select it. When you click on a spot in your image, the magic eraser will magically erase that color you've selected everywhere it appears in your image within a closed shape! And what it does is leave it completely empty, like a void, rather than filling it in with a color, like the regular eraser does. It lets you know what it's done by showing as a kind of weird black and white checkerboard pattern. (Don't worry, you can get rid of it.)

So let's say you want to **clean up the background of a black and white drawing**. Just click your mouse on a spot on the background, and everything within a closed shape which you've chosen will disappear. Click on each closed shape to erase it. (For example, the area within a shirt, then each pant leg, then each ankle, then each hand, etc.) You'll see what I mean when you start doing it. Sometimes you think you have a closed-up shape, but you don't. If there's even one pixel 'open' in your line the magic eraser will leak through and erase more than you intended. It's a good way to check your drawing, if that's important. Generally speaking, I don't care when it does this because I want all the areas erased anyway. What you're left with is a black line drawing floating in space (although it will look like its sitting on a checkerboard). You can now select **Flatten Image** from the **Layer** drop down menu at the top, and the whole background will go white. Instant perfect black and white drawing (provided you have 'white' selected as your background color)! If there are little bits you still don't like you can come back in with the regular eraser and clean them up. Just remember to flatten when you get ready to save.

Another way to get a white background: Go to **File** and select **New**, and you'll get a formatting window. Make the new document the same size (or thereabouts) as the image you're working with, the same resolution, and the same color mode (for example if your line drawing was scanned in RGB, is 6 x 8 inches and 300 dpi, then make your new document match that). **Select a white background** by checking the appropriate box. Type something in the name box and click OK. You now have a new empty white page. Just drag and drop the erased image into this new one (click your mouse on the line drawing, hold it down, and drag it over to the new document), and you'll have your nice black line drawing on a nice white background! You will also have two layers so remember to flatten, either by the way described above or by using the **docking palettes** along the right hand side of the page on your monitor. Click the **Layers** palette, then the arrow on the right, and some choices will pop up. Pick **Flatten Image** and there you go.

This technique of opening a new document is the technique I use because I often want to combine several scanned images into one, and I can overlay several characters or elements into one piece and rearrange them just so, then flatten it all down.

Since we're talking about **layers**, I'll just say that this is the basis of how documents in PS work. You can create infinite layers of all sorts of things (images, patterns, flat colors, etc.) and rearrange them to be one on top of or behind others to get the final image you want. By dragging one layer in the right sided palette up or down you can put one whole layer in front of or behind another. If you have one that's been 'magic erased' and has an empty background, you can place it on top of a

pattern or texture, for example, and have all the empty bits fill in with that pattern! The possibilities are endless.

The way to move images around on the piece you're working on is to choose the **Select** tool from the left hand menu bar (it's the top right one, kind of an arrow and crosshairs). Anytime you want to drag and drop an image or move anything around, you have to use the select tool. Its easy to forget that sometimes. You've just erased something, then want to drag the image over, so you just click on it and start dragging, but what you actually do is start erasing! You forgot to change from the Erase tool to the **Select** tool. You'll get the hang of it after a while, don't worry.

TYPE

If you want to make a self-promo piece or something, you can create a new document, then drag and drop your jpeg images into it and arrange them the way you want. You can then add a **Type** layer with your name and contact info, which will be another layer (select the type tool ~ **the big T**), click on the image, and depending on which version of PS you have you'll either get a box to type into, or in 7.0 it will just type directly onto your image. You can format it the way you do with a regular word processing program. You can also do type in Illustrator and drag it into PS, if you want really really sharp type. You can do type on different layers and make them all do something different, then line them up on the document the way you want them. I usually leave promo pages unflattened so I can go back in later and change info if I want to on a specific layer without changing everything else in the document.
I also add type to drawings I'm sending to clients, labeling them with the job name and page number, which revision it is, etc.

Clone Stamping

Just above the eraser tool is the **Clone** stamp tool (also called the **Rubber Stamp** in some versions). This is great for copying an area and 'cloning' it somewhere else on your image. Like, if you have an area with a bunch of leaves and need to patch up an area that didn't turn out quite right, or that got some unsightly smudge on it, you use the Clone stamp tool to fix it. First you choose the Clone tool. Then click Option and click the mouse on the area you want to make into a stamp (in this case, you'd choose an area of leaves). The size of the area cloned is determined by the size of the brush you choose. Then you just click your mouse around on your image wherever you want to reproduce more leaves. It's like putting a patch over an area you don't like, covering it with something that blends in with whatever's already there. If you have a big gray area and get a mark on it, just clone a good section of the gray and stamp over the bad part.

Smudging

The **Smudge** and **Blur** tools are just below the eraser tool, and they do just what they sound like they do. They're slightly different, but essentially the same thing. They're good for softening the edges of an area so it doesn't look so 'cut and pasted', or an area you've cleaned up with the eraser that's left a definite pixel shape (which can sometimes look like teeth came and nibbled around the edge of something.) Just use one of these tools to soften up and blend the edges a bit.

SPLICING AN IMAGE

What do you do if your illustration is too big to fit on the 81/2 x 11 scanner bed? Not to worry. You scan it in pieces, then splice it together in PS.

Start by scanning your piece in as many sections as necessary ~ probably in halves or quarters, depending on how big it is. You want to have some overlap with the scans, so don't try to scan exactly one half, then exactly the other half, for instance. Let there be 'extra' area in the middle, because those bits will overlap when you line them up in PS.

Open each section in PS as a separate image and save.

Open a new document that's the size you want the whole, finished illustration to be. If your original is 11 x 14, and you've scanned it in two 11 x 8 1/2 sections, create a new document that's at least 11 x 14 ~ it can be a little larger to give yourself some breathing room. You can always crop it down to exactly how you want it later.

Drag each scan into the new document ~ they will each show up as a separate layer in the docking palette to the right, but will look like one weirdly overlapped piece in the document. By selecting each layer separately and moving it around you can get them to all line up perfectly on top of each other (click on a layer in the right hand palette, then move over to your document and just whatever's on that layer will move around with your mouse). When you flatten it all down it will look like one seamless illustration! If you have more than two sections to splice, do two sections first, then flatten. Then do the third one, and flatten, etc. It's easier than trying to do all of them at once because it will get confusing right in the middle of the piece where they all join up otherwise.

Before you drag each section into the new document you might need to crop each one a bit to crop off any edges that may be dark or a little distorted from hanging over the edge of the scanner bed. Also, the overlapping bits might need a slight trim before they'll line up just right. Anything on the very edge of a scan can distort some, usually colorwise.

If you're going to do any color correcting, erasing or magic erasering, do it AFTER you've spliced so you only have to do it once, not on each separate piece before you splice them all together. You can also crop the final piece and resize or whatever after you get them all lined up. I've spliced together things many times and am still always really thrilled when I see the final piece all put back together.

You can also use this technique to **fix a mistake on an illustration**. Just repaint the area that needs to be redone, like a singe hand, or a head or shirt or whatever. (For this reason I always save my final tracings so if I go back in, I can redraw the image at the right size). Then scan it and make it a separate layer that can be spliced or patched over a scan of the original illustration. Get it lined up right, flatten it, and no one will know. Your original illustration will still be "wrong" of course, but you'll have a corrected digital version.

UPLOADING IMAGES TO THE WEB

If you decide to have a portfolio on the web somewhere like Picturebook or TheIspot, you'll need to upload your images to the site. The directions for all of them are similar. After you format your images according to their specs, save them all in one folder or directly on the desktop so they'll be easy to find. It might ask you to label each image a certain way (like ppertile_image1.jpg, ppertile_image2.jpg or something). Sometimes they don't care how you label them, but the suffix (mostl likely jpg) will need to be correct.

The uploading program will ask you to choose an image to be uploaded. Usually they'll have a blank window to type a file name into as well as a "**Browse**" button. Click the Browse button and a list of everything on your desktop will come up. Scroll through until you find the image you want, then click it. It's file name will appear in the window. Click "**upload now**" or whatever they have that's similar, and wait until you're prompted that the piece has been uploaded successfully. Then continue until you've done them all.

Often they'll let you show a thumbnail as well as a full sized version. Thumbnails usually look best when they're a cropped section of the full sized version, rather than just a teeny tiny full illustration. Since they're so small you need to catch the viewer's attention with some element from the illustration, like a face or one figure or something. You can easily make thumbnails by cropping and sizing a full sized image.

EMAILING IMAGES

Emailing an image is as simple as attaching a file to your email. Whatever your email program is, it will have an **Attach** feature somewhere. You click on that and it will bring up a list of everything on your desktop, just like when you choose Browse when uploading things. Choose the image (or images), hit Send, and you're done. You'll want to type a little something in the body of the email like "Here's that drawing I promised you" or whatever ~ don't just send the attached files (although you could, I guess.) And don't forget the subject line as well.

Some email programs have limits on file sizes they can transfer, but unless you're doing something really huge, I wouldn't worry. You can break up a bunch of files into several emails if you like. When I send some regular jobs out, I send the art file as one email, then the contract and invoice together in a separate one.

I've sent jpgs, tiffs, PDFs, Word documents and a few other things through email, all successfully. The larger the file, the longer it will take to send, especially if you and the receiver both have dial-up modems rather than DSL or cable. A really huge art file can take a long time ~ a 600 dpi tiff of mine once took 45 minutes to go through. Smaller files, like 72 dpi jpgs should go through fast.

One thing: I use **Netscape**, and when I attach a file that's buried in a folder within a folder within a folder, it will attach itself with a really long file name, and Netscape won't send it ~ I'll get a 'sending failed' message. For example, if the file I'm sending is "H03721/NS/spot/contract.pdf", and is in a folder named "NorthShore", in a folder named "Clients", the final file name will come out something like "Macintosh:DesktopFolder:Clients:NorthShore:H0372/NS/spot.contract/pdf". No

wonder it won't go through! So when I'm sending stuff like this I temporarily drag it out onto the desktop directly and rename it something like "contract.pdf" and it sails through just fine.

FTP

FTP stands for File Transfer Protocol. It's a way of sending files that are too big to go through an email program. Somehow they take the file off you computer and transfer it to where you want it to go. Don't ask me how it works. It's how you upload your files to a server when you're publishing a website, for instance. I've done it a few times when clients have requested it using a program called **Fetch** (for Macs). If you ever need to do this your client will guide you through it. It isn't hard at all ~ it's very similar to uploading images to a website. You just need software to do it. I'm still figuring this out myself, so that's all I can tell you about it for now.

SENDING ON A CD

If you're going to be sending big files out to clients you'll want to get a **CD burner** and good software, and make sure you can format the CDs to be readable on a Mac or PC. I use a **LaCie** burner and **Toast** software with a FireWire connection on my Mac G4, and they work great (you pretty much just plug it in, install the software, and go).
Find out what will work with your setup before you buy anything, but I'm pretty sure Toast works with everything. You'll want to get CD labels or at least the right kind of pen to label them with. (I bought a little Avery kit that has an Stay Sharp Marks a Lot pen that's a lot like a Sharpie.) You can't use a ball point pen to label a CD, or a pencil. They'll ruin it. It has be a special kind, so be careful. CD labels look very professional (you can ~ using Photoshop, of course ~ format little thumbnail images of whats on the disc and put them on there with your contact info. Avery has templates you can download online for their labels which can be formatted in Word.

You can also save your files on a zip disk, but they cost more and don't hold as much information. CDs are so much cheaper and easier to deal with. And what's great is that they're so cheap you can mess them up and just reburn a new one and not feel bad. You can also get re-writable ones, but be sure you have a re-writable burner as well or they won't work. (Regular, "throw away", CDs are just called "Writable" and are labled as "R"). I actually haven't yet paid for either a CD or a CD case, because I always get them when they're 'free with rebate' at Office Max. The slimline cases are nice because they're skinnier and save space. This is also a good way to back up all your files. You can burn CDs of everything (and even make several copies) and then take some of the files off your desktop to free up some space in your hard drive.

Wrapping Up

So let's see, what have we learned? We can scan, format, change the size, fix the color, make it black and white or CMYK, crop, erase, add type, clone an area, smudge and blur, undo mistakes, save as, splice, email, upload … a lot of stuff. Those are the main tools you need to scan an image and make it ready to go for either email or to send to someone to print.

I didn't cover color calibration because frankly, I'm still learning about that myself. If you're going to be doing prints of your work to sell, or work on a partially finished piece that you've printed out

from your desktop printer on watercolor paper, or are doing work that involves very specific color matching where its crucial that the color on your monitor exactly matches the color from your printer, then you'll want to invest in some color calibration software. As far as sending out files to your client using just what I've talked about here, so far I have had not one single problem with the color being way off or anything. In Photoshop, in the top menu bar, there are some things you can check to tinker with the color calibration which I'll admit I haven't used yet. If you're going to get really really serious about all this then, yes, you'll have to delve into that at some point. But for now, what you've learned here will get you started and give you all the basic skills necessary to scan, format, and get your work either on the web or to the client.

And like I mentioned before, you're just concerned about getting the art to the art director ~ they can format it for the printer and do color separations and all that themselves. I've just scratched the surface of all that myself, so won't confuse with any more needless info here!

All this sounds like a lot, but it isn't if you just go one step at a time. The first time you make an image ready to go and see it printed and have it look great you'll go pour yourself a glass of champagne and dance around the room! You'll never need to take your art to 'the art guy' or Kinkos or wherever again, and will also be saving a lot of money in the long run. Even if you just want to clean up your sketches to look better, or tinker with piecing images together for roughs, or see how your finished piece will look in black and white, all these tools are valuable. Hopefully they'll be helpful to you.
Photoshop is an amazing program, and as you can see by all the icons I didn't even mention, I didn't even scratch the surface of what it can do. Just dive in and play and have fun!

P.S. There are times when I think I'd still send the original art out to an art director, like with a whole picture book or something. I'm confident, but not THAT confident. Yet.
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