DIGITAL DIRECTIONS

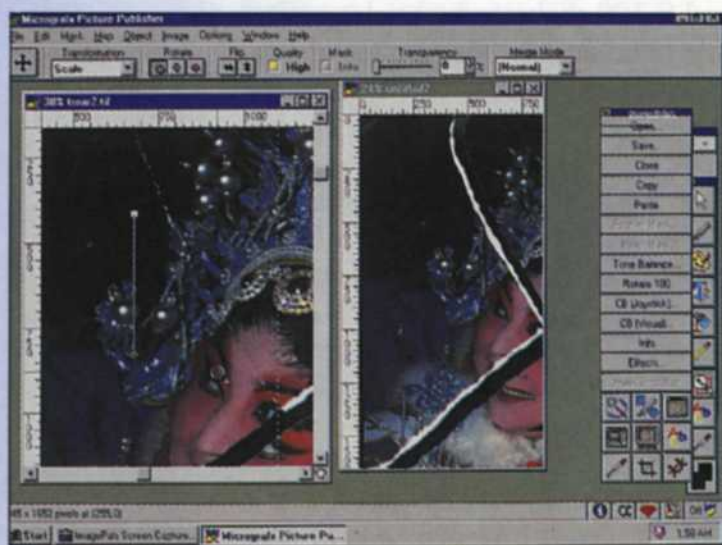# DIGITAL DOCTORS SALVAGE IMAGES

Jack & Sue Drafahl

Screen shot of torn print
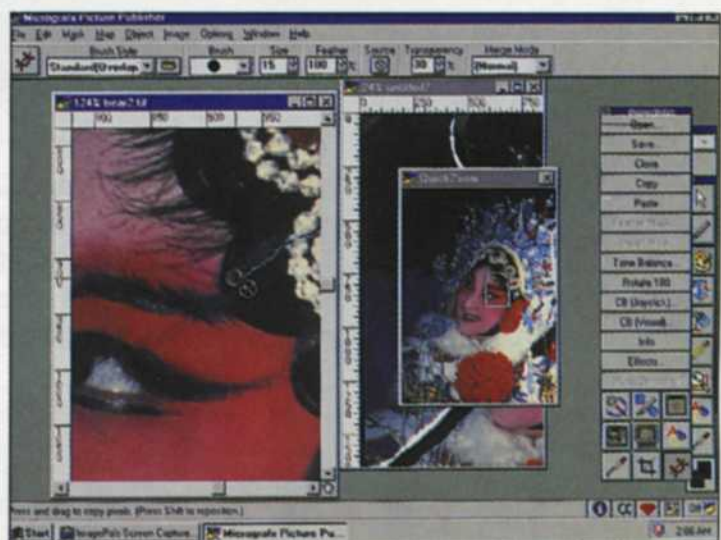

Repaired image

Select first part to use as base image. Select second part—copy-paste-move.

Select third part and copy, paste and move to first part.
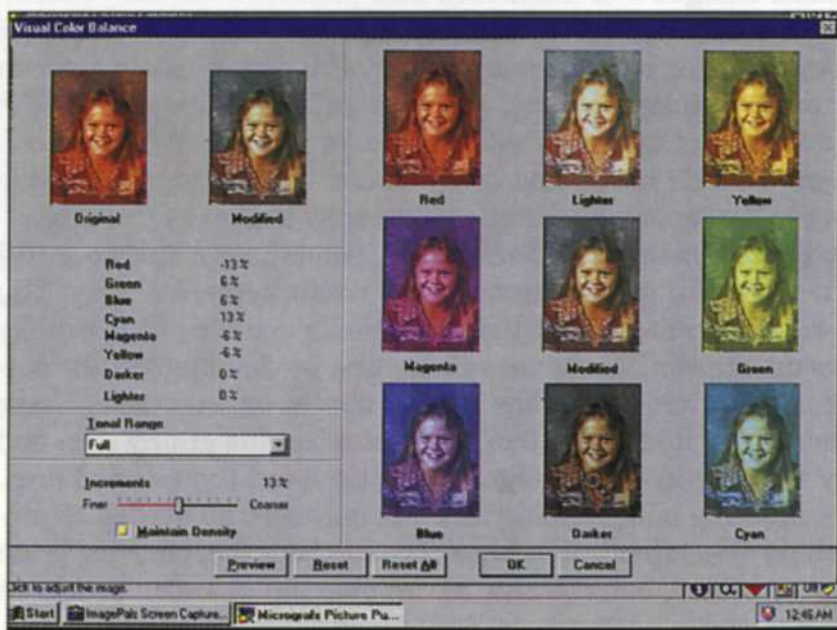

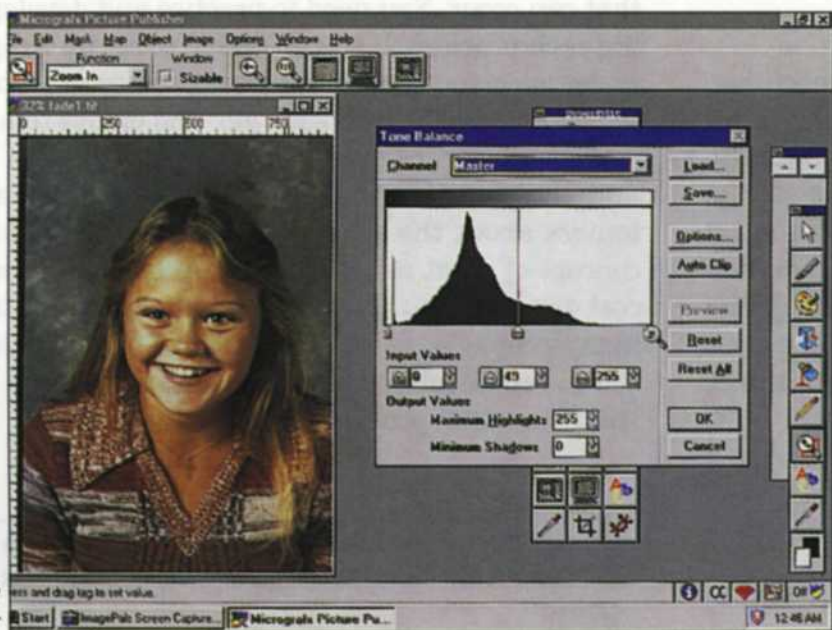Move and align third part.

Use clone tool to fix last seam.

Faded print

Final image

Using visual color correction

Using tone curve editor

WHEN WE FIRST started our traditional photo lab, we incorporated a stock photo agency as part of the business. As the years passed, our stock files increased, and we accumulated damaged images that could not be sent out for sales. Many of these images were round-filed, but those that had important image content were filed in a folder called "Salvage." We had hopes that eventually technology would allow us to fix these images for stock photo usage.

And guess what? Along came digital and we were able to fix a few of the more important images. When we learned how easy it was, we decided to incorporate digital salvage as a lab service for our customers. We don't get droves of customers coming in for image repairs, but when we do, they are thrilled at what can be done.

We first need to identify the most important digital tools and show you how they work before we can show you how they can be used to repair images.

The Clone Tool

The clone tool is a miniature copy and paste tool all wrapped into one. The first part selects the area to copy and the second drops it on the image. This is all accomplished with a single click of the mouse button. The size to be copied can be increased, reduced or feathered so that the pasted image blends in well.

The Select Tools

The select tools vary from a rectangular shape to freeform, and the mouse is used to make the selection. Once these areas are selected they can be copied to the clipboard and pasted back into another part of the image.

The magic wand is a special tool that selects pixels similar to the one you touch. You can expand the scope of the selection by allowing the wand to select similar values. For example a setting of 7 allows the wand to select any pixels within 7 points of the original selection. This tool is great for selecting a sky.

The Copy and Paste Tools

These tools are an extension of the select tools. Once an area is selected it can either be modified or copied to the clipboard, and then pasted to a different part of the image. This tool is useful if large areas of an image are missing, and new sections are copied from a similar portion of the image.

The Feather Tool

This function is almost always used with the selection tools. After a selection is made, you can feather the selection so that the line between the selected and unselected portions of the image blend and do not provide a jagged edge. The width of the feather can be adjusted according to the desired effect. The more the feather, the softer the blend between the selection and the image underneath.

Masking Tools

These tools are a little more difficult to use, but have excellent applications. When you select an area, some programs automatically make the mask, while others require an additional step. One the mask is made, you can edit inside the mask without worry of spilling onto the main image. The mask can be saved to a file and recalled if further editing inside the mask is required at a later date.

The Fastbit or Quickedit Menu

When you have to edit only one small portion of an image, you can use this menu to select only the portion you need to edit. This small portion is quickly loaded into memory—not the entire file. After making the necessary edits, you can then put the edited portion of the image back into the main file.

Full Image Editing Tools and Plug-in Tools

The curve editor, brightness control, and color tools are primarily used on the overall image to make full image corrections, but can be used on selected portions as well. The Plug-Ins are specialized tools that add special enhancements to the image that can include sharpness, smoothness, edge enhancement, grain reduction, and dozens of other incredible tools not possible in a traditional lab. Most software manuals have examples of each tool and how it can be used on an image.

Each software package will have many other tools for digital editing that can be found in the toolbox. You should learn how they all work, keeping in mind that practice makes perfect.

Putting It to the Test

The problem with offering this type of digital service is that it's a simple template-type service. Each damage control job that comes into your lab will be different and will require its own solution for repair. A good repair person will look at the overall problem and decide which part needs the most repair. That will be tackled first, and then slowly repair the less apparent problems. The repair work should be billed by the hour as that is the only accurate way to keep track of the work performed.

Following are some of the more common damaged goods we have fixed in our digital lab. In each case we describe the problem, the tools used to fix the image and the procedure used to repair the image. We have also included an approximate repair time.

Handy Repair Chart

Scratches = (5 minutes). Scratches can be on the negative, slides, or prints. If they are very large, it will be difficult to fix them in a traditional lab, so digital repair is the answer. Once the image is scanned into the computer, the clone tool is selected. The size is set to at least twice the width of the scratch. As you move along the scratch, you can copy and paste adjoining information on top of the scratch. Make sure that as you move along the scratch you are always selecting similar information as you copy it over the scratch. We recommend the use of the "Undo" function, until you feel comfortable with this function.

Cuts and Holes = (7 minutes). This problem is very similar to a scratch, except that the width of the problem is greater. In most cases the problem can be solved with the clone tool. When the cut is very large, you may have to use the selection tool to select a similar size area near the problem and move it on top of the cut. This is

accomplished with the copy and paste tools. It's also a good idea to feather the selection before it's pasted onto the problem area.

Burned photos = (10–20 minutes). This image will probably have a combination of scratches, cuts, holes and missing parts. The large holes and missing areas will require the use of the copy and paste function. If you can't find a similar area to paste over the missing area, you may have to scan in a similar image and use it is as filler material. The smaller problems can usually be fixed with the clone tool.

Pictures Cut into Pieces = (15–30 minutes). This problem is a little more difficult to repair, and may not even be repairable if it is cut into too many small pieces. In this case we are talking about less than six tears. The photo should be reassembled as close as possible on the scanner, making sure that no piece lays on top of another. Using one piece as a base the other pieces are selected, copied, pasted, and moved into place adjacent to the base piece. Each piece is done this way, until the entire image is reassembled. The clone tool is then used to mend the tears between each piece. Any missing pieces are then copied and pasted from similar parts of the image.

Processing Errors = (10–20 minutes). If the processing error affects the overall image, the tone curve editor will allow you to change color, density, and contrast to all parts of the image. If the processing has caused streaks or stains, or if the film touched while drying, you will be using the clone tool and the copy and paste tools. You would select areas near the damaged area and paste them on top of the problem.

Faded Images = (5 minutes). This problem eventually haunts most all traditional photo images, and repair used to consist of duplication using color correction. Now with digital repair, you can color correct, change density, and re-align the contrast curve with the tone editor. Customers will love you for this one. When you can take an old fade image and bring back a large percentage of the color, you'll wonder why digital photography took so long to arrive.

Extreme Grain = (5–15 minutes) Sometimes a customer will ask to have film pushed because of a wrong camera setting. You may save the images, but there is usually a trade-off: It usually shows up as grain. The grain will be most predominant in the out-of-focus areas and makes the images almost unacceptable. Using the magic wand selection tool, you can select the grainy area and apply the plug-in filter designed to smooth out the selected area. The feathering and masking function may also be needed to protect those areas that are in focus. The methods for removing grain are quite varied, but effective, so we plan on an entire article on grain removal in a later issue. Stay tuned.

We know there are a great many other types of image damage that can occur. You need to practice and develop a system for solving each problem. If you do decide to set up a digital repair service, make sure you assign the job to someone who loves a challenge, builds knowledge with each job, and enjoys this kind of work.

We highly recommend making samples of possible problems and showing the final fixed photo at its side. Just telling customers about the service is not adequate. Most clients have no concept of what can be done on a computer, or they think it will cost too much to fix. Digital technology is still an unknown to many people, so you need to educate them about your new digital image repair service. You'll be surprised to see how quickly digital will repair that problem in your bank account. ⌐——

Jack and Sue Drafahl own and operate a custom lab in Portland, OR, and are also professional photographers, specializing in underwater photography.