

# “HYBRID” SLIDE DUPLICATION



Fuji Astia 100

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As with many traditional lab functions, it may be time to consider hybridizing your duping services. If your lab has embarked on the migration toward digital imaging, then you might already have many of the necessary tools.

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**I**F YOUR PHOTO LAB plans to step into the digital arena and currently offers slide duplication as a service, we would like to talk to you about the potential of adding some very interesting and profitable lab services. Don't panic, we are not going to recommend giving up slide duping—yet. We *are* suggesting that you use the advantages of both traditional and digital tools and expand into a hybrid slide duplication service.

Why not just fully switch to digital? Well, the truth is that the traditional way of basic slide duplication is still better and faster. Standard slide dupe time is less than a second, while

digital can take up to one minute for each scan into your computer system. Factor in editing time, and then add at least one minute to send the image out to a film recorder. So, if the image fits into the category of a standard color slide, dupe it on your slide duplicator. The time to consider the digital direction is when the image has characteristics that prevent acceptable dupes or when it will take too long to correct the error.

Before you consider adding this service, you will need certain digital equipment to perform the task. If your lab has already made the migration toward digital, then you might already have many of the necessary tools. You will need a fast, sharp film scanner to input the film, an editing computer system and a high resolution film recorder to output the new dupes.

Over the years we have had our share of slide duplication problems. Before we had digital in our lab, we did the best we could with those problem images, but sometimes wished we could have done a better job for our clients.

When we first added digital to our lab, we could not have predicted the number of situations where digital duping would help. In order to help *you* see the potential of digital duplication, we recently looked back at some of those jobs and broke the problems down into categories. Some may fit your client base while others will not, but no doubt you'll be sure to come up with new ones.





Kodachrome



Kodak 5071

### Critical Data at the Edge of the Slide

This problem usually occurs when a client has old lecture slides with text at the very edge of the slide. In the normal slide duplication process some cropping is done, and this could cut into the text. A special traditional 1-1 duplication service was needed to ensure that all critical data was transferred. With some jobs, the only way to get a good dupe was to copy the edge of the slide mount.

With a digital duping system, you would add a predetermined black border around the scanned image to ensure a full image without the slide mount showing. In most editing software programs this procedure is called *canvas size* or *page size*.

### Underexposed Original

When you increase the exposure on slide duplication film to correct dark slides, the D-Max level becomes lighter. In some cases, the black levels are unacceptable. The advantage of digital duping is that you can scan in the original and bend the gamma curve until you get an acceptable black level. Granted, the image will not have the same quality as a properly exposed image, but it will be better than an overexposed dupe image.

### Old Slides With Crossover or D-Max Problems

Your customers will think you are a genius when you can take a 30-year-old faded slide and restore color, contrast and exposure. Some of these image problems can be solved when you scan the image into your system, and then fine-tune during the editing process. Be careful not to over-correct the image. Your efforts will make the final image even better than before, and it will be archived on a new emulsion.

### Scratches, Dirt and Fungus

In addition to fading, older slides have a good chance of being damaged over the years. In the normal slide duplication process these problems are just copied over to a new image if these problems can't be blown or brushed off. With a digital duplicate, you can use the clone tool to remove dirt, fix scratches, spot out fungus, and restore the image to its original state, or very close to it.

### White Background With Black Lines or Text

Over the years we have seen a variety of technical images with black text on white backgrounds. When these slides are





30-year-old color shift.



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duplicated, any slight shift in color is magnified on the dupe. Exposure on dupe film is also a problem, and reducing the exposure to compensate usually gives the duplicate a muddy look.

With the digital setup, you can convert the image to a pure black and white image, increase the contrast and clean up the black dust that always shows up on this type of image. The digital process also allows you the option of selecting the entire image and applying the reverse effect to it. The results would be a black background with white lines and text.

### Weird Files

If your client base includes those in the medical or technical fields, you may see a lot of strange films. LPD, Kodalith, X-Ray copy film, and Polaroid slide films are very difficult to balance on a standard slide duplicator. Just when you think you have a good balance for one of these films, you will be presented with a new variation.

This is one area where the digital process really helps. If the slide is black and white, make a black-and-white scan, correct the image for exposure and contrast and re-image it on color film in the film recorder. Color Polaroid slides dupe very poorly on the traditional system, but are easily corrected with the contrast, color saturation, and brightness controls of most software editing programs.

Another film that fits into this category is old Kodachromes that have had their emulsion side cleaned by well intentioned clients. The protective coating is sometimes removed during this process which causes the color balance to take a drastic shift to the red. Since the amount of cleaning varies, the color shift is totally unpredictable. If this same image is scanned into the computer, the shift can be removed as it is being scanned. Additional damage control can be accomplished through the editing process.

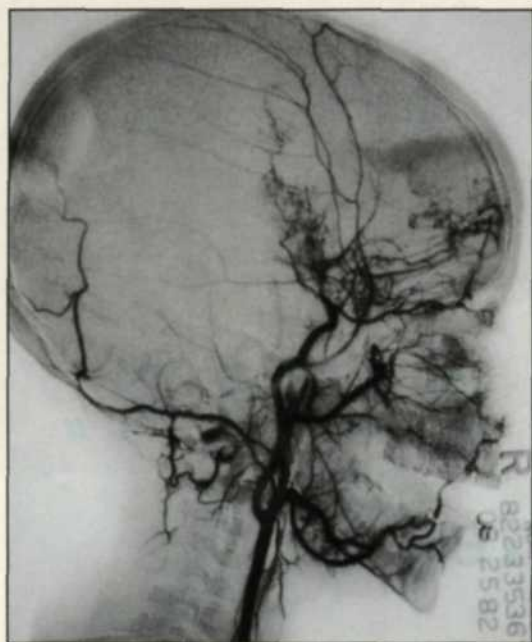
### Changes to the Dupe

Sometimes there is nothing wrong with the original, but your client wants to add a logo, symbol, text, or insert another photo into the original. In the past traditional methods required kodaliths masks, register pins, and a lot of painstaking work. This is another area where the digital process really excels. Once the image is scanned in, you can type in text, insert logos and paste in other photos with keylines if necessary.

### Multi-projector Slide Presentation

There seem to be fewer A/V slide producers in today's marketplace, but those who are still need a variety of special effects to make those dazzling slide shows. Traditional methods have worked in the past, but usually require additional equipment, training, testing, and considerable time. With the digital process, the software does it all. You can animate an effect on the screen, group several photos onto one, reduce a vertical image to a horizontal format, create panorama images, and even register images that were not even shot in register. Just

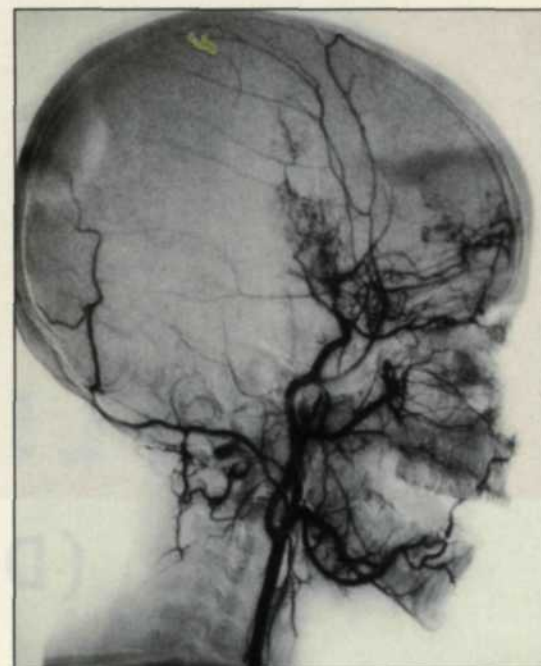




X-ray



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Flat art copy



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think, you don't even have to pay worker's comp on a computer!

### Color Negative Conversion

This process is not really a slide duplication process, but it is still done on a slide duplicator. Color negatives are normally converted to slides with Kodak 5072 print film. The conversion is very time consuming and may require two runs through the system before a good image is made. Even so, the grain pattern is large, and the D-Max tends to have a red shift when compared to a slide dupe.

If the client has a mix of both slides

and negatives, you may want to opt for the digital conversion. Most scanners convert the negative as it is scanned. Color correction, exposure adjustment, contrast modification and dust control are all visible on the screen before the image is sent to a film recorder. Best of all, it is easily repeated if the client requires more dupes. You would merely load in the file and send it to the film recorder.

### Billing Duplicating Services

If you do decide to add this service to your lab, you will need to decide on how you want to bill the service. A per-image

rate can be dangerous, since each image may require different editing times. We think that the best way to go is an hourly rate plus film recorder fees. With a few practice runs, you can get approximate times for variations so you can give reliable quotes. Make examples of these digital magic tricks so your customers can see what they are getting for the extra money they spend. Then buy yourself a wheelbarrow to help carry all your profits to the bank!

*Jack and Sue Drafaehl own and operate a custom lab in Portland, Oregon. They are also professional photographers, specializing in underwater photography.*