The TRIPLE Scan

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Original scan

Window scan

Mask of window scan

Mask of window scan

Scan two, align to #1

Final image (with fish additions)

Digital printers are now more affordable, and the quality continues to improve, but combining digital and traditional tools is often still the best response to today's demanding professional. The responsibility of the photo lab is to help the customer devise a formula for maximizing the lab's hybrid imaging capabilities.

RECENTLY, OUR LAB was presented with an interesting digital/traditional assignment. Following are the tools we used in responding to this challenge.

The job was to create a display book for an aquarium service to be shown at a home improvement show. This small company maintains and set up aquariums and ponds for offices and private homes. The display book was to hold 5x7 color prints of the various aquariums and ponds in their natural surroundings. The ponds were easy, and only required traditional photo skills. We used a high resolution 35mm color negative film and made direct prints.

The photos of the fish tanks were going to be a lot more difficult. We met with the staff of the company and discussed the problems associated with these shots. We were only going to be allowed to take pictures right after the tanks were cleaned. We could set our camera up ahead of time, but only had minutes to make the shot before we had to move on to the next location.

Lighting the scene proved to be next to impossible.

Daylight coming through windows, tungsten light in the rooms, and the low light level in the aquariums, all created a mixed lighting nightmare. The most difficult problem was that the glass in the aquariums reflected everything in the room. Camera angles were very critical and there was no time for re-shoots.

Our solution was to photograph the whole job on a high res 35mm color negative film, and solve the problems by editing in the computer. We selected color negative film because of its wide exposure latitude. We set the camera on a tripod and exposed a negative for each of the problem areas. Care had to be taken not to move the camera so the negatives would all align.

We exposed a negative for the window light, another for the room and a third of the aquarium. When we exposed the aquarium negative, we turned off all room lights, and closed all the window blinds and curtains we could. In some situations, we only had to make two exposures for the room and aquarium lights.

Each resulting negative was scanned into the computer and saved as image1A.tif, image1B.tif, and image1C.tif.

For the editing process, we used a combination of Painter 5 and Photoshop 4. The first step was to color balance the room image. The window images were selected next, and care was taken to make sure that the scan size was exactly the

same as the room shot.

Using the magic wand tool, we selected the area where the sunlight was coming through the windows. We used a large feather value of 4 to ensure a seamless blend, and copied the selection to the clipboard. Going back to the room image we pasted the windows over the windows in the room shot. Additional controls for more feathering and transparency allowed us to make a perfect blend into the room.

Next, we loaded in the aquarium image, and selected the tank with the manual select tool. We again feathered the selection and copied it to the clipboard. Going back to the room shot, we pasted the clipboard image of the aquarium over the aquarium in the room shot.

As we move from one location to the next, we ran into one situation where the window light could not be blocked and thus reflected into the aquarium glass. The only angle that would work for the aquarium was not the best angle for the room shot. So, we moved the tripod for the aquarium image and would fix that problem when we got back to the lab.

The window and room blends worked fine, but since we had to move the tripod for the aquarium image, we now had our work cut out for us. First, we selected the aquarium image with the manual select tool. We used this tool because it is faster to manually select objects with straight sides than with the magic wand tool.

We copied the selected image to the clipboard and pasted it into the room shot. We scaled the pasted image down, and then used the distort command to match the pasted image to the aquarium in the room shot. We then adjusted the brightness and contrast of the pasted image to match the lighting qualities of the room.

In addition to the lighting problems, the client also wanted to have fish in some of the shots where the aquarium was a predominant proportion of the image. When we photographed the aquarium, we used a long exposure to obtain good lighting in the tank. This resulted in blurred fish because they moved during the exposure. The only answer was to use flash to stop the swimming action.

Because of the tight time frame, setting up lighting with flash was not feasible. The best solution was to place the camera up against the aquarium and use a flash through the side of the glass to photograph just the fish.

This resulting image was scanned, then we used the magic wand to capture only the fish. The scaly critter was copied to the clipboard, and pasted back into its aquarium before it even got dried out. Once the fish was feathered (we thought it had scales!) it started to swim around in the aquarium, and we had a finished shot. We saved each step out as a separate image, so we could make any changes with minimal re-edit time. Each approved image was recorded on our Agfa film recorder with Kodak Gold 25 film and then printed on our 5x7 mini-printer.

Thanks to this great learning experience, we found that careful planning of hybrid photography can make for happy customers, while providing your photo lab increased potential and a better profit margin.

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