KEEPING PACE

A Monthly Newsletter Devoted to the Darkroom Arts

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A light at the End of the Dye Transfer Tunnel

Good news at last.
The fat lady hasn't sung yet.

The Dye Transfer crisis may be seeing the light at the end of the tunnel.

As we all know by now, Kodak has seen fit to discontinue the production of the materials used in producing the most versatile color print process of all time.

Their reason was financial. However they left so many people out on a limb, that something had to be done. This news was devastating to many top flight art photographers that make their living by producing fine color prints. We know of many artists that have a backlog of matrices and run off prints whenever they are in demand.

I have made numerous calls and have sent many Fax's to various companies that have the capability to make the necessary matrix film.

Some do not want to get involved at all, but a few said that they would consider getting into the business if they had some idea of the size of a required coating.

One of the champions of the process is Frank McLaughlin. He was formerly the only knowledgeable individual at Kodak who knew what he was talking about. Dye Transfer was his specialty. He put me in touch with a Dr. Jay Patterson.

Dr. Patterson already has informed me that he has a lab in Czechoslovakia working on the dyes. They are formulating the exact Kodak dyestuff and will have these dyes available very shortly for testing.

Dr. Patterson has also told me that he is working with a lab here in the States in producing a short run of matrix film. He will have an initial run in the immediate future.

When this product is ready it will be tested at the various labs. This is only one such possibility.

Dr. Patterson is also in touch with the Bob DeSantis and Associates lab in North Hollywood, CA. This lab is one of the worlds finest. Their quality comes from a dedication to quality that is rarely seen any longer. They will be involved with the testing some of the materials.

I have personally contacted a French company called R. Guilleminot & Cie. in Paris, France. They are very capable of, and interested in producing the matrix film. They are also interested in the financial aspects of the process. They would like the formula from Kodak before they even consider such a venture. They have even gone so far as to offer

to sign a nondisclosure agreement if they are allowed to examine the formula.
I have written to Mr. Fisher, the CEO at Kodak, and asked if he would be willing to divulge the formula for the production of the matrix film. I have not yet heard from Mr. Fisher.
The paper receiving sheet is also on it's way to a solution. The Kodak formula contained a chemical called Thorium. It is an environmental problem.
It is one of the reasons Kodak has offered for it's decision to discontinue the process. Dr. Patterson has found a formula that will use several alternate mordants. These all involve metal salts, and if imbedded into the emulsion, should work very satisfactorily.
Dr. Patterson is interested, as I am, in keeping this process alive. I will do all that I can to help this process stay alive.
I have also contacted other companies in the States, but have not been able to yet get a commitment. However, Dr. Patterson's efforts are making headway.

Why is it so important for this process to remain alive?
Because it is the only color print process still alive that demands the accuracy and skill of the artist to produce a print that excites the imagination of the viewer.

Except for the EverColor pigment process, the digitized systems are all beginning to look alike. Most of the photographic magazines have all succumbed to the computer. For commercial purposes, I can agree that this is probably the only way to go, but for the true art form that requires eyes, emotion and skill, nothing is so satisfying as the individual production of a quality image.
The reason why the Dye Transfer process is so valuable is the fact that so many minute changes could be made after the image was formed in the matrix film.
In any other process, once the image was formed, you are stuck with it.
If you are making Cibachrome prints, and the contrast of one color is off and must be corrected, the only method available is by masking and using tri-color exposures. For the novice, this is a challenge. For the professional, and there are only a few labs that fall into this category. Correction in individual color layers is an advanced technique that few people are able to master.
In the Dye Transfer process, a simple adjustment of the dyes using Acetic acid or Triethylanomine can raise or lower the contrast at will.

Some of the finest prints are being produced by the John Wawrzonek lab in Southboro MA. and by Frog Prince labs in San Francisco. These labs specialize in producing the finest color prints anywhere. The necessary minute adjustments are used with great accuracy and are the main reasons why their prints fill the eyes and the hearts of most viewers with admiration.

Before the matrices are produced, the artistic corrections that most artists feel are necessary are usually accomplished when the separation negatives are made.
This series of steps are not that involved, but do require an understanding of the nature of the film being used to make the separations, as well as the sensitometry and densitometry of film exposure and processing.
However, if all of the criteria are met, and the negatives are made with complete accuracy, then the creative juices can take over.

Just a seemingly simple chore like making sure that the color balance is "correct" can be intimidating to some lab workers. It requires one to have the ability to "see" the balance before committing yourself to a set of final exposures.
The incorporation of grey areas helps in finding the balance.

The testing of a small portion of the image helps greatly in establishing the "correct" balance.
Before the advent of densitometers, all we had to work with was our eyes.
We made negatives by trial and error.
If one set looked right, (and this was just a total sense of what a good negative should look like) we used the same information when producing subsequent separation negatives. We now know that this approach was wrong, but we didn't know too much in the early days.

Being trained in the old Carbro process gave us an edge.
We were used to making black and white prints called "bromides." These were used to produce the colored pigment images. In making these black and white prints, we could begin to see little subtleties that began to make sense. Our prints were considered the best in New York, only because we had good eyes and good judgement.
Technically, we were still babes in the woods.
Because of this training with the eye and with "bromides" we were also able to make matrices with the same kind of attitude and system. It worked. We knew we needed detail in the shadows of the negative and that the overall contrast had to resemble a good negative used to produce black and white prints.
As we progressed and became more attuned to the scientific approach to negative making, our work improved, but we never lost sight of the fact that good judgement was the main tool in making accurate decisions about color balance.
It is the artist that has to make judgements. The viewer will make his or her own evaluation of the finished work, but the artist has all to do with the final outcome of his or her own efforts.
The word simply, is **control.**
No other process in the history of fine art color printing has the advantages that the Dye Transfer process allows.
What about the scanner? Can a scanner produce the separation negatives with the same accuracy that is accomplished by hand? Of course it can. For the individual, the cost of such a high end scanner defeats it's own purpose.
I remember that even as far back as 1957, in New York City, one lab called Authenticolor used a very early model scanner to produce the 8x10 separation negatives from 35mm transparencies.
The results were far from being good, but it was the first attempt to get into a more scientific mode.
In Los Angeles, another company also used a simple incandescent bulb scanner to make the separations for the production of the Max Factor's Dye Transfer prints. This too, was unsuccessful. The resultant image was never as sharp as it could be achieved by hand and eye. These early machines could not compete with a skilled darkroom worker.
However, with the advent of high end digitized scanners things have definitely changed.
The newer scanners can produce a straight line image from the original and it will almost match it, if that is what you want, or give you the opportunity to change it if needed. The cost for such a high end scanner is prohibitive, unless you are in a business position and can pay it off in a reasonable amount of time.
The main problem with any digitized process is the output.
If you scan the transparency, then what? Do you attempt to make a set of continuous tone separation negatives? Are you that accomplished with a tool of this sort? Most of the new scanners and out put devices can either make a new transparency, a new negative, or a set of screened separation negatives.

This is the domain of the lithographic field.

The last item, screened separations, is the only other alternative to the manipulative process, Dye Transfer. Most of us can not afford to buy high end equipment without getting into financial trouble.
However, One such company has done just that. **EverColor.**
This new company produces a new version of the old Carbro process. The prints are incredibly sharp and colorful.
The first advantage is the quality of the final print.
A bonus is the fact that the prints will last for many years without fading.

EverColor is equipped with a very high end scanner built by Scitex, and can produce very fine lined screened separations.
The screen cannot be seen by the naked eye.
The best part of their process is the fact that they have **complete control** of the image before making the final set of negatives.
The image is called up on a high quality screen. After it has been manipulated, it can be proofed using an Iris printer. The results can be seen in a matter of minutes. If you are not completely satisfied with the results, further manipulation can be done. Then a new test Iris proof print is produced.
At this point in time, if you are satisfied with the results, a set of screened separations are produced that will virtually match the Iris proof.

But if that was all there was to making a great print, then anyone with money enough could enter the same field and dominate the color print business by just being bigger.
Anyone who desires to make high quality prints for a living must have the total understanding of the process and truly be an artist at heart. EverColor is such a lab.

Is this new pigment process for you? Is it expensive? Remember, the person that makes a print for you must be a master printer. I repeat the word "must." How many "master " printers do you know of?
Fortunately, Bill Nordstrom, the founder of EverColor Corp. is just that. **A master printer.**
If you are serious about your art form, getting a print made by a master printer is not a bad idea. Their price is much lower that buying a similar sized Dye Transfer print.
Do you want to be in charge of the final output?
There is more than one way to skin a cat. If you want to be involved, and the print is worth the time and possible adventure, you are invited to attend their manipulative portion of the process and be more in control of the final output.
Or, if you do not feel like travelling, you can ask for an Iris proof before committing yourself to a final print.

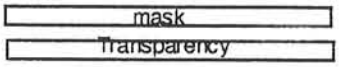
Let us assume that you have the possibility of making a series of prints in a limited edition. No other process can guarantee that the first print and the 50th print will look alike. EverColor will guarantee this service.
Do you need to order the EverColor prints all at the same time? No. You can wait as long as you like. The results will be the same.
Is this a good deal for the artist that is trying to be accepted by galleries? Absolutely.
The galleries want to see "Carbon" prints, then Dye Transfer prints, then Cibachrome prints, and last but not least, quality C prints made from color negatives.

The Cibachrome process is very alive and well.
There is no evidence that Ilford isthinking about scrapping their precious process.

For most people, making a Cibachrome print is an exciting way of extending the art form that began with the camera.
Knowledge of the fundamentals of the process is of major importance. Again, the print maker must know what his equipment is capable of

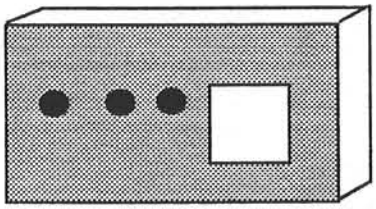
producing.
I keep getting calls from subscribers asking about what kind of equipment to buy, especially for the Cibachrome process.
I have made claims about the inexpensive enlargers that I used for many years. Some people think I may be exaggerating a bit when I tell them about my investment of $150. for a used, Navy surplus, old D2 Omega.
I added a used set of variable condensers to it for an additional $90. and ended up with a very fast, variable, and even light source. A total of $240 was the major expense.
My main Los Angeles lab eventually had eleven 4x5 enlargers (One was a Beseler.) and ten 8x10 diffused Elwoods and one 8x10 Durst Laborator with condensers.
With all of this equipment, I still remember making great prints with this simple and inexpensive 4x5 Omega. Could I have afforded a more up to date system? Of course I could. But I didn't really think it was necessary. Was the fact that I didn't think I needed a color head the main reason for such an attitude? Not really. I used gelatin filters and made Cibachrome prints that were considered the best in the West Coast. I was able to get the slightest adjustment in color balance by using the lightest filter for part time.

In my mind, the equipment is only just so important. The latest Saunders and Omega's are fine. The price is under $1500 and this should not be a strain for any serious printer. However, it is possible to spend $15,000. on an enlarger of the same size and not get a better print.
The light source seems to be the biggest problem when making a Cibachrome print.
At one time, I purchased an Omega product called a Xenomega. It was a pulsed xenon light source. It's speed was my main reason for the purchase. It contained 650 watts of condensed light. This speed enabled me to make 30x40 prints directly from 35mm transparencies.
A new enlarger called the ZBE is a great system. It costs about $14,000. It is a closed loop system and it's main feature is the light source. It is a diffused color head with over 1080 watts of light.
The color head can be purchased separately and would easily fit an Omega or a Beseler.
Of course, the necessary addition to any enlarger is the registration equipment. I use the Condit system. It is reliable and will last a lifetime.
The necessity for masking a transparency for the Cibachrome process is a well known fact.
Is it possible to make a small contrast mask for a 35mm transparency and still make a good print that doesn't exhibit any edge effects from the used of a mask? Of course it is possible. The only problem when using a mask on such a small original image is the fact that the register must be absolutely dead on.



The alignment of the two sheets of film before making **The mask must be exposed by contact and placed back into the carrier in the same position that it was exposed. This will keep the alignment in order.**
Dirt and refraction from any glass in the carrier are the main culprits to be concerned about.
Eliminate dirt by making sure that the transparency is perfectly clean. If necessary, wash the transparency in warm water, gently scrubbing it with a kleenex tissue and Fotoflow then hang to dry in a dust free atmosphere.
The use of some sort of immersion "oil" will help to keep the image clean, and eliminate all refraction and Newton ring problems. I personally have used caster oil, immersion oil for microscopes, and silicon. I prefer silicon.

It will be necessary to mount the 35mm transparency into a larger sheet of film so that an accurate punching of the oversized sheet can be accomplished, otherwise, the fragile ends of the 35mm slide may be damaged and accurate registration will be hampered.
What is the secret for making great prints? There is no secret.
It is really all in your minds eye. You must be able to "see" or "imagine" the final image that you want to portray and work towards that end. It could be the degree of contrast or density that can make or break the effort. Color balance is the last thing to worry about. The main items to think about are the overall contrast, density, open shadows, detailed highlights and finally, the overall color balance.
Even this approach is not the total answer.
The degree of highlight structure is very important. Being able to adjust the highlight content is one of the professional "tricks" that can be used. There are ways to make the highlight areas "jump" out at you. Some times, a specific area doesn't quite look correct and you may want to change it. The knowledge of how to make an isolation masking system is very important. With this "trick" one can make green leaves greener, and brighter, blue skies bluer and red apples redder. These are some of the corrective mrthods that can be employed in making a great Cibachrome print.
You, the artist, must be able to imagine what could be done and then do it properly. The biggest area of contention is this. Are you really satisfied with the transparency?
Is it possible that it could be improved in printing?
The answer is not always clear. I feel that every transparency can be helped.
I have made a study of hundreds of transparencies and was able to find a better color balance for each and every color slide I looked at.
At one time in my career I came up with a method of finding a better balance.
I made a unit which became known as the "magic box."



I disassembled a small Omega color head and built it into a portable box.
I then adjusted the light source so that it visually matched the 5000° K Macbeth light box in my lab.
I recorded the filter pack numbers.
These then were considered normal.
I would place a transparency on the light source screen and examine it. I could then adjust the color filters until I was convinced that the change was for the better.
By simply adding or subtracting the new set of numbers from the original "normal" set, I could easily calculate a new color filter pack. These differences could be mathematically used to make an improved set of exposures for the Dye Transfer matrix films, or a new pack for making Cibachrome prints.
It worked so well that I can honestly say that it saved many jobs from being returned.
The whole essence of making prints is the fact that the printer must have an eye for the dramatic, and an eye for what is the correct contrast for that specific image. The overall density must be within .05% of it's optimum. If the image demands that the shadow areas be seen, then it is up to the printer to find out what it takes to assure this result.
There are so many ways to make a print. The ideal print is really an educated guess.
What magic formula did Ansel Adams have that made it possible for him to become such a prolific master printer?
In my judgement, it was simply **"taste."**
He knew instinctively when he reached the correct level

of density and contrast.
Most of us who have made a life time work of printing have similar qualities, unless we were dragged into the world of "quick and dirty."

Black and white prints are a true measure of one's ability to make a contribution to the world of photographic art.
While it is a simpler printing life, without the need to know about filter speeds and color response for the various panchromatic films, it still requires all of the knowledge that it takes to make a great print.
More than anything it takes the eye and the imagination of an artist to make great prints.
The last place I taught here in Las Vegas was at a commercial color lab. However, a few of their clients used to get their black and white prints made there.
When I arrived on the scene, the black and white prints were abysmal.
The images were exposed on RC based variable contrast paper and processed in an automatic machine.
They were the dullest images I had ever seen.
One gentleman who's work was really quite good was never satisfied with any of the prints he had made there. He was frustrated, but he had no where else to go.
When I began to straighten out the black and white lab, I took one of his images and proceeded to make a 16x20 print. I used Kodaks Elite paper. I had ordered a few boxes of each grade. I quickly found the proper grade.
The 2 1/4 image was of a shot of the Boulder Dam. The sky was almost too bright to print, the side of the dam was too dark, and the only area that looked correct was the open river below the dam. I began to make the necessary excursions by making test prints. I found that I had to make a normal exposure of 15 seconds, while dodging the dark area of the side of the dam for almost 65% and then burning the sky an additional 300%. The results were favorable. I made a few more simple changes and made a complete finished print that floored him.
I would then make an identical print to the last one and mark it with a marking pen showing the different degrees of dodging and burning. This was my "map" that could be used by any other technician in the lab in the event that I was not there.
He had never seen such a complete prints before.

In the first place, the enlarger that was used by the lab to make these important prints was out of level. If you focussed in the center of the sheet, the edges were always out of focus.
Leveling the easel was not quite good enough to correct this problem.
I used one of my old D2 condenser enlargers that I had placed in the lab for teaching purposes. My enlarger was right on. To prove that their system was off, I purchased a "Zig Align" system and really showed them where they were off. I really don't think anyone even cared about this problem, until I pointed out what a dilemma this could cause.
If you are concerned about your enlargers ability to produce a sharp and even image without fall off or distortion, try using the "Zig Align" tools. They work.

Some times, I would use my method of "fine printing "and show the lab technicians my approach.
First, I would make a straight print on a smaller sheet of paper so that I could establish the proper contrast grade.
Then I would make another straight print and examine it with them. I would show them where added information was possible to find by burning. I used the usual dodging tools, and my hands. Nothing fancy.
Sometimes when an area was too tiny to dodge correctly, I resorted to using Crocein Scarlet, (also known as cocine) a powdered red dye that can be mixed with water and added to specific

tight areas of the negative with a very fine brush. The deeper red the color, the lighter the result on the print. I would make as many tests as possible until I was satisfied that I had gotten all that I could from this particular image. Then the final print was exposed, and hand processed with loving accuracy.
Processing the paper to it's maximum point is important. You will never get the rich blacks that only full processing can deliver.
If you think differently, make the test for yourself.
Make two identical exposures and process one for 45 seconds and the other for 1 1/2 minutes. The difference will make a convert out of you.
However, when all is said and done, it still takes the eye and the persistence of the darkroom worker to make the best print of his life, every time.
Persistence.
This is the only secret of success for color printing, black and white printing, or anything else in life that I know.
One of life's frustrations is when it seems possible to write an article about something specific, and it has a hard time to get published.
A few years ago, Tom Kelley, the famous photographer, who's fame also includes the original nude calendar photo of Marilyn Monroe, presented me with an outtake transparency of the original shooting session.
It was faded beyond repair. Or that was the consensus at the time.
The original image that was used to produce the calendar was finally lost in the shuffle and was never found again.
A print of the original was found and copied many times. We had the job of restoring the last version of the original image and made many Cibachrome prints for Tom and his clients.
But this faded transparency was one of the last challenges Tom gave me before his death in 1984.
He asked if there was something that I could do with this transparency to bring it back to it's original color and contrast?
I examined it and decided on a course of action.
First I made a set of separation negatives from this faded original.
I decided to make a set of matrices and then bleach out any remaining silver so that I could dye the remaining matrix with the appropriate colored dye.

I made a set of separation nnegativesand proceeded to do the bleaching and dying. I visually added the colored sheets of film to the transparency using register pins, and checking out the results against a light box. I made as many images in color that I felt were necessary. I ended up with 3 cyans, one magenta and 5 yellow sheets. The color and contrast was achieved by the additionof these sheets and the results were successful.
I produced a full color dupe transparency. It looked like a brand new original.
However, as important as I feel this image is, various magazines that I have selected to run the article have yet to say "yes."
It is the nudity that they object to.
However. I feel that this is an important and historic image Maybe, some day, I will be successful in getting some publisher to say yes.

In the meantime,my Ciba book and video package is still available for $112.
And the Dye Transfer package is still available for $212.
I have also made myself available to those of you that may want or need personal guidance in the field of your choice. If I can be of any assistance, let me know.
I don't mind travelling.

Thanks.
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