

# KEEPING PACE

A Monthly Newsletter Devoted to the Darkroom Arts

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## A Dye Transfer Association?

### The Dye Transfer process evaluation.

I received a call from Dr. Patterson, one of the few persons that has had the clear call to find the solution to the Dye Transfer dilemma. He has informed me that the Kilborn Photo Company in Cedar Rapids, Iowa is making a test run of the Matrix film. Kodak has finally relented and has given the emulsion formula to this company and they will soon have a test run of the film for Dr. Patterson to test. The production of the receiver sheets has also been solved. The same company can also produce the final receiver sheets on paper or polyester.

This is the most encouraging news to date.

The problem of manufacturing the dyes has also been solved.

Dr. Patterson has found more than one company here in the States that can match the dye formulas and can produce the colors that virtually match Kodak's.

A company in Czechoslovakia is also capable of doing the same.

Once the manufacturing process has been defined, Dr. Patterson will set up a system of ordering the materials, warehouse them at his location and distribute them according to the orders that will come in.

Tony Frascello, of Innerscape Photo, in Phoenix, AZ. is able and willing to send out questionnaires to as many as three thousand individuals that have

shown an interest in some form of color printing. I have such a list and will mail it to Tony. The questionnaire will enable Tony and Dr. Patterson to determine the size of any film run and of the quantity of dyes to be mixed and packaged.

This effort will be the beginning of the starting of a new "Dye Transfer Association."

This idea of an "association" was once started in New York many years ago, but it's main objective was to gather technical and business information and spread it out to other labs in the same business. The fact that business competition was very strong killed the idea from the start. But the "association" that is envisioned here is one of only

technical help. If all of the power and knowledge of how to make a Dye Transfer print was equally available, (and it is,) there would still be a difference in the quality of the work because we are all different in our approach to color and images. The key word is "taste."

Thanks to the efforts of a few dedicated individuals, the Dye Transfer process will not die.

I recently spoke to Bob DeSantis, one of the most respected Dye Transfer printers in the business, and he wondered if the term "Dye Transfer" could still be used even though Kodak has let it disappear from it's list of products. I think the term has become generic. There would be no reason for Kodak to complain unless the results of the prints were so bad that it reflected on their reputation.

In one respect, I think that once the process has been restored, and an "association" has been established, technical information, and materials will be easier to obtain. My book and video on the process will still be valid. I was told that the materials will work in the same

fashion and all of the technical data in my books will still be usable. (Thanks.)

**The Ciba process** is still very alive and well. The speed of the enlarger seems to be one of the problems with the process.

One subscriber wrote to me asking about my reasons for my enlarger preferences. I have always felt that the old Omega D2 was a work of art. The frame was solid, and the condenser light source was even, and if a # 213 bulb (250 watt) was used, it would make the printing of the slow Ilford Ciba materials a bit faster. Unfortunately, cut filters had to be used instead of a convenient colorhead, but I also recommended that a faster light source be used. I once owned a Xenomega light source. It was 650 watts of pure pulsed xenon power. Used with the condensers, it provided a very fast light source and made for very short exposures. Unfortunately, Omega does not make this light source any longer. You may be able to find one in magazines such as "Shutterbug." One of the drawbacks to

using any kind of condenser system is the fact that the condenser captures everything, including dust specks and defects on the surface of the film. Consider this.

When the method demands that the use of a contrast mask be added to the transparency in the carrier, it adds even more headaches to the dust and scratch problem. This made it necessary to use some sort of immersion oil in order to hide these defects. This added step in the process made some people quit using the condenser system and they returned to the diffusion system.

My reader wanted to know if he could use one of the newer enlargers, and I said yes, of course. But he wanted to use the slow diffused color head light source that usually accompanies the newer enlargers. I told him of the difficulty he would encounter in using slow light sources, as it caused problems with reciprocity, which in turn caused color changes in the print that were almost impossible to predict. What to do? Well, a new company has come to the rescue. I have written about this new light source before.

Let me repeat it again. The company is **ZBE Inc. of Santa Barbara CA. Tel. 805-5664-7891.** The system contains 1080 watts of light, which is great news for the Cibachrome process. It is not only a fast light source, but it is a well designed color head. It is a diffusion system. This means that the light source is capable of suppressing most dust and scratches in the films emulsion. The result is it takes less time to produce a print and with cleaner results. However, I am an "old stick in the mud" and like the fact that the condenser system gives one remarkable edge effects for a sharper appearance. The light source is so fast that a built in rotary shutter is included. They also made it possible to fit the following enlargers. The Omega family of D5's and D5500's, The Besseler 45MX, The Besseler 45V VL, The De Vere 504, The De Vere 507 and the Durst L1200.

Incidentally, the **Fujichrome paper**, the equivalent of the Kodak Type R material, has a longer life expectancy than Cibachrome paper, according to Henry Wil-

helm. It also is much faster than the Ciba product and does not require any additional light source speed. For those of you who have slow enlargers and are not willing to spend any more of your hard earned loot, try the Fujichrome paper.

The colors are close to the Ciba material, but the separation of tone in the Ciba product is still better. I know this because I have made prints from the same slide on both materials and compared them. However, if you only saw the Fuji print, you would be satisfied.

Processing either the Ciba print material or the Fuji Color material can be accomplished by the use of a simple manual Jobo CPP2. Or if you wish, for the Ciba print, use Ilford's ICP-42 or the Fujimoto processor.

The later allows one to add a replenishment system to it's capability. This is quite important. With the Ilford processor, you cannot replenish anything. As a result, the prints lose a little bit of color and contrast as the chemistry is depleted. Suddenly, as you near the end of the chemistry's life a sudden loss of color occurs.

With the Jobo processor, it is a one shot system which is fool proof.

The Fujimoto processor with the replenishment system can turn a small lab into a production company. It's size limits are 20 inches wide and the results are repeatable if the replenishment devices are used.

It is hard to describe the exhilaration derived from being able to "make" a print. This is your personal effort and your skill that has produced this image. The Cibachrome or the Fuji process are a few of the only "hand's on" systems left, except for the Dye Transfer process. Being able to control not only the density of the print and it's color balance, but the contrast and the highlight structure of the image. This is color print creation at it's highest.

The advantages of having a darkroom with all of the aroma's and mysteries of the unknown is still my favorite way of producing an image. I have been in the color print "game" for over 50 years and find it hard to change. But, I must admit that the new fangled digitized systems are exciting to see in action.

There are so many different systems available today that you need an alphabetical list to keep track of the different companies that are now in the fray.

More important than the different companies that manufacture the machinery are the different imaging companies that have been spawned doing what used to be done by commercial photo labs. Most commercial labs are joining the digitized revolution. They must join, or they will soon be out of business. Whether we like it or not, the digitized revolution is here to stay.

I have long been a supporter of the "hands on" approach to making fine images, but the fact is that most of the commercial labs are going digital. How can we take advantage of this new way to produce images?

Simply purchase a relatively high end computer and make sure that you have a good monitor and a "color card" that makes it possible to work with all 16 million colors. You will also need a high degree of RAM and a large capacity hard disc.

Since the new Power PC systems have been intro-

duced, the former "expensive" systems have come down in price. What used to cost about \$13,000 a year ago can now be purchased for about \$6,000.

In fact, if you want to make color prints without the need for a darkroom, there are so many color printing devices on the market that you will have a problem picking one out. There are color printers that range in price from under \$1000 to over \$80,000.

The high end systems such as the Iris printers are mainly used for making proof prints for the lithographic field. However, EverColor has seen fit to making these prints before committing themselves to producing a full color pigment print. They also sell them as another print service.

One of the latest color print systems is the "LaserMaster" ink jet printer. It is capable of producing a print 30 inches wide by as long as you want and it only costs \$19,995. It works directly from your computer and can produce very fine photographic and photo comp images. If you are a commercial lab, this is one

machine you should investigate.

Call 1-800-699-8342 and ask them to send you a video tape that explains and displays it's potential. Another large system is produced by Zerox. It is essentially a copier system. It works directly from your computer and can produce a large (40x60) image from whatever you can concoct in your imaginative brain and computer. This is a great system for making large "point of purchase" prints used in stores or hotels, and in the case of Las Vegas, in the casinos.

The biggest problem used to be one of resolution. The high degree of resolution afforded by the photographic materials was once the criteria that we used to compare images made by different means. Digitized resolution is now so great that it isn't a problem any longer. The high end scanners that cost very close to \$100,000. are being challenged by simple flat bed scanners that cost only a few thousand dollars. You would find it difficult to determine which scanner was used to produce an image.

Even small scanners used

to scan 35mm transparencies can make amazingly accurate scan and produce fine prints.

Kodak, and their CD system is an example of how far this method has progressed in a little over two years.

The printers are even more of a maze.

I have already mentioned the LaserMaster. There are others.

Some printers cost as little as \$900. They can't begin to compete with the high end systems, but do make it possible to make color prints without a darkroom and without going broke. The Iris printer has been used to produce color proofs for the Lithographic field, but it is a great method for producing quality images. In fact, EverColor uses the system to make proofs of their work before committing themselves to producing the more costly color pigment print.

The Textronic printers come in different systems. The Dye Subliminal images look great, as do their ink jet systems. The Kodak color printers come in two variations. The more expensive printer takes only a few minutes to produce a sharp and very clean

image and costs about \$25,000. A lesser machine is also quite remarkable and costs about \$7,000.

Graham Nash, of the musical group, Crosby Stills and Nash, has entered the field of color printing using large flat bed scanners and Iris printers capable of producing large color prints with great detail.

Remember, all of the digitized images can be manipulated before being printed. Correction is a simple effort now. Dirt is gone forever, and even a damaged or torn original can be restored to its original condition.

There are also color printing machines that cost under \$1000 that claim to compete with the better systems but I would suggest that you take a good long look at any thing so promising.

Last year I investigated the possibility of purchasing a "system." It included a Mac Quadra 800, and an upgraded Ram and Hard Drive plus a quality color monitor and the necessary "color card" required to make everything work, an 8 1/2 by 11 flat bed scanner with a transparency option, plus

a removable SyQuest disc that could be sent to a service company, such as EverColor.

The cost estimate for all of the devices that I thought I would require was around \$13,000. Since the introduction of the new power PC's the price for the same system has plummeted to \$6,000.

The advantage of having complete control of an image without the financial loss usually incurred by the equipment becoming obsolete the day after you purchase it can be offset by upgrading your system rather than discarding it or trading it up. The magazine "Mac User" contains many advertisements that feature the upgrading of your computer. Some can be upgraded so that they will be able to compete with the most expensive systems you can buy.

If you do decide to get into the digitized market place, but want to limit your costs to just the computer as a work station, the major problem with this thought has been the ability to control your final output.

For instance. In the past, you could have your original scanned, then brought

up on your own work station. So far, so good. After spending some time getting your image to look exactly as you want it to look, you save it on a removable disc and send it out to a service company to have either separation negatives, or a pigment print produced.

However, lo and behold, the print looks nothing like what you saw on your screen. What has happened? Nothing that isn't explainable. Your computer isn't set up exactly as the service company's system. It would be a strange coincidence if all of the worlds computers were set up with the same color balance, contrast, and density requirements. This solution to this problem is called "**color management.**"

Different companies, including Kodak, have recognized this problem and some, such as DiComed have somewhat solved the problem, but at a high cost.

Remember, when you look at a transparency (or a work station screen) and try to match it to a reflective print, there are some limitations. It is impossible to make a complete and perfect match.

It is possible to compare a

print to a print and expect to see a match. But from a transparency to a print? Forget it.

However, within the confines of such difference, it is possible to make a print that does look like the original, in contrast color balance and density.

In producing a Dye Transfer print the problem was just as difficult. Many so called experts tried to match the contrast levels by reading the densities of the original transparency and tried to produce the same readings in the print. It won't work.

Dye Transfer printers had to realize the differences between the transmitted image and the reflective image and we were forced to use our eyes to tell us when the contrast, color balance and densities were correct.

The same situation will exist when working with computers.

**EverColor Corp.** the company that produces fine art pigment prints, has devised a solution that won't break the bank and works just great. The color matching system was devised by EverColor for any one that wants to be involved with

making Pigment prints and using their own computer as a work station. In essence, it works this way.

A computer program is used in conjunction with the program called "Photo Shop."

The first thing you must have is a good print. EverColor will provide a print with their system.

It must be placed in a good lighting environment, preferably 5000° K.

Using the uncomplicated procedure listed in the computer program, you continually adjust the image on the computer screen until all of the basic elements are completed, and the image on the screen looks right to your eyes and "matches" the print.

The detailed correction information is then saved in your computer and from here on out, whenever your image on the screen look correct and a print is desired from your service company, such as EverColor, you can be assured that the print will be satisfactory.

You must be aware that it is still impossible to *perfectly* match any color. The printing inks and the actual dyes used in the production of a transpar-

ency are miles apart. It is amazing that we can get so close a resemblance to the original.

Even with the Dye Transfer process, the dyes used in the production of the transparencies were formed by a chemical reaction and differ greatly from the dyes used in the print.

Even with the much heralded Carbro process, the problem with color matching did not exist. We didn't make our prints from transparencies, but rather from black and white separation negatives shot with a "one shot" cameras, or individual negatives made one at a time through imperfect color filters. We couldn't remember the original colors, much less try to match them.

Even the pigments were different.

One company, McGraw Colorgraphic, a subsidiary of Carnation Milk Co. in Los Angeles, produced pigments that produced a good black and good greys when the same percentages of tone were assembled, but the colors were "dirty" and the resultant prints always had a grey pallor about them. On the other hand, "Tri-Chrome Color," based in

England, made superb color pigments, but they were out of balance and it was almost impossible to get a good gray or black in the print. The colors were much cleaner, but that was little comfort to those of us that had to make prints that would be accepted by our clients, the advertising agencies. So, in a sense, color management has been going on for quite some time. The advent of the computer made things a bit more difficult until some "brains" figured out what the problem was and how to fix it.

EverColor's Color management. It took a little time to come up with a system like this. It was worth the wait.

I have finally found a magazine (Photo District News) that is willing to publish my article on the restoration of an old and faded 8x10 transparency of a nude Marilyn Monroe shot by the legendary Tom Kelley when the young star was known as Norma Jean.

Most publications frowned on the fact that it was a nude image. This transparency was given to me

by Tom a few years before he passed away. He wondered if I could do something about restoring it.

I decided to use my knowledge of the Dye Transfer process to make the necessary corrections and to then make a dupe transparency so that the difference could be easily seen.

The original transparency was faded very badly. The yellow was almost all gone, and the image contrast was flat. It had a pink appearance.

I decided to make a set of separation negatives and from these to make a set of matrices for each color. I did this, and then bleached out the silver and dyed the image with the appropriate dyes, dried them and placed them over the original using a light box as the light source.

I was able to add density and contrast to the image by using more than one matrix of each color. In fact, I used 2 cyan's one magenta and 4 yellow's. I did this slowly and examined each effect as I added the dyed matrix to the stack.

The final effect was almost as if I had a new transparency, except that

it looked rather dark. I simply added more exposure to the dupe material and a new transparency was born.

The magazine feels that with today's new digitizing systems the same correction could be done with less effort and produce a superior image.

I have my doubts about this claim. I submitted this image to a number of companies and asked if they could improve on my final image, and they all said that they couldn't come close to it.

When the magazine comes out, I will notify you by my newsletter. It should be an interesting comparison.

Remember, I removed any silver from the dyed images. There was no density added except for the dyes.

The current imaging systems may soon be replaced by the CD. Video tape, as we now know it could soon go the way of the dinosaur. The CD disc has so much room that it can handle a complete encyclopedia and have room left over for much more.

Even simple phone recorded messages can be placed on a small chip.

In fact, I own a Roland keyboard and I am able to record three musical numbers that could last 3 or 4 minutes each on a small chip. In other words, anything electronic can be, and is now capable of, being recorded on a chip, or a CD. What next?

Many motion pictures have been using the latest technology for a number of years. The amazing effect used in the film "RoboCop" where a man's head is split in two and is then reformed right before your eyes is now available as a computer program and costs less than \$200.

This also makes it possible to produce amazing effects in print, using a similar program. Some of the effects that I have used in the Dye Transfer print making efforts included a partial see-through effect on an image.

I thought I was almost a genius when I made the prints for Olympia Beer in which special effects were devised by masking and special full size highlight masks were made to increase the effect of a see-through. Little did I know.

**I have finally found a genius in the field of photographic and electronic imaging.**

**His name is Lee Varis.**

The studio is called Varis PhotoMedia, in Los Angeles.

In my view, he has the imagination similar to the late Reid Miles. His ability to work as an illustrator is uncanny. The latest issue of "Electronic Imaging" magazine (Vol. 37 No. 5) details his accomplishments and his great imagination.

His equipment includes a Quadra 950 with 256 RAM and 5 GB on the hard disc. He works with Crosfield drum scanners and Photo CD's and the new Kodak DCS digital camera.

His main piece of equipment is his imagination. This is a pre-requisite for any illustrator.

He considers himself to be a photo illustrator and uses electronic media to extend his capabilities.

His potential is great. I wish him luck.

Thanks for your support.

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