

Color Proofing

Change & the Digital Revolution

by Richard Black
Director, Product Development
Fuji Photo Film U.S.A.

The old adage “change is good” truly applies to color proofing because it is changing right before our eyes, and on a daily basis. And it is doing exactly what everyone anticipated, it’s moving very quickly from analog to digital. We all thought the transition was going to happen a couple years ago, but surprisingly analog proofing was still growing. But now the transition is happening in a logarithmic way rather than a subtle one—and I don’t expect that to change. Digital proofing has finally happened and people now understand how to use it, where to use it, and how it benefits them.

Is Analog a System of the Past?

The only analog proofing that I see continuing is for film that is actually being transported from one area to another and the user will want a proof of that film. But as standardization continues with file formats, that will soon change too. Right now film is a great way to transport data because it’s locked in and the data is difficult to change.

Previously, when transferring files there were a lot of issues such as fonts, trapping and the version of the software that was being used. Now with industry-accepted file formats such as TIFF/IT P1 and 1 bit

TIFF, the user can lock-in a great majority of those issues. This is another reason why analog proofing is taking some other big hits. People understand that they can transport files digitally and expect the same stability, prediction and confidence that the end product will be reproduced the same way as when it left.

The Digital Trend

Digital proofing happened fast because people have been able to adopt, trust and understand it. But it has taken a while to get to that point. It’s one of those things where the more people use digital proofing, the more comfortable they feel with it, and the more they understand how to deal with any problems that may occur.

On the other hand, analog proofing has been around about 22 years and users already have a tremendous comfort level. Because of this, virtually anybody in the printing industry can get an analog proof and basically tell you what kind it is and the specifications around it (i.e., how it can print, if it was made for SWOP [Specifications for Web Offset Publications] or commercial, or what type of dot gain).

So after years of working with the very familiar analog proof, the dig-

ital proof hits the scene. Now all of a sudden proofs look and feel different, they come in all kinds of formats (with or without dots), and there are also different technologies (ink jet, dye sublimation and thermal development and transfer). This transition required a long learning curve for everybody to understand that here is a contone proof without dots and this is how it reacts vs. a proof with dots and this is how it reacts.

Eventually people began to understand that with this level of quality they could use a contone proof because they now realized there were options to consider such as turnaround time of the printed job, the quality level of the final printed piece, and subject matter of the job (moiré).

Change isn’t easily accepted by some people because we are simply more comfortable with the familiar. So to help ease the mind of those who were reluctant to go to digital proofing Fuji responded to the market by producing two systems: PictroProof, a dye-based, two-page contone proofer that targets internal proofing and some levels of contract proofing that don’t require halftone dots; and FinalProof, a four-page contract quality proofer

What's needed now is for more people to take that leap of faith and try it because all the tools are there. Companies can go completely filmless now.

that is virtually an exact duplicate of Fuji's analog proof, ColorArt, with halftone dots and pigments, and with the same screening laminated to the actual stock.

What's Still Needed for an All Digital Workflow?

All the pieces of the puzzle are in place. What's needed now is for more people to take that leap of faith and try it because all the tools are there. Companies can go completely filmless now. You can go from digital information to a digital proof, make changes and corrections, do another digital proof, go to the CTP device or directly to press, and then print to replicate exactly what you could with analog.

For a long time there was a difference between somebody trying to do a pure digital workflow and an analog workflow. There were areas where you could get into trouble and there were still caveats where you didn't know what was happening, but those days are gone now. There has been enough work with file formats, industry standards, and quality improvement of both CTP and digital proofing so that people can employ a complete digital workflow at every level.

A lot of people have been using a complete digital workflow at the higher levels where there were big, multi-location printers who could afford to go through the learning curve—it was almost like R&D dollars. The company could try it and if it didn't work they could always fall back and do an analog.

Conversely, the small and mid-size shops couldn't afford to take that

time and learning curve. That's why they felt safe doing film-based proofs.

Now that learning curve is very short because the products are better. I think the big guys have blazed the trail and now it's clean enough for some of the other people to come through. That's the reason digital proofing is happening at such an unbelievable changeover.

Today, analog proofing is still the largest market, but it is definitely changing every day. And it won't be long before digital proofing is equal to or greater than analog.

Early on, people didn't know digital proofing's repercussions, what the problems were, or how to fix them. But I think those days are completely gone.

Needless to say, there have been a lot of bumps along the road. Big companies and manufacturers have learned a lot and they now understand the differences and similarities between analog and digital. But it's just like anything else, when the technology is new there's a select few who will go out and try it, hoping to be the first one on the block to capitalize on the technology that will give them a competitive edge. These companies experience some of the problems, but they are also the first ones to experience the benefits of the new technology.

Then there's a second wave once the technology is satisfied—when other companies can adopt it because it's been proven. These companies don't

capitalize on being the first to have the technology, but they capitalize on all the advantages of the digital workflow. And now since the big companies have already spent the money to test the new technology and everyone has learned about it, the process becomes relatively easier.

Digital Has Taken Off

People now understand the technology is ready and that they can now go digital. People have talked with their peers and have heard that it is not a big deal to make the switch, and they have learned from conferences that the problems with digital have been ironed out. There

have been a lot of people waiting to make the transition, and what we thought would happen gradually (switching from analog to digital) is now happening very fast. The changeover is being compressed into such a short time frame that we're just trying to catch up. It seems as though the gates have just opened and analog proofing is now plummeting, and we can't keep digital in stock. At this point, it's hard to get a grip on the supply and demand.

Today, analog proofing is still the largest market, but it is definitely changing every day. And it won't be long before digital proofing is equal to or greater than analog.

I doubt that analog will become nonexistent, but it will be interesting to see where the cross in the road comes between analog and digital. Right now on the sheer mass analog is bigger, but it won't be long before digital catches it (possibly less than five years).

Any Significant Changes In Proofing This Year?

Within the last couple of years the industry has seen various companies introduce many different halftone digital proofing devices into the market including, Creo-Scitex (Trendsetter/Spectrum and Spectrum), Polaroid (Pola-Proof), Imation (with the material for Creo), and Fuji (introduced FinalProof). We now have some major players committing that halftone digital proofing is here to stay.

There's always a demand to supply the market with new products. And it's remarkable how time is usually a key factor when it comes to technology. Just two or three years ago at Graph Expo there were only two digital proofing devices. This year, however, Creo had two options, Polaroid had an option, Imation makes material for Creo, DuPont and KPG introduced material for Creo, and Fuji introduced their digital proofer.

SWOP and the Proof

It's evident that change has affected the printing industry in many ways. So it was not unusual when SWOP had to go through a couple of transitions. Originally SWOP did not recognize off-press analog proofs, they only recognized press proofs. Then SWOP began to recognize analog proofs if they had an application data sheet (ADS), but the requirements were to get a visual match with a SWOP certified press sheet, which can be purchased in a kit. But the problem was that there was still a lot of variability because a visual match literally means what you think matches versus what I think matches. Obviously, every manufacturer made a proof and said, "ours matches according to us." This process wasn't very effective.

In another transition SWOP printed the SWOP press sheet and read data

SWOP-Certified Proofing Systems

Following is a list of SWOP-certified proofing systems. These manufacturers submitted to the SWOP office Application Data Sheets, which verify that their systems are capable of matching the appearance of SWOP press proofs.

Agfa Pressmatch Aqueous Negative

Agfa Pressmatch Dry Negative

DuPont Waterproof

DuPont Digital Waterproof AX4 Negative

Fuji Color-Art System CR-T4 SWOP

Fuji Luxel FINALPROOF 5600

Imation SWOP Matchprint Negative

Imation SWOP Matchprint Positive

Imation Rainbow 4700

Imation LaserProof

Iris Pro SWOP

Kodak Approval Digital Color Proofing

Polaroid PolaProof Digital Halftone Proofing

from it on a target, which has become known as TR001, that lists hard factual data of SWOP criteria. In 1999 SWOP undertook a new certification process for off-press proofs, whether analog or digital. This means that when a proof is created it must visually and technically match TR001 and it must be certified by SWOP for both visual appearance and technical data confirmed with the manufacturer's ADS. This has made everyone come into a much finer match because the proof must be correct, technically and visually. It is a difficult certification process, but it's effective. Additionally, each product has to be re-certified on an annual basis,

which forces companies to make sure their systems remain stable with no change.

What's Going to Happen Next?

It is already happening. In analog proofing we all had systems to address spot or non-process colors (colors other than CMYK). In the digital arena, now that people are adopting it and deciding to make the switch, the number one thing they are finding is the system is still not as complete as it was in analog. So now all of us are trying to quickly figure out how to create non-process colors to compete, which will continue to be the single and biggest objective for the next few years. **IPA**