

# PROOFING FOR

That time-honored tool remains essential whether the workflow is analog or digital, but its form has certainly changed.

Since the moment desktop publishing hit the graphic arts industry, color proofing has remained a moving target. Even today, proofing is often the single most elusive component in the production process, no matter if the digital workflow is applied to computer-to-plate (CTP) imaging, PDF images, or the Internet.

But despite the volatility within the graphic arts industry—or perhaps because of it—the ideal of a contract color proof that accurately predicts what will eventually come off the press remains a steadfast goal. “After all these years, the color proof is the one consistent dynamic that can follow a given file, show all the elements, and ensure a smoother transition from stop to stop,” notes John Wadie, director of sales and marketing for Imation.

The industry has come a long way, so while color proofing is no longer the obstacle to a successful all-digital workflow, it has also not reached the simple plug-and-play level. Currently, the biggest challenge for print service providers may be choosing from among the daunting range of technologies available.

## MOVING IN DIFFERENT DIRECTIONS

Color proofing is moving in two different directions, reports Mark Vanover, who serves as the marketing director of digital proofing

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First of all, he says, there's a continuing need to proof content early on, which means involving the creative personnel early in the production process. This need is driving new price/performance levels in desktop color proofers; Epson's new Stylus Pro 7000 series, for example, has a base price of \$3,995.

The other trend is the use of a digital halftone proof by which printers can predict color and image integrity when working in a CTP environment.

Still, for shops not yet opting for an all-digital workflow, analog proofing remains quite viable, particularly in the publication market where many ads exist in standing film, and as a result of vendors' undiminished development of imagesetting.

For example, in the past year Fuji's eight page Sumo imagesetter has experienced record sales, reports Don Schroeder, senior product development manager of color proofing for Fuji Photo Film U.S.A., Inc. “The Sumo can produce 58 eight page flats per hour. film that still needs to be proofed. Many people still recognize film as the cheapest and easiest way to store information. And analog proofing continues to provide a simple way of creating the fifth and sixth colors to show multiple color builds.”

Another example of the strength of analog systems is the WaterProof product from DuPont Color Proofing, now installed in

more than 1,500 sites in North America. In fact, says Ken Lowden, marketing and industry relations manager for DuPont Color Proofing, the company's WaterProof Color Versatility offering with custom color ability has led to a record number of analog proofing sales in the past year.

## ENTER THE NEXT BIG THING

But analog processes might finally be loosening their hold: one industry report states that digital proofing is gaining a market share of 18% per year. And even as digital proofing continues to increase, another method is beginning to unfold: Internet-based proofing.

Within the last year, there's been an increase in the number of application service providers (ASPs), such as Digital Art Exchange and Wam!Net, that offer customers remote, soft proofing via the Internet, thus shortening cycle times and saving costs.

One such provider is RealTimeImage, the developer of RenderProof. RealTimeImage's new remote proofing product suite, RealTimeProof, includes three solutions: RealTimeProof Classic (which replaces RenderProof), RealTimeProof.com, and RealTimeProof Express. To date, RealTimeProof Classic accounts for 70 installations and more than 500 users worldwide.

Pixels-On-Demand, RealTime's core streaming technology, enables the downloading of high-

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resolution images over standard Internet connections, letting viewers annotate, mark up, zoom in, pan, or scroll images, in real time.

"We are streaming only the part of the file that the customer is interested in viewing," explains Yehuda Messinger, marketing director of the graphic arts division for RealTimeImage. "There's no dependency on bandwidth; clients and end-users can view their high-resolution files on line using only a minimal Internet connection."

## ADDING INTERNET PROOFING

Digital Workflow Solutions, a trade shop based in Gaithersburg, Md. serving publishers and small and mid-size commercial printers, recently added Internet-based color proofing to its capabilities.

A Scitex shop with both PDF and Brisque workflows, the shop's range of proofing methods includes the DocuColor 30/Spontane, Improof, and Iris proofers, plus Canon Fiery, Fuji FirstProof, and more recently, Polaroid PolaProof. Digital Workflow Solutions also produces film-based proofing, using Imation's Matchprint system.

Three months ago, the company signed up with Vio Worldwide, an application service provider, because of its RenderProof option. (RenderProof, as mentioned earlier, is RealTimeImage's proofing option, a part of the RenderView technology.)

RenderProof lets the firm place its Scitex-RIPPed jobs or a PDF on the Vio central server; all of the people involved in the proofing decision can go on line within seconds and make annotations and mark up the copy on screen to

their heart's content, in real time. The proof can also be output on any printing device.

## SAVING THE BIG DOLLAR

"The big benefits for our publisher clients are in FedEx savings," says David Sacks, president of Digital Workflow Solutions. "Before, we had to fax a proof to the client to show general content, then send an actual Iris print. To send a color laser print, FedEx was the big dollar. Now we don't have to worry about making that seven o'clock FedEx pick-up each evening, which used to mean losing a whole day if we were a few minutes late."

While Digital Workflow's sales of Iris proofs have dropped dramatically since implementing the Vio service, the firm is charging customers the same amount for on-line proofing.

Another big benefit is the shortened proofing cycle, which allows publishers to upgrade ads from one- or two-color to four-color, or to change a half-page ad to a full-page ad just days before press time.

"My publisher customers are very happy with our new technology," reports Sacks. "The perceived value is great; they feel like they are getting something more."

## SHOWCASING NEW TECHNOLOGIES

At the Drupa 2000 show in Germany in May and at last month's Graph Expo and Converting Expo show, color proofing vendors showcased new technologies. What follows are some of the offerings.

"When we introduce new proofing technologies, our main

concerns are how they compress the workflow and how accurately they reflect the designer's vision," says Rich Stoebe, manager of integrated marketing for Imation. "We strive to shorten the time to get a job approved and on press. We are much more keenly aware of reducing cycle time than ever before."

Adds Wadie of Imation, "The ultimate goal is that our clients' clients need to get to market faster and to do it with marketing materials that consistently represent their visual presence."

As do many of its competitors, Imation looks to participate in the entire workflow with its proofing devices, from client to final output. It assumes that its primary customers—the print providers—will have on hand multiple devices, based on what their customers want as proofing output.

Thus, Imation has enhanced its media offerings and built software capabilities to drive a variety of engines.

Its offerings include second-generation Matchprint Digital Halftone proofing media for the CreoScitex Trendsetter Spectrum and Presstek PearlHdp systems; Matchprint ink-jet color RIP software and media system for the Hewlett-Packard (HP) DesignJet ColorPro GA printer, the Canon BJC-8500, and the large-format HP DesignJet 5000 CP; and the Matchprint Color Laser System, which drives the Minolta CF910 and CF911 copier/color laser network printers.

At Graph Expo, Imation showed the Matchprint Digital Halftone direct-to-paper proofing system and Matchprint Digital Halftone custom color software.

## EXPLORING NEW MARKETS

"We are also extending the intellectual property we have in color science into new markets," says Stoebe. At Drupa 2000, Imation announced its first product

offering from its alliance with Xerox Corporation: a digital front end (DFE) that provides networked connectivity to the Xerox DocuColor 12 printer/copier.

The product, named the Imation Matchprint Professional Server, provides comps, proofs, and prints that simulate Matchprint color proofing systems. Co-branded media, created specifically for use with the Imation/Xerox Matchprint Professional Server and DocuColor 12 proofing solution, is also being developed.

Imation has also jumped into the Web market, with its Verifi accurate Web color product, which addresses the needs of Web site owners and on-line shoppers for color accuracy on the Internet. Based on Imation's color management technology, it is currently in field testing.

### MARKET RESPONSE

With graphic communicators taking a more proactive role in the choice and direction of color, DuPont is responding with tools like the DuPont Cromalin Color Station, launched this year, and DuPont proofing media, to more accurately set expectations earlier in the print production process, reports Ken Lowden.

The Cromalin Color Station utilizes DuPont color science for accurate color management, DuPont proofing media, and the Epson Stylus Pro 5000, 7000, 7500, and 9000 printers. All come with a full day of training, and WaterProof as well as custom color profiles. Prices range from \$7,000 to \$15,000, depending on format size.

Specifically designed with the CTP workflow in mind, the fully automated, dual-sided Dylux DI-1050 imposition proofer incorporates two HP 1050 high-speed ink jets to produce complete, front-and-back eight-up forms in fewer

than nine minutes at 600 dpi. It lists for \$35,000, complete with installation.

A new generation of Digital WaterProof continuous-flow ink-jet proofers from DuPont features a new design and high-speed printing mode, as well as a resolution mode of 600 dpi or 1,200 dpi.

### I GENERATION SERIES

"The new i generation series has gamut-enhanced [GE] inks that allow users to proof so many nonprocess colors that we've brought back the Cromalin name," says Lowden. "The DuPont Cromalin i generation units come equipped with the CromalNet Proof Server and color management technology, and can accept most CTP and desktop file formats."

He says two sizes are available. The iG4 has a 22x28.3" four-page format, and the iG2, with a size of 15.75x22", can produce a two-page proof in under 10 minutes, Lowden says.

DuPont's new Digital Halftone Proofing System, being jointly developed with CreoScitex and currently in field tests, is designed to run on CreoScitex thermal imaging equipment for eight-page thermal proofing of process and specialty colors.

Finally, in the analog arena, DuPont launched its WaterProof Color Formulator at Graph Expo last month. This computerized color mixing system enhances the ability of the DuPont WaterProof Color Versatility system, which lets the user proof virtually any color on both sides of the actual printing stock.

### PROVIDING ADDITIONAL SUPPORT

To provide added support to its computer-to-plate customers and prospects, Screen (USA) is offering its LabProof system, which can be bundled with the optional

LabFit color management system. LabProof is a DDCP (direct digital color proof) software application that allows users to output RIPped one-bit TIFF and CYMK TIFF data color proofs using an Epson Stylus Pro 7000 or 9000, or an HP 1050C ink-jet printer.

LabProof consists of a print driver, and the Editor component from LabFit. Both products tie in to Screen's new color management workflow, PQ2M.

"LabProof software can import one-bit TIFF files, de-screen them using our proprietary technology, add ICC profiles, then output the data to a proofing device from Epson or Hewlett-Packard," explains Shigenori Masumura, system integration manager for Screen (USA). "Since it automatically prints TIFF files received directly from external RIPs and does not require a RIP of its own, errors related to RIP differences cannot occur."

Currently available, LabProof lists for \$6,000; LabFit, \$2,500.

The newest introduction by Kodak Polychrome Graphics to its Approval system is Recipe Color Technology, which allows the creation of millions of spot colors on the Approval XP/XP4 without dedicated donors. This is accomplished by using the transparent nature of the donors as well as the adjustable densities of the donors, says Ken Theocus, marketing manager for color proofing systems.

### USES SAME PROCESS DONORS

"To create spot colors on other proofing systems requires separate donor material," says Theocus, "which is very inefficient, expensive, and limiting. We use the same process donors; spot colors can be created instantly."

Using Recipe Color Technology (which recently won an InterTech Technology Award

from the Graphic Arts Technical Foundation), the RIP creates one or more spot color plates as if they were being sent to a filmsetter or platesetter.

New Dot Gain Manager software allows the control of dot gain on the special color plates in addition to the process color plates. These spot color plates are used to generate the Recipe Colors on the proof.

Kodak Polychrome Graphics recently announced Pantone-calibrated status for the Recipe Color system. New orange and green donor materials, together with Recipe, allow the Approval system to expand the color gamut for six-color proofing for Hexachrome print jobs.

#### TO DOT OR NOT TO DOT

"Direct digital color proofing continues to be the ever-evolving trend in the marketplace, and Fujifilm covers it from two points," says Don Schroeder. "The proofing market is divided into separate 'must have a dot in the proof' and the 'no need for a dot' camps. Although both have found a position in the market, no clear cut winner has emerged."

Fujifilm offers users a choice: the no-dot PictroProof digital proofer and FinalProof, its newest high-end digital halftone dot proofer. Also available from Fujifilm are its PreProofer 2000, for large-format digital imposition proofs, and its analog Color Art FujiProof system.

FinalProof, a pigment-based halftone dot contract-quality color proof made from roll media, allows for automatic imaging. "FinalProof's color space is the same as Fujifilm's analog Color Art system, which is long established in the printing industry, thus allowing for a proofing legacy across two technological platforms," says Schroeder. "Pigment-

based FinalProof has achieved SWOP approval and is targeted at the high quality sector of the market."

FinalProof is so automatic it doesn't require any operator intervention, except during lamination. It's offered in two sizes: four page 21.5x25.5" or 21.5x32.25", which allows for 29" presses. FinalProof is available in 2,400-, 2,438-, and 2,540-dpi resolutions.

#### A DIFFERENT APPROACH

Polaroid Graphics Imaging LLC takes a different approach from many of its competitors. "We try to bring the customer closer to matching the press," explains Richard Deroo, director of strategic partners for Polaroid. "We feel our competitors are developing legacy proofing materials to keep their analog systems alive. This restricts and limits their digital offerings to match the legacy of their analog offerings."

Continues Deroo, "Our approach is to develop ink sets that match press ink set standards. We think we can advance our customers to a better position, to a proof that will more closely match the press, instead of an analog proofing standard that takes a customer further from the press."

According to research presented by Polaroid, running a CTP-generated plate on press will result in a total dot gain of 15%, while the digital proof, simulating the analog proof, yields a total dot gain of 25%. "Our laser ablation technology [LAT], combined with our finishing technology, inherently has low dot gain built in," says Deroo. "It has a wider dynamic range, with the ability to reproduce a full range from 1% to 99%. In our view, our product can reproduce the inherent low dot gains in a CTP workflow, as well match press ink standards."

#### NO WET PROCESSING

The PolaProof systems use pigmented inks and require no intermediate transfer steps or wet chemical processing. Each color is imaged directly onto the actual printing stock.

The two-up Prediction 2000, the newest member of the LAT-enabled PolaProof family, is fully automated, featuring the ability to run completely unattended for up to 12 A4 pages. PolaProof 2230 is a four-up manual device; PolaProof 1420, a two-up manual device. All systems can run Pantone's Hexachrome six-color set as standard ink sets.

#### A COMPLETE LINE

"CreoScitex has the most complete line of digital proofing solutions in the industry," contends Mark Vanover. "We offer a range of professional desktop, continuous-tone, and halftone contract proofs, and imposition proofing innovations."

New developments include an addition to the large-format digital halftone proofing product line. "The Trendsetter Spectrum is our current product that offers proofing and plating using the same machine," says Vanover. "That ability is being extended to the Lotem platemaking line. It will be in field testing by the end of the year."

The dual-purpose proofing and plating systems use the same input, resolution, screen parameters, and spot function to image both plates and proofs. They interchangeably image four- and eight-page proofs on the same device for large digital halftone proofing.

For users requiring a dedicated proofing machine, CreoScitex offers the Proofsetter Spectrum.

#### BIGGER, BUT SMALLER

"As the market gets bigger for CTP, the shop size using CTP

gets smaller," says Vanover. "Smaller shops using the equipment only three hours a day to make plates can now use the other 21 hours to make proofs. Also, to overcome a common objection, there's no better way to ensure imaging integrity than by making proofs and plates using the same engine."

Adds Vanover, "We are also media-vendor neutral, which provides our customer with additional flexibility." Media partners include DuPont, Fuji, Imation, and Kodak Polychrome Graphics.

Also new from CreoScitex is an advanced system configuration for the iProof, which includes calibration with support for the X-Rite DTP-41 spectrophotometer and Profile Wizard Suite. Two new proofing stocks, commercial and publication, better simulate the IrisPro Media line used with the IrisPrint series of digital contract proofers.

### INVESTING IN INK JET

"Agfa is committed to providing our customers with open, cost-effective proofing solutions," reports Deborah Hutcheson, Agfa's senior product marketing manager for proofing systems. "We will continue to develop and maintain our analog products as long as our customers need them.

"Regarding digital proofing, we continue to invest in the development of ink-jet hardware, software, color management, and media to develop this area to its fullest potential. We are committed to developing ink-jet proofing systems that meet customer requirements for a high-quality contract proof."

Hutcheson notes that Agfa's recent developments are in the area of multi-density, high-resolution ink-jet proofing systems. "And 'systems' is the key word here," she says. "We think we provide a

completely integrated proofing solution, right through from engine to RIP to color management to automated calibration to media and ink—everything a customer needs to produce high-quality contract contone proofs."

She continues, "A customer can purchase a complete AgfaJet Sherpa system for under \$20,000, a price point that's significant for the contract proofing market. And the cost is under \$10 for an eight-up proof, which can be produced in under 18 minutes."

Featuring multi-density ink color capability and advanced color management, they offer error-diffused screening at two high resolutions (1,440×720 dpi and 720×720 dpi) and one fast-output resolution (360×360 dpi).

### SETTING APART

"In our view, three factors differentiate Epson Stylus Pro printers from the competition," says Mark Radogna, senior product manager of professional graphics for Epson. "First, Epson is considered to be one of the top brands. Second, the image quality often rivals what appears on press. Third, we offer great value; our printers are priced so that they are an easy investment that allows high-quality proofing equipment to be used in daily work."

Epson offers the four-up, 24"-wide Stylus Pro 7000 and 7500 printers, as well as the eight-up 44" Stylus Pro 9500. The units feature 1,440×720-dpi resolution and photographic-quality output at speeds up to 72 sq ft per hour. Micro-piezo DX3 print head technology enables the printers to place precise microscopic drops of ink on a wide array of media.

### INKS FOR 200 YEARS

Epson's Archival Ink features a breakthrough in chemical engineering by which prints can last

more than 200 years. Available on the Stylus 7500 and 9500 printers, this pigment-based ink system delivers a color gamut that reportedly rivals dye inks.

An optional Epson RS-5100 Fiery X2 RIP from Electronics For Imaging (EFI) is also available for all Stylus Pro 7000 and 9000 series printers. The RIP is designed to help maximize several of the printers' advanced features, while adding advanced throughput options, job control, and workflow flexibility.

The Stylus Pro 7000 basic printing system is available for \$3,995; the 7500 and 9500 units are priced at \$4,995 and \$10,995, respectively. Optional RS-5100 Fiery X2 RIPs are available for each printer for approximately \$5,000.

Says Radogna, "Today, most proofing is so expensive that it is reserved for the most sophisticated users. We want to see those in the design studios and ad agencies with even minimal knowledge of color produce extremely high-quality contract proofs. The Stylus Pro 5000 was the first step toward that goal; the 7000 and 9000 series extend it further." ■