

A Magazines Canada White Paper

SOFT PROOFING:

A Guide to Benefits & Best Practices

September 2008



INTRODUCTION

Change is constant in the magazine publishing and printing industries as technology continues its march forward. New software and hardware enables exciting, more efficient digital solutions for virtually every step in the production workflow. PDF/X files, Internet delivery and increasingly sophisticated press technologies like computer-to-plate have changed how we do business.

The next big step is upon us. Soft proofing—also known as monitor, virtual or remote proofing—is a workflow solution using a calibrated LCD monitor as the output device. It has enabled a radical shift to a fully digital workflow, which means savings in valuable resources. Soft proofing, as you will discover in this paper, outperforms hard proofing in:

- Efficiency
- Predictability
- Consistency
- Accountability
- Responsibility
- Economy
- Distribution
- Speed

The result is that hard proofs are increasingly becoming a vestige of the past film-based workflow. We expect that soft proofing systems will support more stable and replicable output across multiple devices and print locations as the technology evolves. Specifications for Web Offset Proofing (SWOP), supported by Magazines Canada's dMAC Specifications, has endorsed a variety of soft proofing systems, each offering competitive choice and colour reproduction that rivals, and even exceeds, the best hard proofs.

Soft proofing is currently an emerging technology and might not be the right choice for everyone. Despite its touted advantages, soft proofing carries with it the same workflow challenges and technological developments of any innovation. The shift to soft proofing is a business—rather than a creative—decision, and clearly requires the training and support necessary to make the transition. Choosing soft proofing may cost more at the outset, but will deliver increases in efficiency, predictability and cost savings over the longer term.

Soft proofing offers many advantages and may—as many in the industry predict—become the proofing solution of choice within a few short years. This shift is expected to dramatically change business practices. Before it does, we encourage all publishers, printers, production experts and their colleagues to learn more about soft proofing.

Magazines Canada has created this report to provide an overview of soft proofing. We will discuss the benefits and challenges presented by soft proofing, and we will help your organization understand the current industry shift towards soft proofing.

After all, the more you know, the better prepared you will be for the future.

2

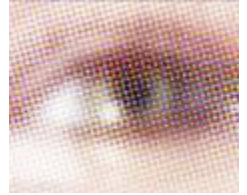
SOFT
PROOFING

BACKGROUND

WHAT ARE HARD PROOFS?

Hard proofs are hard copy prints that provide a good indication of layout, positioning and colour transfer of the planned press run. The proofer technology and the proofer media are usually chosen to ensure that it is capable of reproducing all colours in the planned press output.

Today, proofing is done primarily with inkjet-based proofing devices; however there are customers who still demand a “traditional” proof such as that produced on a Kodak Approval or Fuji FinalProof. Hard proofs have been essential to editorial and creative staff, and print technology operators to check for errors in the printing of type and colour. Also, hard proofs have served in the past as publishers’ and advertisers’ final sign-off to printers—effectively letting the printer know that the proof meets client expectations.



Hard proofs have never represented an exact replica of the final product, merely the best reproduction possible on the stock and equipment available.

EARLY PROCESS CONTROL



Process control is a recent concept. In the past, industry specifications were rudimentary, with densitometers used inconsistently (if at all) and spectrophotometers too expensive to consider. Hard proofs often contained colours that could not be matched on press. Often the proof was made without reference to the printing press (and its colour gamut), thus a contract proof was often approved with final sign off, but the press operator found it difficult to match the colours on press. Hard proofs were best used as a “colour target.” It wasn’t until consistent colorants entered the market and “dot gain” was built in to traditional colour proofs that hard proofs gained in exactitude and offered a close approximation to the product of repeated printing.

Proofing has advanced in the past 30 years. The first Specifications for Web Offset Proofing (SWOP) booklet was released in 1976. SWOP helped to raise the quality of publication printing via specifications and tolerances for everyone involved in the graphic arts workflow, including all forms of magazine advertising and editorial input. Better measurement and research resulted in detailed profiles of how ink and paper interact. A method for converting RGB colour into CMYK separations was introduced and the International Color Consortium (ICC) was created in 1993. The ICC (see page 10) paved the way for many of the recent advances in colour measurement, management and reproduction.

Magazines Canada developed Digital Magazine Advertising Canadian Specifications (dMACS) designed to assist publishers, printers and advertisers improve process and production quality for the benefit of all.

Despite many developments that have improved the quality of the printing process, progress in proofing appears to have been driven more by cost reduction than the ability to match the press sheet.

SHORTCOMINGS OF HARD PROOFING

The hard proofing process has many shortcomings, including:

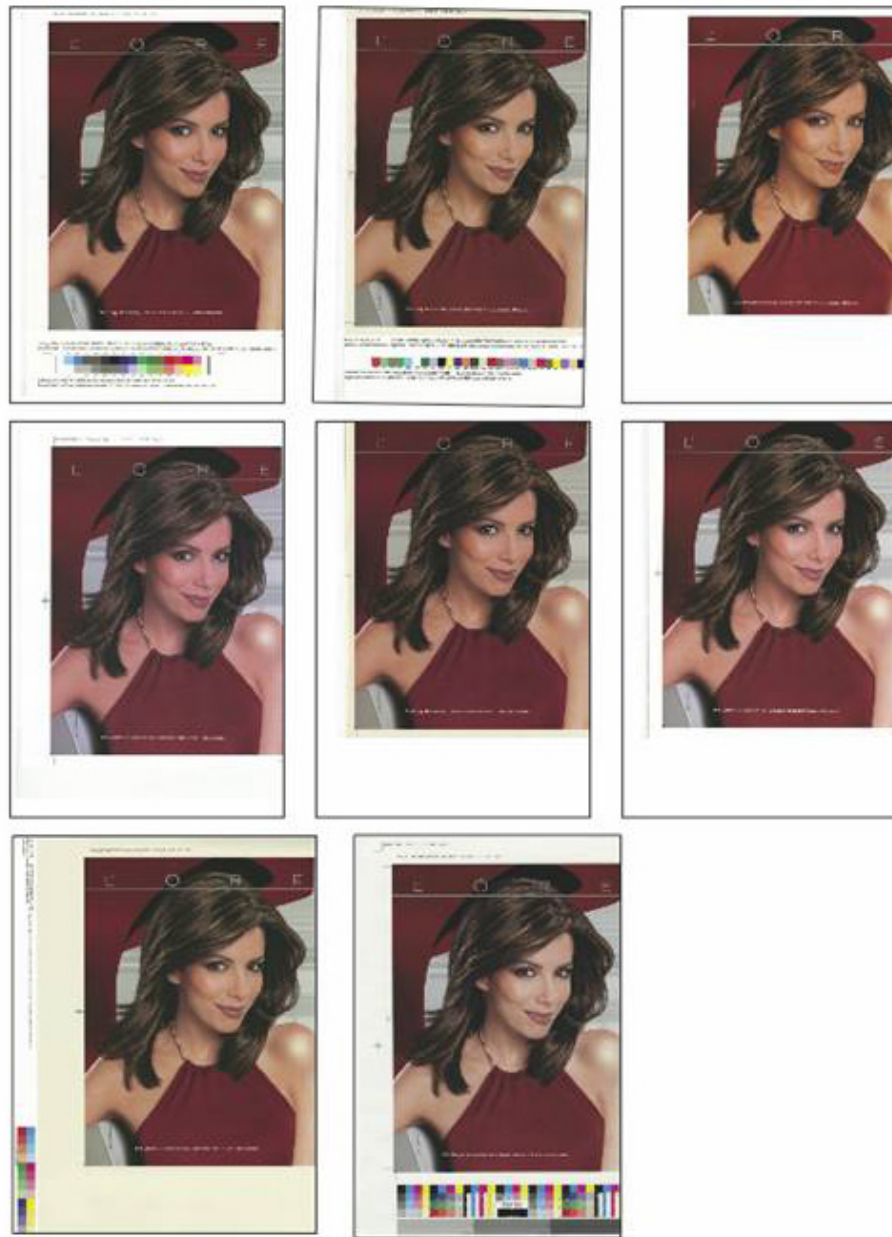
1. The process used to produce hard proofs may not deliver consistency from one proof to another (see illustration on page 4).
2. The calibration of proofing equipment is difficult to verify; it is not known if somebody printing a proof at a remote site is using a system that is within calibration.
3. Hard proofs do not display information about the type of equipment used to produce them.
4. Hard proofs often do not contain a colour bar to allow accurate measurement.
5. Hard proofs do not have an automated way of tracking revisions and noting who has looked at the proofs and when.

These shortcomings reduce the value of the proof as an accurate representation of the final product. Industry groups devoted to improving the proofing process have conducted studies that validate the unreliability of hard proofs.

In 2007 an informal comparison of 14 Canadian-produced “contract” hard proofs showed dramatic differences from proof to proof. Each proof in the study purported to be SWOP Certified, and samples were collected from a variety of agencies, trade shops and publishers, produced from the same PDF/X file.

This study found that half of the proofs examined did not meet SWOP specifications; proofs were either missing colour control bars or did not indicate the proofing system used, or both. Therefore, it was impossible to verify if the proofs were within SWOP tolerances. For those that did have control bars, when measured, the majority of the proofs failed when checked against specification tolerances (Application Data Sheets are available at www.swop.org). Variance in colour was easily visually noticeable in the uncorrected scanned samples of several proofs, which are shown below.

unretouched scans of supplied 'dMACS' proofs



4

SOFT
PROOFING

These results were echoed by a more comprehensive review of hard copy proofs performed at the 2007 IPA Proofing RoundUP in Chicago. It was found that 44% of proofs supplied by trade shops did not meet the specification.

Both tests demonstrate that, while proofing systems may be SWOP Certified, individual proofs are only as good as the care taken in generating the output. In other words, when you buy a SWOP Certified system this only means that the system is capable of achieving standardized results; you will only get SWOP results if you follow the correct procedures. As the above example shows, if SWOP Certified systems are not used correctly, they can give non-SWOP results. It must be said, however, that properly generated hard proofs can and do produce useful results to verify a replicable colour target. The annual IPA Proofing RoundUP is a testament to this fact.

Not to be outdone, the 2007 IPA Proofing RoundUP has also verified that soft proofing systems are producing comparable results at least as good as hard proofs stating, "A visual assessment of the major systems showed that soft proofing is a very acceptable option getting high marks from many of the 35 judges who evaluated the systems."

And further, "Six sets of remote hardcopy proofs were submitted [to the IPA Proofing RoundUP], each set consisted of two, three or four proofs from locations from across a city to across the globe. Each company used the same model of proofing device and media for each location to maximize the effectiveness of their color management. The systems that were used have some control mechanism to standardize their output. The RoundUP test compared the first proof with all subsequent proofs in that set and found an unbelievable average Delta E of 0.81. This shows that with quality controls in place, proofs can be made anywhere and look the same."

Results from the IPA Proofing RoundUP may be found at www.ipa.org.

5

SOFT PROOFING

HOW SOFT PROOFING WORKS

This section details what you need to set in place before adopting soft proofing, from workflow systems to industry specifications to hardware and software. Next, we will explain how everyone in your organization or supply chain can benefit from soft proofing.

WHAT IS SOFT PROOFING?

Soft proofing consists of:

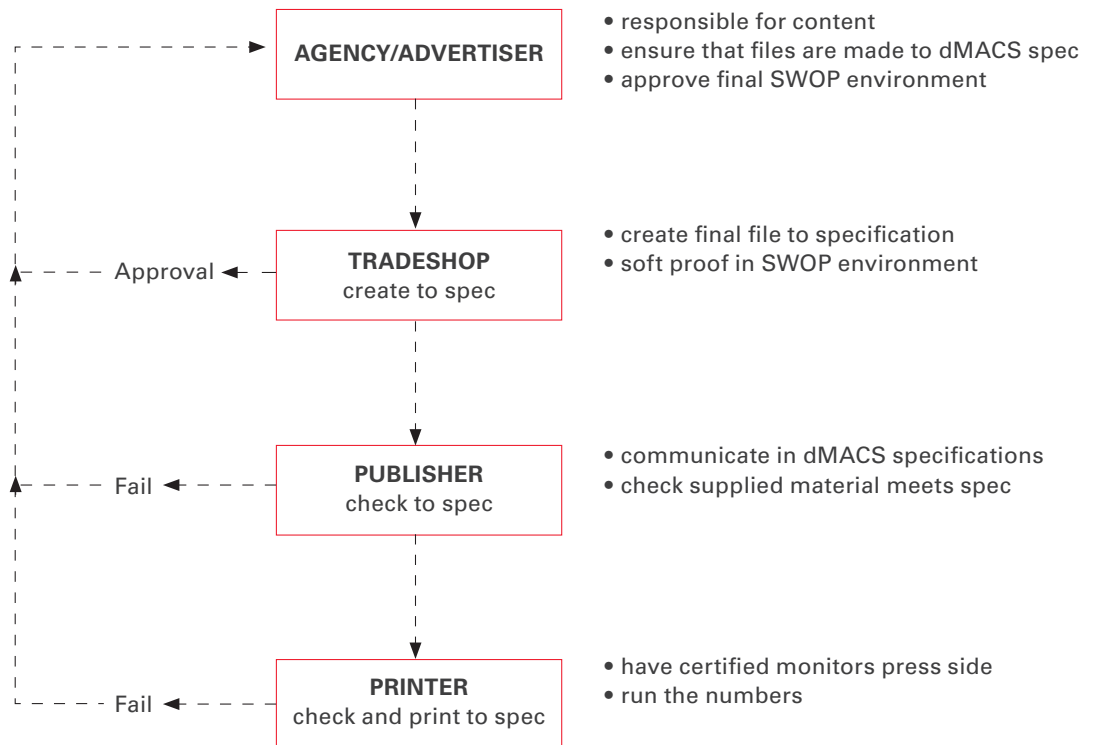
- A good quality monitor
- A measuring instrument such as the i1Pro spectrophotometer or i1Display colorimeter
- Purpose built commercial communication and collaboration software
- ICC profiles or colour information for the monitor and the press
- A light booth in instances where a hard copy is needed

WORKFLOW

The exchange of digital files between agencies, prepress, publishers and printers demands a common workflow if files are to open and print consistently with predictable results. Industry specifications such as SWOP, GRACoL and dMACS are important and can ensure satisfaction throughout the proofing process.

Soft proofing workflow demands that each partner handling a file or files accepts responsibility for delivering on expectations as defined by industry specifications. The illustration below demonstrates the responsibilities inherent in soft proofing workflow.

Responsibilities in the Magazine Advertising Soft Proof Workflow



Of course, every workflow requires different levels of proofing throughout the process, depending on the need at the time. Proofs may be generated simply for position or content only, or proofs are generated to view and make colour decisions, dot-based or otherwise.



Because soft proofing facilitates the digital exchange of files, a system is required to communicate information about how files have been used throughout the soft proofing workflow. Some publishers require that supplied files include a “virtual proofing slug” (see left) that indicates the proofing system and profile used. Some advertising portal service providers are partnering with soft proof service providers to provide an online proofing solution that includes an audit trail. Vendors are also working on a solution based on the Job Definition File format (JDF) that records metadata about the environment in which files have been proofed and approved.

Regardless, at a minimum, any party involved with the creation or approval of contract colour soft proofs should keep a detailed log of their systems calibrations. This way, if a problem arises it can be verified that the system was operating within tolerances during the time the file in question was processed. In addition, each party in the supply chain should understand the importance of using the industry standard ICC (International Color Consortium) profiles. In all instances the soft proof is accurate if the colours in the image are adjusted to simulate the press output. The correct use of ICC profiles ensures that the colours on the screen are an accurate representation of the how the job will be printed. This is done by using a press or printing condition output profile, such as the freely available SWOP and GRACoL ICC profiles.

Software now allows separate prepress and press-side proofing operations to be seamlessly integrated. That means pressroom operators are able to view the same colour-accurate proofs as those viewed and approved by the agency and client. This reduces need for reconciliation of conflicting proofs at press-side, reducing the need for multiple rounds of proofing, facilitating faster colour achievement on press.

SPECIFICATIONS

Consistency and accountability are essential in soft proofing workflow. The rigorous application of industry standards to your soft proofing workflow will ensure success. Organizations such as SWOP, GRACoL and dMACS have done much to ensure that colour and design print as originally intended by the file creator, by working with the creative, publishing, prepress and printing industries.

The increasing affordability of desktop publishing tools has resulted in the de-centralization of pre-press services. This change means that there are greater variations in the quality and characteristics of colour files submitted for print production. Files typically begin with creative professionals before heading to advertising agencies and other imaging professionals en route to the actual publisher or printer. In preparation for final print production, technical adjustments must usually be made to files to guarantee proper reproduction.

Advertising and editorial files may now be refined to predictable and quantified measurements. Today’s best practices use spectrophotometry and other key measures to provide numeric specifications and standards. These standards enable printers to quickly and accurately replicate appearance visually, from proof to press, on most any proofing system or press. This means you can print on virtually any type of press and on any substrate while maintaining the right visual appearance, and a common appearance between files printed differently.

Every colour-managed workflow relies on colour accuracy and consistency across the numerous input and output devices involved in magazine production in order to obtain the same results regardless of device, media or location. This reality demands agreed-upon specifications and tolerances. This is called running colour “to-the-numbers.” Without question, “run-to-the-numbers” printing is more predictable and consistent, as it limits human intervention and subjective judgment while a job is on press. It also increases accountability.

For more information on industry specifications, see the Resources section at the end of this report.

MONITORS

Soft proofing requires the proper monitor, which includes:

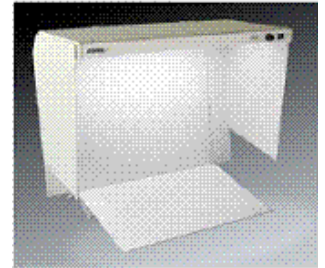
- A colorimeter that measures your screen's appearance in CIE Lab (or at least the support for this technology).
- Adjustable RGB gain or white balance controls.
- Adjustable white point with three RGB controllers—pre-set colour temperatures won't suffice.

In addition to this, soft proofing requires that work areas be illuminated with standard D50 lighting and equipped with the means to reduce the intensity of that lighting to the brightness of the monitor screen.



ADJACENT LIGHTING

Soft proofing requires lighting that illuminates the monitor at the same brightness level as the original and/or proof. A 5000 K (Kelvin) light source is used as the industry standard and reference point within the graphic arts industry, as it is comparable to midday sunlight. Where possible, 5000 K lamps should be used over each work station and/or a light booth should be available with 5000 K lighting.



GTT's PCV-3D (with optional sidewalls)

Existing soft proofing systems have found a variable-intensity viewing booth placed alongside the monitor helpful. A reduction in ambient room light will typically be required so that both the booth and external lighting match the brightness of a white screen image (i.e., a blank Photoshop image filled with 255, 255, 255 RGB). Some light booths are equipped with a USB interface for online communication with the monitor calibration software. Once the system is calibrated, the system continuously monitors and readjusts the light booth's luminance level to maintain proper settings.

If you don't have a variable viewing booth, replace your overhead bulbs with D50 tubes and partially hide them with a non-flammable opaque material until a piece of neutral white proofing stock held next to the monitor is the same brightness as the white screen. At the same time, make a black cardboard hood to keep light off the monitor's surface.

CALIBRATION

Calibration is highly important to the soft proofing process. If every LCD monitor in the soft proofing workflow is properly calibrated, all images viewed will have a similar appearance to all users—agency and creative professionals, publishers and printers. This means that adjustments can be made based on visuals, without the need to generate a hard proof.

The calibration of monitor displays and all colour devices tends to drift. This is particularly true of CRT displays; LCDs are less prone to drift. The purpose of calibration is to compensate for drift and to bring the device back to a previously specified state. Displays that drift significantly in a few days should not be considered appropriate for soft proofing.

Every proofing system has its own calibration procedure; these will be defined in the Application Data Sheet. Currently, creatives look at proofs using a profile that may or may not be indicative of the paper on press. Designers can make choices for CMYK profiles in desktop applications, but they generally use the default ICC profile (SWOP V.2), even if they are not doing work for web offset.

Calibration must be performed on a regular basis if monitor integrity is to be achieved. Bear in mind that it takes 1 hour for colour to stabilize after a system start.

BRIGHTNESS

Brightness is key in matching whites. Once the brightness of the ambient lighting is adjusted, a monitor's "white point" needs to be set to match the viewing booth. Setting monitors to a D50 colour temperature will not suffice.

Not all fluorescent bulbs meet soft proofing tolerances; it is also a challenge to measure the illusion of white. Fortunately, there is a simple solution to both of these problems.

To ensure that a white monitor screen matches the white of the adjacent illuminant, adjust a monitor's white point until the two match visually. This should be done only after optimizing brightness and contrast.

To further improve the quality of your monitor profile, adjust your grey balance. Fill the top half of your white screen with a neutral grey scale and evaluate greys while setting your white balance. Greys should be completely neutral. Some monitors allow you to adjust black balance with RGB controls, as well as white balance. Adjust bias and gain separately, if possible. This will help extend the life of your monitor.

Commercially available soft proof systems can calibrate and adjust the brightness of monitors with very little operator effort.

COMMUNICATION

Most commercial soft proofing systems have communication protocols built into the product enabling live communication between reviewers. For instance, the client may circle or draw an arrow around a part of the image that needs correcting. In the same way that MS Word has "track changes," reviewers of a proof can trace the history of edits. Most systems also interrogate the remote viewer and confirm whether the remote party has recently calibrated their monitor. Thus the system can show via a "traffic lights" icon if the collaborator is within calibration and therefore confirm that they are seeing the colour correctly. Systems can be set up to define the approvers for each job, ensuring that the proof is not finally approved until all relevant parties have signed off. These sorts of communication features add to the attractiveness of soft proofing.

SOFT PROOFING SYSTEMS

ON THE MARKET TODAY

There are a few soft proofing systems available and in use today. Users may purchase soft proofing technology outright, or subscribe to a service on a pay-per-proof or per-click basis. These technologies provide a low cost of entry and the ability to increase usage of virtual proofs as the technology becomes more accepted. The best-known systems are ICS Remote Director, Kodak Matchprint Virtual, Adobe Photoshop 6.0 (& upwards) Soft Proof Setup. Here is what each company has to say about its product:

ICS REMOTE DIRECTOR



Remote Director, a SWOP® Certified monitor-based contract proofing system, applies advanced colour management to verify the accuracy of every monitor and every proof. Its software runs on commercially available hardware (Macintosh and Windows) to allow multiple reviewers in dispersed locations to view, collaborate and comment on colour as well as content and build a digital record of the proofing process from start to finish, including legal sign-off.

For additional information, visit icscolor.com/index.php?/products/remote_director/.

KODAK MATCHPRINT VIRTUAL



From concept to print, SWOP® Certified Kodak monitor proofing solutions extend colour process control throughout the workflow—upstream to content creation and production approvals and downstream to press side proofing. Using qualified LCD monitors and Kodak colour calibration technology, users can view contract quality proofs online at their convenience. Kodak Matchprint Virtual provides consistent colour management across multi-monitor system configurations for effective real-time collaboration, speed and communication.

For additional information, visit graphics.kodak.com/US/HomePage/default.htm.

ADOBE PHOTOSHOP 6.0 (& upwards) DIY SOFT PROOF SETUP



Though not SWOP approved at time of writing, Photoshop has long provided the ability to display a soft proof of what an image will look like when separated to CMYK. However, this feature had not been available for RGB output devices such as inkjets and LightJets, until Photoshop 6.0. With RGB soft proofing and an accurate output profile, users can reduce the trial and error that often results when trying to get an image looking just right on paper. Using the Proof Setup dialog in Photoshop, you can select the options for how the proof should be simulated: i.e., the profile for the paper you'll be using from the Profile drop-down box; and the rendering intent you will use when you print your image.

For additional information, visit adobe.com/products/photoshop/family/.

ADOBE AROBAT PRO DIY SOFT PROOF SETUP



All soft proofing options are available using Adobe Acrobat Pro, suitable for high-end commercial printing. It allows you to select from a list of ICC profiles plus a number of preset profiles are available from which to choose. You can even simulate paper white, by choosing a particular shade of gray that imitates the paper colour that fits your profile, as well as ink black. Plus Adobe Reader allows you to view a soft proof file.

For additional information, visit adobe.com/print/

DALiM DIALOGUE



DALiM Dialogue utilizes unique data-streaming technology to standard Web browsers, allowing users to view high-resolution files accurately, in real time and without the need for client software or browser plug-ins. Printers, publishers, ad agencies and designers can offer their customers the ability to view, zoom in/out, navigate, place annotations, draw to highlight areas, take densitometer readings, check production parameters, and even 'chat' in real time.

For additional information, visit dalim.com/en/products/dialogue/toolset.php.

CGS ORIS SOFTPROOF



As print production becomes more distributed globally, and as deadline pressures continue to tighten, print designers and producers need a practical, integrated approach to color collaboration and approval. Hard copy proofing, the most reliable means of assuring contract quality color, must be combined with the speed and convenience of display-based approval systems.

For additional information, visit cgs.de/products/software/ColorTuner/softproof/.

AGFA:DELANO



Agfa:Delano is a project management solution for graphic enterprises. Through web access, authorized users can manage centralized information for publishing and printing projects. The :Delano StreamProof option leverages the standard built-in soft proof functionality to a higher level by providing fast access to high resolution proofs over internet professional markup tools.

For additional information visit agfa.com/en/gs/products_services/all_products/delano.jsp

ICC PROFILING

Many manufacturers provide profiles for their products, and there are several products that allow end users to generate their own colour profile, typically through the use of a colorimeter. Profiles define the most saturated colours available in a colour space: i.e., the bluest blue or deepest black your printer can produce. Profiles provide a choice between closest possible colour matching by remapping the entire colour range to allow for different colour gamuts or ranges of colours. In magazine printing, profiles are commonly used when converting from an RGB colour space to a CMYK colour space.

ICC (International Color Consortium) profiles provide colour management systems with the information necessary to convert colour data between input devices, display devices and output devices. Every device that captures or displays colour will have its own profile, including cameras, printers and monitors.

Accurate profiles are the key to a well-managed workflow. With accurate monitor and printer profiles, your output will closely match what you see on your monitor. Without profiles, you are working on the basis of trial and error, and guesswork.

COSTS

Virtual proofing systems carry no ongoing costs for materials, transportation or distribution, but there are initial set-up costs and there can be software maintenance/licensing costs. These set-up costs may include:

1. Monitors and calibration hardware and software.
2. Viewing equipment such as 5000k lighting and monitor hoods.

The cost of this equipment can range from hundreds of dollars for one workstation, to over \$50,000 for printers to install a full monitoring system alongside a press. The life expectancy for this equipment is between 24 and 36 months.

SWOP Certified systems are available from vendors in a variety of configurations: proofs can be available on a per-click charge of a few dollars or through a discounted monthly subscription based on a sliding scale according to volume.

On an enterprise level, the one-time purchase and ongoing support of a total system could cost upwards of \$50,000.

WHY SOFT PROOF?

EVERYONE BENEFITS FROM SOFT PROOFING

Soft proofing can improve efficiency in your workflow and drive down cost of consumables. But the benefits don't stop there. Whether you're an art director, a creative or advertising professional, an editor, publisher, prepress or printer, soft proofing can offer benefits. This section details the specific ways in which you can take advantage of soft proofing to enhance your productivity.

FOR ART DIRECTORS

- Avoid multiple rounds of colour corrections
- Documentation features track revisions and approvals automatically
- Greater colour accuracy—jobs print as intended
- No guesswork or mental calculations—a what you see is what you get system

FOR CREATIVE AGENCIES

- Collaborate with partners all over the world
- Provide better, more accurate and rapid service

- Reduce hard costs of consumables
- Soft proofing can ensure more consistent results across all magazine titles in a media plan
- Printed products more closely match screen-based expectations

FOR EDITORS

- Simplified operations means more time to spend on editorial
- No guesswork—what you see on screen is what you get

FOR PUBLISHERS

- Reduces the worry caused by late advertisements, new feature stories and last-minute copy changes
- Cost savings (in consumables, couriers, labour, etc.)
- Soft proofing simplifies the workflow, taking the pressure off timetables
- Faster turnaround, more flexible system permits last-minute changes
- Closing dates may be extended to capture more ad bookings
- Predictability—soft proofing allows publishers to view a publication as it will print far earlier in the publishing process
- 100% accountability

PREPRESS

- Soft proofing combines colour accuracy, content review and collaboration in one central location
- Timelier job completion
- No handling, routing, trafficking or managing of hard copy proofs
- Higher degree of workflow automation, more billable studio time
- Cost savings in consumables (i.e., ink, paper, etc.)
- Ability to work globally, wherever the clients are

PRINTERS

- Eliminates the delays caused by the hard proofing process
- Automation allows for hands-off processing of press proofs from imposition to press-side workstations
- Reduce press downtime or holding for missing or bad hard copy proofs
- Reduce imposition and rip errors, in-line conflicts and more—problems can be seen before starting the press
- Improved client accountability

ENVIRONMENTAL CONSIDERATIONS

Soft proofing eliminates many of the consumables traditionally used in a hard proofing. This reduces costs, and is also good for the environment. Consider the environmental benefits of soft proofing:

- Proofing on screen eliminates the need for proofing papers. Therefore fewer trees need to be logged, which in turn contributes to forest conservation, and less pulp and paper processing
- Less ink—which may contain petroleum distillates—is consumed
- There are no transportation impacts (i.e., oil and gas) required to courier proofs
- Soft proofing using industry specifications should help printers verify colour more quickly, reducing paper, ink, natural gas and electricity usage

No workflow is free of ecological impact. Increased monitor usage will eventually result in these display units finding their way to landfill. It will be necessary to dispose of these devices responsibly to ensure minimal environmental impact.

Soft proofing helps to make your business more eco-friendly, creating a ripple effect throughout the industry as reductions in consumables translate into a smaller environmental footprint.

SOFT PROOFING CHALLENGES

The first and foremost challenge associated with soft proofing is developing an efficient workflow that links all users and external stakeholders in the soft proofing process. Agency creatives, magazine designers, editors, prepress and printers must all be on the same page throughout the process of transition into a digital workflow. This fundamental step will require modifications to existing workflow, training and process controls. If even one party involved in the supply chain does not make the necessary upgrades, there is a risk of derailing the vast potential of the technology. All parties must be willing to commit to soft proofing technology and to validate the products of soft proofing processes.

The shift to soft proofing requires trust. Convincing all stakeholders in the workflow to trust their monitors to represent final colour at press presents a sizeable challenge, as this thinking is opposite to analog workflow practices where paper proofs are the norm. Of course, a soft proofing system does allow for the creation of a hard copy from a soft proofing system with the press of a print key.

The key to a successful conversion is working with clients and agencies, and consistently submitting bulletproof PDF files that meet SWOP and/or dMAC Specifications. Magazines and industry bodies should consider publishing and promoting guidelines for proper advertising submissions.

BEST PRACTICES

1. SUCCESS REQUIRES 100% CONVERSION

As we have learned, workflow efficiency lies in one consistent workflow. The pragmatic solution is to establish in as short a time as possible a timeframe that facilitates an orderly conversion from hard proofing to soft proofing. (The timeline must be realistic and achievable). This will also reduce the cost of supporting two workflows.

2. INDUSTRY SPECIFICATIONS (SWOP, GRACoL AND dMACS) ARE OF UTMOST IMPORTANCE

IDEAlliance, the central force behind SWOP and GRACoL specifications, continually updates industry specifications to meet industry needs and to address hardware and software changes. SWOP and GRACoL specs, in concert with their Canadian counterpart, dMACS, are central to ensuring the entire industry works together with a common goal of achieving predictable file reproduction, regardless of file origin, wherever it will be published or printed. Adherence to industry-wide specifications is essential to ensuring that client expectations are met.

3. RUN-TO-THE-NUMBERS

Running print jobs “to-the-numbers” refers to using numerical specifications (ink densities and dot gains) instead of eyeballs to guarantee results. If colour management is to work in the pressroom, press operators must use the specifications of SWOP, GRACoL or dMACS, and “run to” these numbers. Common specifications ensure measurability and uniformity of grey balance and tone value. A properly created file will, when run to-the-numbers, generate output of a consistent and predictable quality. The ISO 12646 standard was developed to make recommendations on viewing conditions, enabling users to achieve a consistent and accurate match between soft proofs and hard copies. And the Ugra Display Analysis and Certification Tool (UDACT) offers a new digital control device for the analysis and certification of soft-proofing displays.

SUMMARY

TAKE A HARD LOOK AT SOFT PROOFING

Soft proofing is the last step towards an all-digital workflow. It saves time and money and generates proofs that are accurate, repeatable and supported by approved industry standards. Soft proofing is consistent, stable, measurable, efficient, fast, collaborative and exacting. Early adopters appreciate:

- Calibration, ensuring consistent colour appearance across all users
- The stability of LCD technology supporting soft proofing workflow
- Independent colour verification using commonly available spectrophotometers and software
- Reduced shipping, handling and storing requirements
- Accelerated approval processes
- Cost savings on courier services and consumables
- Reduced environmental waste
- Collaborative examination, discussion and annotation of soft proofs
- Built-in communication logs and version control
- No more accidental duplicate files
- Proofs that can only reproduce in-gamut values
- Standardized press reproduction
- Fewer geographic restrictions and expanded market potential
- Easy accessibility via the Internet
- Security passwords, certificates and encryption
- Files including metadata (i.e., author's name, modification dates)
- Automation systems based on Job Description Format (JDF) ticketing



CONCLUSION

Software and hardware advances make soft proofing a reality today. While challenges remain, designers, publishers, prepress and printers around the world are embracing soft proofing as they foresee its ultimate potential to take colour to the next level of efficiency, predictability, consistency, accountability, responsibility and affordability.

It is hard to predict when the conversion from hard to soft proofs will be complete, but large Canadian publishers and printers are already starting the transition. Some say that the conversion will have taken place by the end of this decade, motivated by the appeal of a fully digital workflow.

Soft proofing comes with significant changes to workflow which require careful testing within the specific requirements of each organization. It also requires all stakeholders in the workflow chain to work more closely together in understanding responsibilities and standardizing processes. Without closer cooperation, soft proofing benefits and efficiencies will be squandered. Lastly, there are costs attached to ensure quality monitors, a necessary ICC monitor profiling package, appropriate viewing conditions and supporting software.

The benefits are real. The shift will support more stable and replicable output across multiple devices and across multiple print locations in less time. These benefits strongly suggest that soft proofing is a business decision, not a creative decision. At the end of the day, it is about workflow efficiency, predictability and economics.

This paper recommends that all publishers and printers actively investigate if and how soft proofing is right for them. Take a system for a test run to better understand opportunities and challenges. History has shown that the biggest barrier to adoption is not having hands-on experience. Personal experience will help ensure that organizations are not left behind, given that many pundits suggest that soft proofing will be adopted quickly in Canada and globally. In other words, the more you know, the better prepared you will be for the future.

RESOURCES

- **SWOP (Specifications for Web Offset Publications)** – The mission of SWOP is to raise the quality of publication printing via specifications and tolerances for everyone involved in the graphic arts workflow, including all forms of magazine advertising and editorial input. Adherence to these specifications ensures that all input received by the printer can be reproduced as intended and desired by the advertiser/publisher with minimal difficulty. Quality that is measurable and verifiable at each step in the prepress-to-print workflow allows everyone in the image reproduction process to monitor and improve performance by statistical methods. Go to swop.org for more information.
- **GRACoL (General Requirements for Applications in Commercial Offset)** – GRACoL prescribes general guidelines and recommendations useful as a reference source for quality colour printing to help print buyers, designers and specifiers work more effectively with print suppliers. The document reflects the impact of new technologies in the workflow of commercial offset lithography. Go to gracol.org for more information.
- **dMACS (digital Magazine Advertising Canadian Specifications)** – dMACS leads publishers, printers and advertisers in the development of production standards designed to improve printing and production quality as well as eliminate costly errors. These specifications work to improve the consistency, quality and predictability of production materials for all industry stakeholders: advertisers, agencies, paper and ink suppliers, printers, publishers and ultimately the magazine reader. Go to magazinescanada.ca/dmacs.php?cat=dmacs for more information.
- **IPA (The Association of Graphic Arts Providers, formerly the International Prepress Association)** – IPA is the forum for graphic communications professionals who want to build business by strengthening and profiting from graphics workflow competencies. Go to ipa.org.
- **ICC (International Color Consortium)** – ICC promotes the use and adoption of open, vendor-neutral, cross-platform colour management systems. Its intent is to provide a cross-platform device profile format that may be used to translate colour data created on one device into another device's native colour space. The acceptance of this format by operating system vendors allows end users to transparently move profiles and images with embedded profiles between different operating systems. This permits tremendous flexibility to both users and vendors. Go to color.org.

CONTRIBUTORS

Magazines Canada Manufacturing and Technology Committee and industry experts:

Greg Antonacci, Family Communications
David Ballantyne, Quebecor World
Doug Bennet, *Masthead*
Bonnie Cook, House & Home Media
Mark Fritzler, Clarity
Michael Goughan, Clarity
Leah Hachey, Quebecor World
John Hall, Rogers Media
Kim Latreille, St. Joseph Media
Steve McClinton, Stora Enso
Maria Mendes, Transcontinental Media
Lynn O'Hearn, St. Joseph Print
Mark Patenaude, St. Joseph Print
Dr. Abhay Sharma, Ryerson University
Chris Smyth, Rogers Media
Tony Tino, McGill Productions
Rob Wilson, Transcontinental/RBW
Gary Garland, Magazines Canada
Claire Pfeiffer, Magazines Canada
Patricia Stamp, Magazines Canada
Barbara Zatyko, Magazines Canada
Jenn Lawrence, Jenn Lawrence Graphic Design

SOURCES

Andrew Rodney, The Digital Dog
Color Proofing Options: There's More Than One Way to "Color" a Cat, Dan Reid, March 2003, Digital Output
Color proofing: The proof is in the outputting, Dan Remaley, Graphic Arts Technical Foundation
Current Trends in Virtual Proofing, Graphic Communication Institute at CalPoly (GrCI)
ICS Remote Director Technical Specifications and System Requirements, www.icsclor.com
IDEAlliance Moves Proofing "to the numbers" into the Mainstream, News Release, January 19, 2007
Instant Proof, American Printer, October 2006
Introduction to Icc Profiles and Their Use, Dry Creek Photo
Kodak Matchprint Virtual Calibration Software, Release Notes Vers. 5.0
Out of Gamut: Soft Proofing in Photoshop 6.0, Bruce Fraser, 2000
Position Paper 2006-1 Revised, IDEAlliance, May 2006
Proofing RoundUP Results 2007, Test Results and Analysis, IPA Technical Conference, June 5-7, 2007
Soft Proofing: Everthing You Must Know, Joe Marin, Session #65, GraphExpo, September 2007
Soft Proofing: Not Ready for Primetime? Folio June 21, 2005
Successful Soft Proofing, Making your monitor really match the proof, HutchColor Color Management Solutions, Revised January 2007
The ABC's of Proofing: Understanding a Key Element of the Print Production Process, EFI, 2006
The Final 4: Keys to Successful Soft Proofing, Joseph Marin, PIA/GATF, April 2006
The Perfect Match the First Time: Proofing, Cheryl Dangel Cullen, Digital Publishing Solutions, July 2006
The Top Nine Things That Printers Regularly Screw Up When Implementing On-line (Soft) Proofing, Rod Brant, Lithocenter, November 2006
View to a Proof: New Breed of Virtual Proof Threatens Dominance of Inkjet, by Hal Hinderliter, Graphic Arts Monthly, November 2005

