

A SPECIAL SUPPLEMENT TO
GRAPHIC ARTS MONTHLY MAY 2007

GUIDELINES & SPECIFICATIONS



IDEA *Alliance*®
International Digital Enterprise Alliance

SWOP®

SWOP[®] SPECIFICATIONS 2007 (SWOP[®] 11th Edition)



Proofing technologies and industry practices have made significant advances over the past two years. During that time, the industry has been asking some hard questions. Our industry has changed since SWOP first developed its specifications, yet SWOP had changed very little. For example, by the end of 2005, the vast majority of agencies were producing proofs on non-SWOP paper stocks. They were also beginning to explore proofing "to the numbers," demand tighter tolerances and wanted greater assurance of a close visual match from a proof to printed publication.

With this publication of the eleventh edition of SWOP, I am happy to report that SWOP is meeting the challenge!

SWOP's merger with IDEAlliance in 2005 provided new resources to support SWOP's modernization. In February 2006, SWOP announced the adoption of a new #3 grade paper (such as Fortune Gloss) favored by many as their proofing stock of choice for monthly publications as an approved SWOP paper stock in addition to the traditional #5 grade groundwood stock.

At the same time, SWOP adopted the new IDEAlliance G7 calibration, printing and proofing process control methods. The G7 methodology defines gray balance as the primary method for color control as opposed to the previous SWOP methods that focused exclusively on solid ink densities and TVI / dot gain. Since G7 was specifically developed to produce a close visual match from proof to press, G7 has provided a new foundation upon which we could update the SWOP Specifications.

As part of the commitment to drive the ongoing improvement of proofing systems, the IDEAlliance Print Properties Working Group initiated a series of research press runs and development efforts to provide a scientific basis for modernizing its Proofing Systems Certification Program. By fall 2006, two new characterization data sets that take into account actual G7 printing conditions for web offset presses were finalized for SWOP.

SWOP is also addressing the challenge of proofing to the numbers and tightening tolerances for certified proofing systems. In the fall of 2006, a new proofing systems certification program was launched. Based on our research, we are, for the first time, able to numerically determine close visual appearance for proofing. The new certification program is being conducted at the Rochester Institute of Technology Printing Applications Laboratory. Certification under the new program indicates confirmation that a proofing system has the ability to match the SWOP characterization data sets within tight colorimetric tolerances and to represent a visual consistency unprecedented in the history of color proofing.

SWOP has made tremendous advances over the past two years. I am proud to invite you to explore this 11th Edition Specification and learn how SWOP is meeting the challenge.



Nubar Nakashian

Chairman

IDEAlliance SWOP Committee

SWOP® Specifications

These Specifications are for the preparation of input materials that will go to the publication printer. This includes digital files and proofs of all kinds.

Viewing Artwork and Proofs

Artwork, proofs and final printed product **MUST** be viewed and/or compared using 5000 Kelvin (D50) illumination complying with ISO 3664, "Viewing conditions for graphic technology and photography" with the ability to eliminate UV content.

According to ISO 3664, viewing and measurements will be taken against white backing as per CGATS.5-2004 with the following characteristics: (1) shall be known to be opaque, (2) diffuse-reflecting, (3) CIELAB L* greater than 92, (4) CIELAB C* less than or equal 3.0 and (5) non-fluorescing.

Digital Page Preparation

SWOP assumes that all pages are created by digital means and delivered in digital form.

A content proof made from the supplied digital files must be furnished by the Page creator to the Prepress Service Supplier with all supplied digital files. The proof should be identified as to its purpose, i.e. "content only," "color," etc. The printed results should meet the customer's expectations for quality reproduction.

Page Sizes

See individual publisher's mechanical specifications for ad size dimensions and standard (non-bleed) and bleed sizes.

All live matter of importance, including all type, must be a minimum of 3/8" inside the final trim in order to guarantee that no essential information is trimmed off.

Type Reproduction

Thin lines, fine serifs and light weight or very small type should be restricted to one color. Reproduce all colored type with a minimum of colors.

Reverse type and line art should not be less than .007" (1/2 point rule) at the thinnest part of a character or rule.

Reverse type should use dominant color (usually 70% or more) for the shape of letters. Where practical, and not detrimental to the appearance of the job, make the type in subordinate colors slightly larger to minimize register problems on the production press. Small type and fine serifs should not be used for reverse type. The surrounding tone must be dark enough to ensure legibility. See section below on "Image Trapping."

Overprinted (surprinted) type should not be less than .004" (1/3 point rule) at the thinnest part of a character or rule. When type is to be overprinted, the background should be no heavier than 30% in any one color and no more than 90% total in all four colors for legibility.

Image Trapping

All supplied materials sent to the publisher or printer must be properly trapped and, when possible, image trapping should be represented in the accompanying SWOP proofs.

By "Trapping" we mean that overlap of colors should be introduced when line work abuts line work, or abuts continuous tone images, with the dominant colors providing the image shape. Lighter colors should be spread into darker colors. This overlap should be sufficient to minimize register problems on production presses. Normally the overlap of colors will be in the area of .002" to .004". This will vary depending on the subject matter and the colors involved.

Since files must be trapped when exchanging PDF/X files, the trap flag must be set to "TRUE."

Vignette or Fadeaway Edges

Special care should be taken with fade-away edges where the fadeaway is made up of more than one color. In many cases, fadeaway shadows are best reproduced in black only.

With computer-to-plate technology it is possible to accurately produce a very low dot percent on plate. In preparing digital files this should be kept in mind. For critical work it is important to use a proofing system that reflects this minimum tone reproduction characteristic.

Although developments in digital plating and engraving technologies have improved tone reproduction control in the extreme highlights (less than a 5% dot), designers should still be cautious in placing critical image components in this tonal range. This is because all-digital production cannot always guarantee precise reproduction below a 5% dot, depending on the process involved.

Screen Rulings

Specifications for screen rulings apply when using conventional halftone screening or amplitude modulated (AM) screening. Amplitude means size; AM screening breaks up an image into dots of varying sizes to simulate the original image. In AM screening the size of the dot is varied to simulate different shades of color. In addition, in AM screening, the dots have a fixed spacing (screen ruling) and fixed angle.

When digital files are supplied by the prepress supplier, screen rulings are not an issue unless supplying press or off-press proofs made with a halftone dot pattern. Screen rulings and screen angles are now typically the responsibility of the printer when digital files are accepted as input. Screen rulings are specified in "Lines per inch" or lpi.

When digital halftone proofs are supplied by the prepress supplier, the following specifications apply:

SWOP #3 Sheet lpi	=	150
SWOP #5 Sheet lpi	=	133 – 150

For black-and-white reproduction check individual publisher for screen ruling requirements.

Screen Angles

Screen angles are also an important factor for halftone or AM screening.

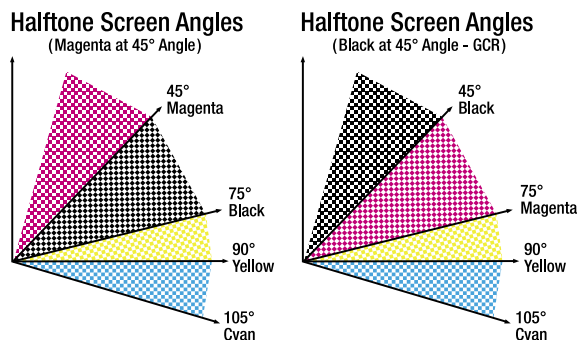
If digital files are sent to the publication printer they should not include screening parameters.

Whoever generates plates using halftone screening from digital files must follow the specification shown below.

The screen angles of the colors should be 30° apart, with the yellow placed 15° from the other colors and between the cyan and magenta or the cyan and black. It is permissible to place the yellow on the same angle and ruling as the cyan or, depending on the dominant colors in the picture, on the same angle and ruling as the magenta. This alignment has the advantage of spacing all the angles by 30° and eliminating the moiré that often occurs between yellow and the other colors.

It is desirable to have the dominant color (normally magenta) on the 45° angle. As the use of Gray Component Replacement (GCR) has steadily increased in recent years it has resulted in black often being the dominant color. When significant Gray Component Replacement (GCR) is used, and if black

becomes the dominant color, black should be printed at the 45° angle instead of magenta.



Screen angles for two-color printing should follow the same guidelines, with the black at 45°.

Screen angles and rulings should be such that no moiré pattern should appear in the film, proof or print.

If the advertiser / agency desires to specify screening requirements to the printer, it must be done with prior agreement of all parties involved. In computer-to-plate workflow the responsibility for meeting the customer's screening requirements lies with the plate-maker / printer. The printer is responsible for reporting moiré to the publisher or advertiser/agency and to help resolve the problem.

Stochastic Screening

Stochastic screening, often called FM (Frequency Modulated) screening, lets you output high-quality color images at lower resolutions by using a different approach to screening technology. Unlike AM screening, FM screening keeps the dot size the same and varies the number of dots used.

In FM screening, the concepts of screen angle and frequency no longer apply. Because the dots are randomly placed, there is no direction (the screen angle used in AM screening) to the dots. The variable spacing of the dots means there is no fixed spacing, and therefore there is no screen frequency.

Final Material

Files representing print-ready material should be exchanged only as CMYK data using the TIFF/IT-P1 or PDF/X-1a file formats or their future versions. PDF/X-3 may also be acceptable. Check with your printer. The use of non-standard, application or native file formats is not permitted.

A SWOP proof, created from the final printing file must be furnished to the publication printer with all required

digital files. This proof may be submitted in the approved hard copy format, or SWOP digital format, currently a PDF visual.

The files should include all image trapping and should incorporate all of the other logical parameters specified by SWOP. However, files should not include screening parameters or dot shape. When plates or film are made by the printer directly from digital files, it is the printer's responsibility to report moiré pattern problems to the agency and publisher and to help them resolve the problems whenever possible. Multiple sets of files and proofs may be necessary with multiple insertion orders, depending on the requirements of the individual publisher.

Final digital files should have four centered register marks identical in each color located approximately 1/2 inch outside the "live" area of the ad. Where ads are less than full page (non-bleed) it may be necessary for the printer to remove the register marks before plating. Any removal of register marks required for page form assembly is the responsibility of the printer.

Register marks should include solid lines at least 1/4" long on both axes.

The lines should be precisely the same width (thickness) in each color.

File resolutions should conform to, or be compatible with, the publication printer's output device resolution requirements. The individual publisher should be consulted for this information.

Data compression used within files should comply with the provisions of the TIFF/IT-P1 and PDF/X-1a file format standards. Data compression applied to the complete file structure should only be used if the sender and receiver agree to the method and use of file compression. Only lossless compression should be used, defined as a method of compression that results in no (0%) data alterations to the reconstructed file. It is the sender's responsibility to ensure that the publisher and/or the printer is aware of the type of compression used and has the means to decompress the file. Other types of compression may be acceptable in the future, as PDF/X and its future versions gain acceptance and more implementations become viable.

The method of delivery and file formats to be used for exchange of electronic files should be agreed to by all participants.

Digital files may be accompanied by either an electronic job ticket or ad copy instructions, potentially utilizing AdsML XML. See **www.adsmi.org** for more details.

Characterization Data Sets

During 2006, the IDEAlliance Print Properties Working Group conducted web press runs on behalf of the publication printing community. The goal of the runs was to verify the application of the G7 Proof-to-Print Process for web presses and to develop characterization data sets for both the SWOP #5 groundwood coated publication printing sheet and the new SWOP #3 coated sheet.

As a result of this work, two new characterization data sets are now available. These can be downloaded from **www.swop.org/resources/download**. The new characterization data sets provide reference aims for proofing and printing and are used for both process control and color management. Output profiles can be built based on these new characterization data sets.

Proofing

The new IDEAlliance color bar should be included on each proof made to SWOP specifications using a SWOP Certified Proofing System. Each proof should be made according to the manufacturer's SWOP Application Data Sheet (ADS) that specifies correct system set up parameters.

Proof quality and coloration can change over time. Therefore proofs should be dated and replaced if a change in appearance has occurred. (e.g., exposure to light, over time, will affect the color accuracy of a proof.)

Remote proofing, in which a proof is produced at a distant location, necessitates good communication between the parties involved, and the use of control devices that enable the output of proofs that are produced as intended.

General Guidelines

To be considered a valid SWOP proof, all proofs must include the new IDEAlliance Color Control Bar and be clearly identified with available job information and proofing system identification. The color bar is currently under development and will be downloadable from **www.swop.org/resources/downloads**. The bar will be made up of patches selected by the Print Properties Working Group from the ISO IT8/7.4 target. The patches have been selected to demonstrate the color and gray balance parameters specified by SWOP from the highlights to the shadows. In the interim, the combination of the Fogra/Ugra media wedge and the ADS color bar that is used for the certification of proofing systems should be used.

Hard copy proofs should not be stapled or otherwise damaged in any area that might interfere with the densitometer reading of the color bars.

All proofs should match one another and be consistent in color and tone reproduction. This can be assured by measuring the color bar on each proof and comparing measurements from proof to proof with a spectrophotometer or spectrodensitometer..

- **Identification:** Every proof should be accompanied by the name, address and phone number of the prepress service supplier and, if possible, the name of the person or persons who should be contacted in case of a problem.
- **Alterations:** It is important for the best quality reproduction that new proofs be supplied if alterations are made to the color values of the digital file. For minor corrections, when time does not permit reproofing, note on all proofs what changes have been made. This also applies to two-color and black-and-white ads.
- **Register:** All finished proofs for two-color or four-color printing should be in exact register.

Proofing Substrates

It is widely known that many publications routinely use papers brighter than a No. 5 grade coated paper for both covers and text. This brighter paper stock has also come into favor as the proofing stock of choice for many agencies and creatives. Until recently, SWOP proofing specifications have indicated the use of a No. 5 coated sheet as the accepted proofing paper for publication printing. However, in response to industry demand, SWOP approved a second, brighter "proofing" stock in December 2005. During 2006 this paper was characterized by the IDEAlliance Print Properties Committee on behalf of SWOP and is included in the Version 11 SWOP Specifications.

The #5 grade SWOP proofing stock is 60# basis weight paper of 72# (nominal) TAPPI brightness. Brightness will vary with age.

The paper stock may be a coated groundwood stock or a sheet coated to simulate the appearance of such a ground wood stock. A paper known to meet these specifications is SWOP Specified Proofing Paper (Monterey Gloss), manufactured by Tembec Paper Group, and distributed by Manchester Industries and sold in sheet form by various paper merchants. Specifications for this paper are shown below. Any papers meeting the technical specifications may be substituted.

	#	gsm	brightness	opacity	gloss
Monterey Gloss	36	53	72	88	48
	38	56	72	88	48
	40	59	72	89	50
	45	67	72	90	55
	50	74	72	91	58
	55	81	72	91	58
	60	89	72	92	58
	70	104	72	94	58

The second SWOP proofing stock, approved by SWOP in December 2005, is a #3 grade proofing stock, is the brighter coated stock that is preferred by many creatives and agencies for proofing. A paper known to meet this specification is Fortune Gloss, manufactured by Stora Enso. Specifications for this paper are shown below. Any papers meeting this specification may be substituted.

	#	gsm	brightness	opacity	gloss
Fortune Gloss	60	89	88	91	70
	70	104	88	92	70
	80	118	88	94	70
	100	148	88	95	70

Note: Paper specifications came from Tembec and Stora Enso respectively.

Publication Printing

Important Definitions

Several definitions will help you understand and use the SWOP 2007 Specifications. These are:

- **CIE L*a*b* (CIELAB):** A 3-D color space mathematically derived from CIE xyz chromaticity coordinates resulting in greater perceptual uniformity. L* = neutral light-dark axis, a* = red/green axis and b* = blue/yellow axis.
- **CMYK:** Four-color process printing uses CMYK—that is Cyan (also called process blue), Magenta (process red), Yellow (process yellow) and black inks to create all colors.
- **lpi:** Lines per inch or Line Screen (LS) is the number of lines of dots per linear inch in a halftone screen. The lower the line screen number (fewer dots in an inch), the larger and more widely spaced the dots which produces less dot gain. Higher line screen rulings (more dots) can contain more image information and produce finer detail if they are used on a paper stock of high enough quality. Higher line screens produce more dot gain.

- **NPDC:** Neutral Print Density Curve is the relationship between the measured neutral density measured neutral density points of a printed tonal range that describes the neutral reproduction curve and its contrast.
- **Solid Ink Lab Values:** Color information that is used to specifically map a color gamut. These measurements are extremely useful for ink manufacturers and color management experts.
- **SID:** Solid Ink Density is a numerical measure of how much complementary (major filter) light is absorbed by a solid patch in a color control bar as measured and reported by a reflection densitometer measured dry with instrument calibrated to Status T.
- **TAC:** Total area coverage defines in percentage terms the total amounts of cyan, magenta, yellow, and black in the darkest area of the printed image. Theoretically, the blackest area would benefit from being produced with maximum ink amounts totaling 400%. However, in four-color process printing, that would cause problems in production press operation. Total area coverage should be checked in the heaviest (darkest) area of the film or electronic file and read in the same spot on each color. Look for the appropriate TAC for each print condition in the color preferences setup for the color separation software.

Using ISO-Compliant Inks

Inks must conform to ISO 2846-1: "Graphic technology – Specification for colour and transparency of printing ink sets – Part 1: Sheet-fed and heat-set web offset lithographic printing."

Gray Balance

SWOP has always specified that good visual gray balance, under standard viewing conditions, is essential to proper four-color printing. Now, with the adoption of the G7 Proof-to-Print Process, SWOP has adopted the gray balance specifications as GRACoL.

Gray balance was traditionally defined as the CMY percentages needed to match the color of a 50% black ink tint, or the color of paper, but these definitions are too vague for today's ICC workflows. To avoid these ambiguities G7 defines an arbitrary table of CMY percentage 'triplets' based on the generic 50c, 40m, 40y ratio, and pre-defined a* and b* values for each triplet taking into account the paper color.

The nominal gray balance for a # 3 sheet (ISO Grade 3 paper) for paper $L^*a^*b^*$ is;

$$@50c, 40m, 40y = a^* 0.0 (+/- 1.0), \quad b^* 0.0 (+/- 2.0)$$

The nominal gray balance for a # 5 sheet (ISO Grade 5 paper) for paper $L^*a^*b^*$ is;

$$@50c, 40m, 40y = a^* 0.0 (+/- 1.0), \quad b^* 2.0 (+/- 2.0)$$

Total Area Coverage

The combined value of all CMYK inks for a particular area or object cannot exceed a specified amount, or ink may not transfer effectively and printed sheets may not dry properly. This specified amount is referred to as Total Area Coverage (TAC).

SWOP specifies TAC as:

SWOP #3 Sheet TAC	=	310%
SWOP #5 Sheet TAC	=	300%

Neutral Print Density Curves

Because SWOP now uses the G7 Proof-to-Print Process, Neutral Print Density Curves (NPDC) have become an important specification. The NPDC relationship is between measured neutral density and original halftone percentages on a gray scale. SWOP specifies the following NPDCs.

To specify NPDCs we look at a 25% gray, a 50% gray and a 75% gray as defined:

25% gray	25%C	19%M	19%Y
50% gray	50%C	40%M	40%Y
75% gray	75%C	66%M	66%Y

SWOP® 2007 Print Characterization Chart

Profile	SWOP2006 Coated3.txt	SWOP2006 Coated5.txt
Paper / Substrate	Grade #3 publication	Grade #5 publication
LPI (for reference only)	150	133-150
TAC	310%	300%

Paper $L^*a^*b^*$	L^*	93	90
	a^*	0	0
	b^*	0	4

$L^*a^*b^*$ aims D50 over white backing	K	L^*	18.50	18.97
		a^*	0.01	1.10
		b^*	-0.12	1.18
	C	L^*	57.06	56.63
		a^*	-36.97	-37.92
		b^*	-45.05	-40.92
	M	L^*	47.99	47.76
		a^*	71.92	69.73
		b^*	-3.10	-3.57
DEab of 5 or less for all colors	Y	L^*	88.08	85.46
		a^*	-5.09	-5.85
		b^*	87.90	84.52

Neutral Density Aims minus Paper Density

Paper / Substrate		Grade #3 publication	Grade #5 publication
25C/19M/19Y	25% CMY/K	.25 / .22	.25 / .22
50C/40M/40Y	50% CMY/K	.54 / .49	.54 / .49
75C/66M/66Y	75% CMY/K	.89 / .87	.89 / .86

Pre-2007 Press Control Guidelines

(Historical Reference only)

Paper / Substrate		3	5
Solid Ink Densities	K	-	1.60
	C	-	1.30
	M	-	1.40
	Y	-	1.00
TVI	K	-	22
	C	-	20
	M	-	20
	Y	-	18
Print Contrast	K	-	35+
	C	-	30+
	M	-	30+
	Y	-	25+

How to Use the Chart

In the printing process, the relationship between the substrate (paper), LPI (lines per inch), SID (solid ink density), TAC (total area coverage), gray balance and NPCD (neutral print density curves) is crucial to the quality of the printed output. The SWOP 2007 Print Characterization Chart specifies values and tolerances for input variables and output goals for commercial printing for a #3 or #5 sheet. The chart includes variables for both a premium coated paper and premium text and cover substrate.

The goal of the chart is to facilitate communication and expectations between the print buyer, creative, premedia/prepress service provider and the printer. Using this chart you can select a set of input variables and have a clear expectation of the output parameters that meet SWOP quality.

This chart includes the important G7 features that help to reproduce visual appearance from proof to press and from press to press. Maintaining gray balance at the midtones is the key new G7 metric.

You will also notice that the chart provides Paper Lab Values, Solid Ink Lab Values and Print Contrast Numbers. This information is placed on this chart to assist the technical experts and ink manufacturers.

Tolerances & Variation

Variation is part of the printing process and SWOP recognizes this reality. That is why the SWOP 2007 Print Characterization Chart specifies tolerances. Even using the G7 Proof-to-Print Process, variances should be expected.

Some printers may suggest that their printing parameters differ from those listed here. For example a printer may suggest using a 200 line screen or vary their ink densities. While this may enhance print properties such as resolution, there can be a penalty in other areas. Print buyers need to understand tradeoffs and make informed decisions.

SWOP® Off-Press Certified Proofing Systems

SWOP specifies the use of ONLY those off-press proofing systems that have been Certified by IDEAlliance for SWOP substrates.

Until the fall of 2006, the SWOP Off-Press Proofing System Certification Program combined a numeric evaluation of offset proofs based on target TVI values along with a human evaluation of visual similarity.

But new factors demanded that SWOP re-evaluate and update the certification program. One factor was SWOP's adoption of the G7 methodology that strengthens our ability to determine the closeness of a visual match numerically. Another factor was the desire of proofing vendors to be certified for SWOP, and GRACoL simultaneously. All these factors indicated that a new industry certification program should be developed.

As a result, the IDEAlliance Print Properties Working Group began to conduct research to develop methods to evaluate and certify halftone proofing systems and inkjet systems "to the numbers." In a cooperative effort with the proofing systems manufacturers, a new certification program was launched in the fall of 2006. This program provides certification on the two SWOP proofing stocks (#3 and #5) as well as, for the first time, a GRACoL commercial #1 coated stock.

Hard-Copy Certification

Hard copy proofing systems certifications are conducted by the Rochester Institute of Technology Printing Applications Laboratory. Certification under this program indicates IDEAlliance confirmation that a given vendor's fully specified proofing system has the ability to match specific characterization data set within exacting numeric tolerances.

The certification process begins with a visual inspection to determine if there are defects in the proof that would prevent metrological evaluation. Results are informational only and will not be part of the pass/fail criteria for the proofing system.

Next the proof will be evaluated metrologically using a known traceable spectrophotometer (per ISO 15790) and compared to its respective goal characterization data set. IDEAlliance has selected the XRite DTP70 for this part of certification process.

All proofs must pass the general measurement requirements in ISO 12647-7 and will meet specified tolerances. Proofs will be measured against white backing as per CGATS.5-2004 with the following characteristics: (1) shall be known to be opaque, (2) diffuse-reflecting, (3) CIELAB L* greater than 92, (4) CIELAB C* less than or equal 3.0 and (5) non-fluorescing. The delta E a*b* formula will be employed.

The IT8/7.4 target will be measured to evaluate the match to the target characterization data set. In addition the IDEAlliance Fogra/Ugra media wedge along with the new ADS Proofing Certification Strip

for accessing gray balance will be measured on each page of the proofing form to determine consistency among the pages. Measurements of the Ugra/FOGRA Media Wedge CMYK-EPS V2.0x and the ADS Proofing Certification Strip will provide the gray balance measurements.

Five (5) numeric criteria must be met in order for a system to be deemed to have passed certification and to be labeled as "Certified." The criteria are:

- If the difference between the characterization data set and the IT8/7.4 target is an average delta E ≤ 1.5 for all patches and a maximum delta E ≤ 6.0 for at least 95% of all patches;.
- If the solid patches cyan, magenta, yellow, red green and blue on the IT8/7.4 are delta E ≤ 5.0 from the characterization data set;.
- If the difference between the characterization data set and patches on the IT8/7.4 target has white point of a delta L ± 2.0 , a delta a ± 1.0 and a delta b ± 2.0 (excluding fluorescence);.
- If the difference between the 50/40/40 gray balance target and the characterization data set has a delta E ≤ 1.5 ;
- If the difference for each patch in the Ugra/FOGRA Media Wedge CMYK-EPS V2.0x and the ADS Proofing Certification Strip between Page 1 of 2 and Page 2 of 2 (or Page 1 of 3, Page 2 of 3, and Page 3 of 3 if using the 12x17 pages) of the form is delta E ≤ 1.5 .

Monitor Proofing

Research by the Print Properties Working Group is currently underway to define a process by which monitor proofing systems may be certified "to the numbers" as well. The proposed certification process was shown at the IDEAlliance Proofing Summit in March 2007 to provide for public input before the new monitor proofing certification procedures are implemented later in the spring.

What is an ADS?

A key component of the certification process and for producing SWOP proofs is the Application Data Sheet or ADS. The ADS is intended to assist producers and consumers in the use of proofing materials for a SWOP proofing system. The ADS specifies the system name, system components and finishing procedures to assure proper system setup and use.

When a system is certified, the system will be listed on the SWOP website (www.swop.org). Each system will be linked to the ADS for that system so system users can download the ADS to use as a guide for producing SWOP proofs.

How Can I Make a SWOP Proof?

The first requirement to generate a SWOP Proof is that you must be using an IDEAlliance Certified Proofing System. In addition, you must follow the directions for that system that are contained within the downloadable Application Data Sheet. Each system is a bit different in setup for the SWOP Proofs and the setup may also vary depending upon the SWOP substrate you choose. So you must follow the directions for that specific system.

SWOP Committee Members

Jim Delahanty, Business Week
 Michael Guzman, DDB NY
 Ron Sheffield, Doner Advertising
 Anthony Bellacicco, Draft, FCB
 Elaine Fry, Forbes
 Don Schroeder, Fujifilm Graphic Systems
 Jim Frisch, GMI Color
 Cathy Merolle, Hearst Magazines
 John Regina, Hudson Yards
 Dan Caldwell, ICS
 Colleen Capola, Leo Burnette

Dick Presley, Kodak Graphic Communications
 Tom Collins, Quad/Graphics, Inc.
 Gina Sigmon, Quebecor World
 Mike Rodriguez, RR Donnelley
 Joel Rubin, Past Chair
 David Niles, Sappi Paper
 Nubar Nakashian, Tanaseybert, LLC
 Kin wah Lam, Time, Inc.
 Steve Smiley, Vertis, Inc.
 John Dunn, xpedex/Intl Paper