

## A

**ATTRIBUTE**

A font characteristic (such as bold, italic, etc.) created by highlighting a font and clicking on a button. Font characteristics created in this way may not print correctly to an image setter. Instead of, for example, making a font bold by highlighting it and using the “bold” attribute, you should choose the bold version of the font from your font menu.

**ALIASING**

A set of problematic effects resulting from the usual method of displaying scalable images on low-resolution screens

**ANTI-ALIASING**

One solution to the aliasing problem. The pixels of the graphic being displayed are shaded by analysing them as areas (not dimensionless points) on a theoretical infinite resolution output surface. In practice it's adequate to resample on a grid 2 to 16 times as fine as the original device grid - meaning 5 to 257 grey levels respectively.

**ALPHA CHANNEL**

The top eight bits in a 32-bit colour scan, which can be used to describe the image's opacity. Used commonly for colour manipulation and masking.

**ASCII**

An acronym for American standard code for information interchange, a standard code for representing data. ASCII format does not contain paragraph or other formatting information.

## B

**BASIS WEIGHT**

The weight in pounds of a ream (500 sheets) of a specific paper grade that has been cut to its basic size.

**BINDING**

The fastening of papers to create a brochure or book. The most common binding styles are saddle-stitch, perfect bound, side-stitched, case or edition, and mechanical.

**BLEED**

A printed colour or image that extends past the trimmed edges of a page, usually, a 1/8th inch.

**BLUE LINE**

Prepress photographic proof made from stripped negatives where all colours show as blue images on white paper. Colour digital proofs are beginning to replace blue lines.

**BANDING**

A visible stepping of shades of colour in a gradient.

**BAUD**

A measure of the rate at which data is transmitted, expressed in terms of the number of bits per second.

**BEZIER CURVES**

In object-oriented programs (such as adobe illustrator) a curve whose shape is defined by anchor points.

**BINARY SYSTEM**

A vision system which creates a digitized image of an object in which each pixel can have one of only two values, such as black/white, or one/zero.

**BIT**

It's an Abbreviation for binary digit the smallest unit of information that can be stored and processed by a computer. In image processing, the quantized image brightness at a specific pixel site is represented by a sequence of bits.

**BITMAPPED**

An image formed by a rectangular pattern of individual pixels. Each pixel has a value from one bit of information (black or white), to as much as 24 bits per pixel (for full colour images) assigned to it.

**BYTE**

Equivalent to the storage space required for one character of information. In most small computers, a byte is equal to eight (8) bits.

**BINDERY MARKS**

Marks that appear on a press sheet to indicate how the sheet should be cropped, folded, collated, or bound

**BROMIDE**

A photographic print on bromide paper, also sometimes know as a photo-mechanical transfer (pmt). Used as the prime format for supplying black and white finished artwork. With the advent of desktop publishing, bromides are now rarely used.



## CACHE

A portion of ram or disk space used to keep often-used data for quicker access.

## Calibration

Setting equipment - monitors, image setters, etc.; to a standard measure to produce reliable results.

## CIE

Commission Internationale de l'éclairage is an international group that has developed a set of colour definition standards endorsed by adobe for postscript level 2.

## CMYK

Cyan, Magenta, Yellow, Black are the process colours, or subtractive primaries, used in colour printing. Black (k) is added in order to print a true black.

## COLOUR CORRECTION

It is a process of adjusting an image or photography to compensate the deficiencies and imperfections.

## COLOUR TRANSPARENCY

A photographic image on transparent film, usually in positive form, 35mm, 4" x 5" and 8" x 10" are commonly used formats.

## COMP

Creating a comprehensive artwork representing the general colour and layout of a design

## COMPRESSION

Software used to decrease the size of a computer file for storage with little or no distortion of the image data and quality.

## CHARACTER

In computer terminology, a character can be any letter, digit, punctuation mark or symbol. It is usually represented by a unique binary code consisting of at least eight bits. It may also be defined as a graphic shape representing a letter, numeral or symbol or a letter, digit, or other symbol that is used as part of the organization, control, or representation of data.

## CODE READING

Recognition of alphanumeric or other sets of symbols, e.g. Bar codes, UPC codes, etc. by a code reader.

## CLIPPING PATH

A vector-based outline used to "clip" or silhouette an image from its surroundings so only the desired part will print.

## COLOUR SEPARATION

A laser scanning method used to separate full-colour artwork or transparencies into the four primary printing ink colours of cyan, magenta, yellow and black.

## CREEP

A phenomenon of the middle pages of a folded signature extending slightly beyond the outside pages

## CROP

The blocking out of unwanted parts of an image to fit a layout space or deleting portions those aren't relevant.

## CROSSOVER

An image or type that continues across a spread of a brochure, book or magazine to another page

## CTF - 'COMPUTER TO FILM'

A process by which colour separations are made from computer to film, from which printing plates are then, burned using a refined photochemical process. Advantages include the control afforded by seeing wet proofs made from film, examining films for problems with moiré patterns and overprints, the ability to strip in or strip out corrections or remake films affordably, and—in china—lower cost. Disadvantages include the potential loss of quality due to one additional transfer step and the extra time required to make films.

## CTP - 'COMPUTER TO PLATE'

It is a process by which colour separations are made directly from digital files to printing plates, without the aid of an intermediary step. Advantages include quality afforded by eliminating the intermediary step, speed and convenience. Downsides may include an inability to identify problems with moiré patterns and overprints, the usual omission of accompanying wet proofs, which might allow identification of costly mistakes before press time, and—in china—higher cost.

## CALIBRATION BARS

A strip of varying shades usually ranging from 0% to 100% (in 10% increments) on film, proofs, and press sheets. Pre-press service providers use calibration bars to measure and control screen percentages for printing and proofing

## CAMERA READY

Reflective artwork that needs to be shot with a copy camera to transfer to negative film.

## CENTER MARKS

Press marks that appear on the centre of all sides of a press sheet to aid in positioning the print area on the paper.

## CHOKES & SPREAD (TRAPPING)

The process of creating a slight overlap between adjacent colours (called a trap) in order to keep the paper colour from showing through

## COLOUR OVERLAY

A sheet of a film or paper whose text and art correspond to one spot colour or process colour. Each colour overlay becomes the basis for a single printing plate that will apply that colour to paper.

## COLOUR PROOF

A representation matching the appearance of the final

printed piece. Includes colour laser proofs, colour overlay proofs, and laminate proofs.

### COMBINATION SIGNATURES

Signatures of different sizes inserted at any position in a layout.

### COMPOSITE PROOF

A version of an illustration or page in which the process colours appear together to represent full colour. When produced on a monochrome output device, colours are represented as shades of grey.

### CUSTOM PRINTER DESCRIPTION FILE

File containing information, specific to a type of output device, used in conjunction with a standard PPD file to customize the printing process.

### COLOURSYNC

Apple's Colour Management System (cms). Coloursync uses a variety of profiles for different input and output devices, to try and calibrate the whole design, publishing and printing process.

### CANTONE/ CONTINUOUS TONE

An image made of continuous shades of grey or continuous ranges of colour. Images such as photographs are continuous tone; so are scans which are made in colour or greyscale. Printing presses cannot reproduce continuous tone; instead, they simulate shades of grey by using a halftone. Devices which can print continuous tone, such as iris printers and dye-sublimation printers, do not create accurate representations of what a page will look like when printed on a press.

## D

### DPI (DOTS-PER-INCH)

In offset printing, the number of dots that fit horizontally and vertically into a one-inch measure. Generally, the higher the dpi, the sharper the printed image

### DRAWDOWN

A test of the ink colour on the actual paper stock that will be used to evaluate how it looks

### Dry trap

Printing over dry ink, which, unlike a wet trap, requires a separate pass through the press

### DCS

Desktop colour separation is a process by which five post-script files (CMYK and a low resolution place holder) are created for each colour image.

### DOS

An acronym for disk operating system

### DATABASE

A large collection of well-organized data that can be re-

trieved by a computer, for example, a mailing list

### DECOMPRESSION

Restoring a compressed image to its full file size

### DIGITAL

The representation of data as discrete points. The process of digitizing an image converts analog light into an array of elements each having a discrete value. An image in digital format is obtained by partitioning the area of the image into a finite, two-dimensional array of small, uniformly shaped mutually exclusive regions which are called resolution cells. Then assigning a representative grey shade to each such spatial region. A digital image may be thought of as a function whose domain is the finite, two-dimensional set of resolution cells and whose range is the set of grey shades.

### DIGITAL PROOFING

Producing page proofs directly from digital information (such as; laser, ink-jet, thermal transfer and dye sublimation prints).

### DEFINING COLOUR

The colour, usually the darker colour, whose shape defines the object. The defining colour should not be choked or spread, as that would compromise the image.

### DENSITOMETER

A device used throughout the printing process to measure the amount of light passing through or reflecting from a given medium. die line in a digital file, the outline used to create a device for cutting, stamping, or embossing the finished printed piece into a particular shape, such as a rolodex card.

### DOT GAIN

When an ink dot enlarges through absorption on a porous paper it is dot gain. This affects the overall tone of an image, as the size of the dot is equivalent to the tone it represents.

### DOWN-SAMPLING

The reduction in resolution of an image, resulting in a loss of detail

### DUOTONE

A halftone that is printed as a two-colour image by replicating a portion of the original tonal range for the second colour. The halftone screens must be angled 30 degrees apart.

### DENSITY RANGE

The difference between the lightest and darkest areas of an image. It is also known as tonal range.

### DRUM SCANNER

An extremely high resolution and pre-press scanner quality that uses a high-speed rotating glass drum to scan transparencies and photographic images. Drum scanners give a much more detailed reproduction of an original than flat-bed desktop scanners and can capture a much greater range of tones. However, the gap between some of the top

flatbed scanners and drum scanners is narrowing at a dramatic rate.

## E

### EMULSION

The coating of light-sensitive material on a piece of film

### EMULSION DOWN

When the emulsion of the film can directly contact the emulsion on the surface of a printing plate and still be right reading.

### EPS

Encapsulated Postscript is a file format used to transfer postscript image information from one application to another.

### ELECTRONIC PUBLISHING

All encompassing term that applies to everything from desktop publishing, dtp, digital printing techniques, to photocopied or fax machine publishing, to email publishing.

The term can be used to differentiate modern computer production driven forms of publishing, from older technologies involving mechanical or hot-metal typesetting and manual paste-up artwork.

### EXTENSION

A plug-in for the Macintosh operating system, that gives the operating system new capabilities

## F

### FINISH

The surface characteristics of paper – such as gloss, matte, silk, velvet, satin, and dull

### FONT

A typeface family that includes all letters and numbers in the same style

### FORM

Pages of a book or brochure that are printed on the same sheet of paper as it passes through the press. Once the sheet is folded and trimmed, the form becomes a “signature.”

### FOUR-COLOUR PROCESS

Method of printing using cyan, magenta, yellow and black (CMYK) inks to simulate full-colour images. It is also called full-colour printing and process printing.

### FPO (FOR POSITION ONLY)

Usually a low-resolution image (72 or 100 dpi) file used only to indicate placement and size. It is meant to be replaced by a high-resolution image before printing.

### FUNCTION KEYS

Special keys on a computer key board that can initiate a special function within a program; dependent on how a programmer defines the keys in that program.

### FILTER

A plug-in for an image-editing program such as photoshop, which is designed to produce a certain effect. For example, filters may be designed to blur or sharpen an image, or to create special effects such as motion trails or fractal patterns.

### FLATBED SCANNER

A type of scanner which works when an original is placed face-down on a sheet of glass and an arm equipped with a light and an electronic sensor sweeps under the glass. This is the most popular type of scanner for home use; however, it offers limited resolution and limited dynamic range.

### FONT FAMILY

A collection of alphabets in a similar style but in different weights or classifications. For example, the garamond font family might include garamond, garamond bold, garamond italic, and garamond bold italic.

### FINAL SIZE

The size of the printed piece after folding and any finishing work

### FIRST SIGNATURE FOLDING DUMMY

A folding dummy that determines the page arrangement for a single signature layout template. This template can then be applied to a job that requires multiple signatures, and press wise will correctly impose all the pages based on the numbering sequence and binding method specified by the first signature.

### FLAT

Individual film assembled onto a film carrier readied for contacting or plate making. Referred to as a cab in gravure printing.

### FLAT SIZE

The size of the printed piece before folding.

### FLOOD

A user-defined, screened box that prints on and completely covers a presswise blank page.

### FOLDING DUMMY

A template used for determining the page arrangement on a form to meet folding and binding requirements. See also all signatures folding dummy and first signature folding dummy.

### FOLIO

A printed page number.

### FAKE DUOTONE

Also know as false duotone, duograph, duplex halftone, screen halftone and flat tint halftone. A dummy duotone simply has the image from one plate duplicated and over-printed over the other colour plate.

## FULLY FORMATTED DISK

A disk containing all of the print-ready files required for a job to be outputted at pre-press. This could typically include the dtp document itself (e.g. A quarkxpress or Indesign file) all the eps logos and high resolution Photoshop bitmap files and scans.

# G

## GRIND OFF

The 1/8th inch along the spine that is ground off of gathered signatures before perfect binding.

## GAMMA

Measures the contrast that affects the midlevel greys (mid-tones) of an image.

Gamma correction

Changing the brightness values of the middle range of grey tones without dramatically altering the shadows and high-lights.

## GAMUT

A range of colours available in a particular colour system, (i.e. RGB, CMYK, Nature).

## GIGABYTE

A gig is a unit of measure equal to 1,024 megabytes (one giga denotes one billion).

## GIGO

An acronym for garbage in, garbage out. A saying that refers to the inability of obtaining good results with bad data.

## GRADATION

A smooth transition between one colour and another or no other colour and another or no other colour.

## GUTTER MARGIN

In binding, the blank space where two pages meet; the inside margin at the binding edge; also called back margin or bind margin.

## GICLEE

A type of fine-art print produced by printing onto canvas or rag paper by a very high-quality digital device such as an iris printer. Giclee prints are extremely high-quality reproductions of an original painting or other work of art, and are popular on the fine-art market. Pronounced "gee-clay."

## GRADIENT

A blend from one colour to another colour.

Graphics Interchange Format (GIF)

An image file format that can contain at most 256 different colours or shades of grey. Since gif files can not contain more than 256 discrete colours, this file format is not appropriate for photographic images. Gif images can contain one level of transparency, and are often used on the World Wide Web. Gif images are lzw compressed.

## GCR

Abbreviation of Grey Component Replacement. A technique for minimizing ink coverage. When trapwise converts RGB data to CMYK, it analyzes a bitmap image for grey tones composed of cyan, magenta, or yellow and replaces those colours with a similar percentage of black.

## GRADUATED FILL / GRADIENT FILL

An area in which two colours (or shades of grey) are blended so as to create a gradual change from one to the other. Graduated fills are also known as blends, gradations, gradient fills, and vignettes.

## GREYSSCALE

The representation of colours in varying shades of grey usually 256 shades in digital artwork.

## GRIPPER EDGE

The leading edge of a sheet of paper, which the grippers on the press grab to carry the paper through a press.

## GRAMS PER SQUARE METRE (GSM)

Gsm is the term used for the method of measuring paper and board weight.

## GREY BALANCE

Using cyan, magenta, yellow and black to produce a neutral grey image.

## GALLEY PROOF

A type of a proof from any source, whether metal type or photo type. It is also called checker and slip proof.

## GREY LEVEL

Number of distinct grey tones that can be reproduced by a computer

# H

## HEXACHROME

A colour model which uses six primary colours (cyan, magenta, yellow, orange, green, and black) to simulate a full range of colours. Hexachrome is sometimes used to print a job on press where very high colour fidelity and saturation is required. However, it is significantly more expensive than conventional CMYK printing, as the paper must make two additional passes through the press for the two additional colours of ink. Hexachrome has a much wider gamut than traditional CMYK.

## HFS - HIERARCHICAL FILE SYSTEM

A disk and cd-rom format used by Macintosh computers. HFS disks can be read by windows computers only if they have special software (such as Mac-in-dos) installed.

## HISTOGRAM

A graph showing the relative distribution of pixels of various densities in an image. The histogram shows the number of pixels with high density on the left and low density on the

right. Its purpose is to show the distribution of tone throughout an image. An image with no shadows will have a histogram with a valley on the left; a histogram with no highlights will have a valley on the right. The histogram below shows an image with a good deal of shadows, midtones, and highlights, but less quartertones.

### HALFTONE

A reproduction of continuous-tone artwork (such as a photograph) through the application of a screen that converts the image into dots of various sizes.

### HOT METAL TYPESETTING

Hot metal (or hot lead) typesetting, line casting or compositing is a no-longer used method of setting lines of type for printing on a letterpress printing machine.

Initially this was done by hand, where the typesetter would either set individual letter or slugs of type. Eventually machines were built that speeded up this process somewhat. The most famous exponents of hot metal were linotype and monotype, who have recently merged into one company.

Hot metal typesetting was eventually replaced by phototypesetting and, later on, desktop publishing.

### HIGHLIGHTS

Lightest portions of a photograph or halftone, as compared to midtones and shadows.

### HARD COPY

A paper printout at 100% size of digital files. It is usually output on a desktop laser or inkjet printer.

### HARD DISK

A disk that is similar to a floppy disk but is not flexible. It has greater storage capacity than a floppy disk but is also more expensive.

### HARD DOT

A dot in a halftone screen that has smooth, crisp edges.

### HIGH RESOLUTION

The quality and accuracy of detail that can be represented by graphics systems with a display device such as video and/or a printer. Resolution quality depends on the number of basic image-forming units (pixels) within a given area; the greater the number, the higher the resolution.

### HLS COLOUR MODEL

A colour model based on three coordinates - hue, lightness or luminance and saturation.

### HUE

Its is the wavelength of light reflected from or transmitted through an object. Commonly called colour.



### IMAGE PROCESSING

Encompasses all the various operations which can be ap-

plied to image data. These include, but are not limited to, image compression, image restoration, image enhancement, preprocessing, quantization, spatial filtering, and other image pattern recognition techniques. In the computer field, image processing is a method of inputting two-dimensional images into a computer and then enhancing or analyzing the imagery into a form that will be more meaningful to the user.

### IMPRESSION

In printing, the pressure of the type, plate or blanket as it comes in contact with the paper. Same is true for die cutting.

### INK-JET PRINTER

A type of printer in which dot matrix characters are formed by ink droplets electro statically aimed at the paper surface. Some advantages are high resolution, colour reproduction, and quiet operation.

### INPUT DEVICE

A device capable of accepting data and converting it into electrical impulses, which can be processed in a computer

### INPUT/OUTPUT (IO)

A general term used to describe the external equipment connected to a computer. Also refers to the two-way exchange of information that goes on between a computer and the equipment.

### INTERPOLATE

Software used (such as with a scanner) to assign an intermediate colour to a pixel based on the colours of the pixels around it to provide higher resolution than otherwise could be attained.

### ISDN

Integrated Service Digital Network is a standard of telecommunications that will allow digital information of all types to be transmitted over phone lines.

### IMAGESETTER

An output device using photosensitive paper or film and achieving high resolution. A photographic device that interprets the postscript description of a page through its raster image processor (rip) to image the graphical data directly onto film.

### IMAGING

The process of producing a film or paper copy of a digital file from an output device.

### IMPOSITION

The layout of pages in the position they will be printed on the press-sheet. The process of arranging individual pages on a form to construct a signature so the pages will be in proper sequence after printing, folding, and binding.

### IMPORTED GRAPHICS

Graphics and photos that are created in one program, such as adobe illustrator, and imported into another, such as quark xpress, for final output.

## INTERPOLATION

The computer's way of increasing image resolution by filling in new pixels. The pixels' colour or tonal range are based on neighbouring pixels.

## INDEXED COLOUR

A system where an image is represented by creating a lookup table of colours, then representing each pixel as a number in that lookup table. Indexed colour images can contain at most 256 discrete colours. Gif images are one example of indexed colour images.

## INTAGLIO

A type of press or printing technique which uses engraved plates. The image on the plate is engraved into the plate's surface; then, ink is spread across the plate and wiped off, and the plate is pressed into the paper with great force. The result is a "raised" printing on the surface of the paper. Paper money and postage stamps are often printed on intaglio presses.

## IRIS

A type of digital proof produced by an iris printer. Because iris proofs are continuous tone and do not match the standard colours used on printing presses (that is, they do not conform to swop standards), iris proofs are inappropriate for checking colour or for contract proofing.

## ISO-9660

A cd-rom recording format that is commonly used on Microsoft windows and UNIX computers. An ISO -9660 cd can be read on almost any kind of computer; however, it has many limitations (such as 8-character filenames).

## ICC COLOUR PROFILING

International Colour Consortium Profiling—a universal colour management specification created to allow colour management across various platforms and vendors.

## J

### JPEG

Joint Photographers Experts Group is a set of standards developed by this group for compressing and decompressing digitized images with computers.

### JOLIET

A cd-rom recording format for windows pcs that allows long file names.

### JOB TICKET

A docket to keep track of pre-press and colour reproduction jobs by service bureaus.

### JAGGIES

An image that has been scanned at too low a pixel resolution will appear pixilated. If the graphic is output at too low a printed resolution, it will also appear jagged or aliased. Sometimes also referred to as bitmapped.

Jaggies can also occur to linked images which have been output to a high resolution printer, or an imagesetter, but where the original linked image file is missing.

## JOB STATE

The state of working in presswise while one or more jobs are open. Opposite of no-job state

## K

### KILOBYTE

k, kb is a unit of measure of digital information corresponding to 1024 bytes.

### KNOCKOUT

A shape or object printed by eliminating (knocking out) all background colours. Also the removal of an underlying colour to keep it from changing the colour the shape or object that would print over it.

### KEYLINE

A thin border around a picture or a box indicating where to place pictures. In digital files, the key lines are often vector objects while photographs are usually bitmap images.

### KERNING

The process of adjusting the space between two letters in a piece of text, to make a more pleasing fit. The term "range kerning" is sometimes used to describe the process of adjusting the space between many letters in a piece of text at once.

### KODAK APPROVAL

A type of digital proof that matches the results obtained from a traditional film proof very closely. Kodak approvals produce high-quality proofs without the expense of printing film. An approval proof is made at the same line screen and with the same halftone as finished film, so it can be used to check the quality of the halftone as well.

## L

### LAN

Local Area Network is group of connected computers in a relatively small area that share access to printers, modems etc.

### LASER PRINTER

A printer technology that focuses laser beams to form images on photo-sensitive drums in a principle similar to that used in xerographic copiers. Laser printers are used as output devices for computers. They are high speed, high quality, and have relatively high first costs compared to other printer technology.

### LOSSY

A term used to describe a file compression scheme that may discard information (and thus detail in an image) as it

reduces the size of the file. You lose information.

## LPI

Lines Per Inch is a measure of the frequency of a halftone screen (such as 150lpi or 200lpi). Lpi refers to the frequency of the horizontal and vertical line that were, at one time, made by placing an etched glass plate or film over an image and exposing it to product dots.

## LUMINOSITY

The brightness of colour

## LOOSE COLOUR

Proof of a halftone or colour separation that is not assembled with other elements on a page. Also, known as loose or scatter proof.

## LOW-RES

Low-resolution image, such as 72 or 100 dpi.

## LAB

A colour model developed as a way to describe mathematically every colour that can be perceived by the human eye. Formally known as CIE L\*a\*b, the lab colour model describes colour in terms of its luminosity, or brightness (l), and two axes describing colour on an axis from green to magenta (a) and from blue to yellow (b). Since lab can contain every colour in the RGB gamut, as well as every colour in the CMYK gamut, it is a good intermediary between the two.

## LAMINATE PROOF

A type of proof, made from film, where each colour is laminated to a sheet of paper, in the same order the colours will be printed on press. Laminate proofs most closely simulate the look and feel of a printed piece, and can be made on the actual paper stock that will be run on the press. Contrast overlay proof, digital proof.

## LAYOUT

The process of assembling words, images, and other elements on a page to form a finished piece. A stamp produced by OPI software.

## LEADING

The space between lines of type in a block of text. Pronounced "leding," the name comes from the old-fashioned practice of increasing the space between lines of type by adding strips of lead between blocks of metal type. Leading is specified in points, and includes the point size of the text; so for example 10 point text set with 10 point leading would have the lines of type touching each other. By typesetter's convention, the average amount of leading used in a normal block of body copy is 120% of the point size of the type; so for example 10 point type is normally set with 12-point leading.

## LINE SCREEN

Measure of the distance between the rows of dots in a printed halftone, usually expressed in lines per inch or lines per centimetre. It is also known as, "line screen frequency" the

higher the line screen, the better-quality the reproduction.

## LZW

A form of image compression that reduces repeating elements in an image to mathematical expressions. Unlike JPEG compression, LZW compression is "lossless;" that is, compressing an image with lzw does not cause any image degradation. Tiff images can be lzw compressed; gif images are always lzw compressed. (lzw is named for Lempel-Ziv-welsh, the mathematicians who jointly invented it.)

## LIVE AREA

The area inside the trim lines; the area of artwork intended to be included in the final work.

## LINE ART

Art that is made up of continuous lines such as pen & ink drawings or typefaces. There is no tonal difference from one area to another.



## MB OR M-BYTE

Acronyms for megabyte (1,024 kilobytes). Megabyte -a mb is a unit of measure of stored data corresponding to 1,048,576 bytes.

## MICROPROCESSOR

Computer-type device that permits one to program it to do logic switching which includes sequencing and interlocking, timing, counting, open and close loop control, arithmetic and communications. As opposed to program controller, it can program a number of operations simultaneously.

## MIDTONES

The range of colours or levels of grey between the brightest and darkest colours in an image.

## MODEM

An acronym for modulator - demodulator. A device that connects peripherals and that converts and reconverts digital signals from a computer into tone variations for transmission over standard telephone communications lines.

## MONITOR CALIBRATION

The process of correcting the colour rendition settings of a monitor to match selected colours of printed output.

## MONOCHROME

A black-and-white version of an image with no grey tones.

## MONOCHROMATIC

Refers to a display unit having a dark background for contrast to a light colour character, such as a dark green background with light green characters, on a computer.

## MARK-UP

Instructions written on a hard-copy printout.

## MATCH COLOUR

A custom-blended ink colour that matches a specified

colour in a colour system such as pantone®, toyo® or tru-match®. It is not built from a combination of CMYK.

### MASK

A selection, object, or alpha channel used to block out part of an image. A mask can be used to crop an image to a certain size or shape, or to protect part of an image while the image is being modified.

### MATCH PRINT

A trademarked name for 3m's standard laminate proof. Match print proofs are the most common form of contract proof in the printing industry, and offer excellent representation of colour as it will appear on press; however, match print proofs cannot be produced on the actual paper stock that will be used on press. See also colour key, water proof.

### MULTIPLE MASTER

A special type of font that can be varied on more than one axis. Most fonts can be changed in size; a multiple master font may allow the user to change its width, its weight, its serifs, or other parameters smoothly and evenly as well.

### MISREGISTRATION

The unwanted result of incorrectly aligned process colours and spot colours on a finished printed piece. Misregistration can be caused by many factors, including paper stretch and improper plate alignment. Trapping can compensate for misregistration.

### MOCK-UP

In presswise, a proof used to ensure the correct page numbers, orientation, and dimensions are used in the final print-out of an imposition layout. A press wise mock-up does not include any of the text or graphics of the imposed page.

### MOIRÉ

An undesirable pattern created when overlapping screen angles are incorrect. Screens should be at 30 degree angles to each other.

### METALLIC INK

Ink that contains powdered metal, sometimes with added pigments, to simulate a metallic finish. Gold and silver are the most common, but it is also common to have metallic inks in numerous colours.

### MARGINS

The white space around the printed matter on a page.

## N

### NON-LOSSY

A term used to describe a file compression scheme that reduces the size of file without losing any of the information in the file or detail in the image.

### NEUTRAL DENSITY

A measurement of the lightness or darkness of a colour. A

neutral density of zero (0.00) is the lightest value possible and is equivalent to pure white; 3.294 are roughly equivalent to 100% of each of the CMYK components.

### NO-JOB STATE

The state of working in presswise while no jobs are open. Opposite of job state.

### NEWTON'S RINGS

The term Newton's rings refer to a flaw that can occur in a photograph or transparency that had grease on it whilst it was being scanned. The visual effect is similar to that of oil poured on water.

### NON-PRINTING BLUE

A blue pencil that can be used to mark up artwork or mechanicals. Useful, as it will not be picked up on graphic arts films. Also known under a number of other names such as; non-repro blue, drop-out blue and simply blue pencil.

## O

### OBJECT-ORIENTED

Also referred to as vector, defines an image mathematically (line between two points) rather than as pixels in a bitmap.

### OUTPUT

Results produced by a computer and then transferred from memory to the outside world by means of a printer, plotter, and display screen or into a mass storage device.

### OUTPUT DEVICES

Devices such as solenoids, motor starters, etc., that receive data from the computer.

### OPEN PREPRESS INTERFACE (OPI)

A system where a high-resolution image is scanned and placed on a server computer, which automatically creates a low-resolution stamp of that image. This stamp can be placed in a page layout application easily and quickly. When the page is ready for final output, it is printed through a spooler on the same server computer, and the server computer automatically switches the stamp with the high-resolution image.

### OPERATING SYSTEM (OS)

The special set of software that allows a computer to operate and allows a user to copy files, run programs, and perform other tasks. Macos, UNIX, and Microsoft windows are examples of operating systems.

### OPTICAL RESOLUTION

The maximum resolution at which a scanner can scan an image without interpolation.

### OPTICAL SIZE

One parameter which can be adjusted in some multiple master fonts. The optical size of a font is the design of that font optimized for a particular point size. For example, a font whose optical size can be changed might have slightly

thicker serifs when set very small, and thinner, more delicate serifs when set larger.

### OUTLINE FONT

A font that consists of mathematical equations that describe what each letter should look like. Outline fonts can be printed at any size and at any resolution without “jaggies” or loss of quality. Outline fonts are sometimes stored as separate files on a disk. Such separate files are also called “printer fonts.” contrast bitmap font.

### OVERLAY PROOF

A type of proof, made from film, where each colour is created on a clear sheet of acetate, and then all four colours are taped to a sheet of paper in such a way that the sheets can be flipped up individually. This type of proof allows examination of each individual layer of colour separately, and allows easy checking of traps. Contrast laminate proof, digital proof. A colour key is one example of an overlay proof.

### OVERPRINT

Print one ink directly on top of another ink.

P

### PDF (PORTABLE DOCUMENT FORMAT)

Adobe® systems file format to facilitate cross-platform viewing of documents in their original form.

### PROOF

Print made from negatives or plates to check for errors and flaws, predict results on press and record how a printing job is intended to appear when finished.

### PMS COLOURS (PANTONE MATCHING SYSTEM)

A series of standard colours commonly used by package designers and manufacturers. These are published by pantone, inc. Communication of specified colours which can be made with a code number.

### PERIPHERAL

Any device connected to a computer or network to give it input, output or external storage capabilities (such as scanner or printer).

### PERMANENT MEMORY

One that continues to hold data after power has been disconnected from the computer. Also known as non-volatile memory.

### PICT

A common format for defining bitmapped or object-oriented images on the Macintosh.

### PICT/PICT2

A common format for defining bitmapped or object oriented images on Macintosh. The more recent format (pict2) supports 24-bit colour.

### PIXEL

A modified acronym for picture element, i.e. the dots that form the picture on a TV monitor or display screen. The more pixels per inch the higher the resolution of the display. For example, a small element of a package is measured for average brightness and then used to represent that portion of the package. Pixels are arranged in a rectangular array to form a complete image of the package. In machine vision; the object viewed is called the scene.

### PIXEL DEPTH

It's the measurement of the number of bits of stored information per pixel (i.e. 24 bits per pixel).

### PMS

Pantone Matching System is a commonly used system for identifying specific ink colours.

### PLOTTER

A machine used to draw graphic information from a cad system onto materials such as paper, mylar or die board.

### PPI

A pixel per Inch is a measure of the amount of pixels in one square inch. The more pixels contained in the space the higher the resolution of the image and the larger the file size.

### PREPRESS

A collective term for the steps necessary to go from original artwork to the film, from which printing plates are made. In the digital prepress process, these steps are carried out by computerized systems.

### PROCESS COLOURS

The four colour inks, cyan, magenta, yellow and black, that are combined to print a wide range of colours.

### POSTERIZATION

An effect that is achieved by converting an image with continuous tonal range (such as a photo) to one with a limited number of visible steps/bands.

### POSTSCRIPT

A device-independent page description language developed by adobe systems, inc.

### PPD

Acronym for postscript printer description, a file format developed by adobe systems, inc., that contains information enabling software to produce the best results possible for each type of designated printer.

### PREPRESS SERVICE PROVIDER

In the publishing industry, the generic term for colour separation houses, commercial printers, electronic prepress houses, service bureaus, and in-plant printers.

### PRESS SHEET

In sheet-fed printing, the printed sheet of paper that comes off the press.

### PRINTER'S MARKS

The marks printed on a press sheet or film to aid in position-

ing the print area on the press sheet, checking the quality of the printed image, and trimming the final pages. Printer's marks may include calibration bars, crop marks, and registration marks.

### PRINTER SPREAD

A pair of pages positioned across a fold from each other on the press sheet. Process colours the four transparent inks (cyan, magenta, yellow, and black) used in four-colour process printing. See also colour separation.

### PRINTER FONT

The part of a postscript font that defines the shape of the font for the postscript printer, e.g., an imagesetter or laser printer.

### PUNCH CALIBRATION FILE

A press wise file containing the centre punch hole locations of specific imaging devices.

### PRESS DOT GAIN

The amount by which a halftone dot increases between the printing plate, blanket and printed sheets. This occurs when ink is absorbed by paper and is an inevitable part of the printing process – therefore it must be compensated for when scanning and be represented on the proof.

### PAGE LAYOUT

The process of assembling text, graphics, and other elements into a finished page. Page layout is done in a layout program such as quark xpress. The elements that make up the page (such as pictures, text, and logos) are usually created in other programs (like adobe photoshop, adobe illustrator, or various word-processing programs) and then assembled in the page-layout program. Modern page layout programs can also perform many of the functions of word processors and drawing software. Once the page is assembled in a page layout program, it is ready to be printed.

### PANTONE

A popular system used to specify different colours of ink. The pantone system lists over a thousand different colours, each one of which is a particular type of printing ink; by specifying colours with their pantone numbers, any element of ambiguity about the exact colour wanted is removed. Pantone inks are used most often in spot colour printing, but pantone also publishes guides specifying how the colours can be simulated by mixing the primary colours cyan, magenta, yellow, and black. (Note: pantone and the pantone reference system are registered trademarks of pantone, Inc.)

### PHOTO CD

A type of cd-rom used for storing images. Images placed on a photo cd are scanned on a special workstation, and then encoded in a proprietary format using a colour model called ycc, which is similar to lab. The images on a photo cd are compressed using a proprietary, lossy compression technique; when they are taken off the cd, they can be opened in any of several different colour models (including RGB and

CMYK) and at any of several different resolutions.

### PHOTOMULTIPLIER TUBE (PMT)

A colour-sensing device used in high-end drum scanners. Like ccds, photomultiplier tubes convert light into electrical impulses which can be interpreted by a computer. Pmts, however, are much more sensitive than ccds, and offer much greater resolution and detail-resolving ability.

### PLATESETTER

A special type of imagesetter which prints directly onto printing plates instead of onto film. The central component of a computer-to-plate system.

### PLATFORM

A particular type of computer hardware and operating system. The most popular platforms for computer graphics and page layout applications are Macintosh computers running macos, and Intel-based computers running Microsoft windows.

### PLUG-IN

Any special-purpose add-on for a program, designed to extend the program's capabilities or give it new features. Plug-ins of various sorts are available for most popular page layout, drawing, and image editing software; and may add features like special effects, enhanced colour or type controls, new printing capabilities, etc.

### POINT

A common unit of measure in page layout. Traditionally, there have been 72.27 points in an inch; most computer programs use 72 points to make up an inch. Type sizes and line thicknesses are usually measured in points.

### PORTABLE NETWORK GRAPHIC (PNG)

A format for graphics that is useful primarily on the World Wide Web. Png graphics can contain millions of colours and can be transparent, and are compressed without degradation of the image. However, many web browsers can not display them.

### PRESS PROOF

A proof made by creating plates and running a job on press. Used as a last-minute check before the entire job is printed. Ideally, the press proof should match the contract proof.

### PRINTER DRIVER

A piece of software installed on a computer which tells the computer how a certain printer works, how to access the printer, and what capabilities (such as page size and resolution) the printer has.

### PROFILE

A file which describes, mathematically, how colours look on a particular model of printer, monitor, or scanner. Profiles are used by colour management systems to adjust the colours in an image as it passes from one kind of device to another, to make sure that the image looks the same on all the devices even though different devices may represent colour differently

## PROXY

A screen-resolution representation of a high-resolution graphic image, used for displaying and editing on a computer monitor. A proxy-based image editing application (such as live picture) works by allowing the user to do photographic retouching on a low-resolution representation of an image (the proxy), and then replaying the retouching steps on the high-resolution file when the user is finished. The advantage of this technique is that the image retouching is very fast, even if the images themselves are very, very large. The disadvantage of this technique is that, since the user is working with a low-resolution approximation of the image, true pixel-level image editing is not possible.



## QUADTONE

An image produced by taking a black-and-white picture and printing it on top of itself in four different colours of ink to produce a subtle range of tone. The principle is the same as for a duotone.

## QUARTERTONE

The areas of an image which print at about a 25% grey value or a 75% grey value.



## RAM

An acronym for Random Access Memory. It is the temporary storage device for programs and data for the CPU to process. Ram is volatile and its contents will be erased when the power has been disconnected.

## RASTERIZATION

The process of converting mathematical and digital information into a series of dots by an imagesetter for the production of negative or positive film.

## READ/ONLY

Read/only identification systems employ radio frequency identification tags, which contain pre-programmed data.

## READ/ONLY TAG

A radio frequency identification tag that is capable of only being read, i.e., the pre-programmed data on the tag can be read but its stored data cannot be changed.

## REFLECTIVE ART

Artwork prepared so that it may be photo mechanically reproduced or scanned into a computer.

## RESOLUTION

A measure of the smallest possible increment of change in the variable output of a device. In a bar code system, the smallest element dimension which can be distinguished by a particular reading device or printed with a particular

device or method. Resolution is generally a function of the number of pixels in the image. The greater the number of pixels, the better the resolution will be.

## RGB

Acronym of Red, Green, and Blue. Three primary colour system used for sensing and representing colour images in a machine vision system, for example.

## RIP

Raster Image Processor is part of an output device (i.e. Imagesetter) that rasterizes (rips a file) to a single format (dots) so that it may be imaged into film or paper.

## RISC

Reduced Instruction Set computing is a type of processor capable of faster computation because it uses simpler and more regular instructions.

## ROM

Read-Only memory is permanent data storage that contains key instructions for the computer to start up and operate. This storage cannot be erased by power disconnection.

## ROSETTE

The pattern created when all four-colour halftone screens are placed at the traditional angles.

## RASTER GRAPHICS

Computer image made up of pixels. Photoshop® is the most common raster program

## READER SPREAD

A layout made in two-page spreads as readers would see them. For example, an 11 by 17 reader's spread of a 16-page manual would have pages 2 and 3 next to each other and so on.

## RECTO PAGE

The right-hand page of an open book or spread. Opposite of verso page.

## REGISTRATION MARKS

Figures (usually crossed lines and a circle) placed outside the trim page boundaries in colour separation overlays to provide a common element for proper alignment.

## RANDOM PROOF

A proof made of a scanned image, to verify the colour of the scan and to plan any colour correction or retouching that needs to be done to the image. Random proofs are more reliable than on-screen presentations to demonstrate exactly what a scanned image will look like on press. (the name comes from the fact that the images are placed on the page "at random," not in the position they will be in on the final printed piece.

## REFLECTIVE

An original, such as a photograph, that light bounces off of to create an image. Opposite of transmissive. In general, transmissive originals produce higher-quality scans than reflective originals.

## RICH BLACK

Black colour that is made by mixing other colours of ink with black ink. This produces a much darker, deeper black on press than can be achieved by using black ink alone. Typical values for rich blacks are 40% cyan, 100% black or 40% cyan, 30% magenta, 30% yellow, 100% black.



## SATURATION

The amount of grey in a colour. The higher the grey content, the lower the saturation.

## SCANNER

An electronic device that electro-optically converts optical information into electrical signals.

## SCREEN FREQUENCY

The number of lines or dots per inch on a halftone screen used in printing.

## SCSI

Small Computer Systems Interface is a type of connector used to attach peripherals (such as an external hard drive or scanner) to a computer.

## SEPARATIONS

Separate pieces of film output, each representing only one printing colour.

## SHARPNESS

The level of detail in an image.

## SUBTRACTIVE PRIMARIES

The inks cyan, magenta, and yellow used in the printing process to create different colours.

## SERVICE BUREAU

Typically an independent business that specializes in preparing digital files for print.

## SOURCE FILE

The original graphic file.

## SPOT COLOUR OR VARNISH

Specific colour or varnish that is applied only to portions of a sheet.

## SCREEN FONT

The part of a postscript font that defines how to draw the font cleanly (not bitmapped) on the monitor.

## SEP

A postscript file format created from PageMaker (tm) that can contain multiple pages as well as links in the form of opi comments to high-resolution images, in colour or in black and white.

## SHEET SIDE GUIDES

Printer's marks that appear along each side near the bottom of a press sheet to aid in positioning the print area on the press sheet.

## SHEETWISE LAYOUT

A layout in which different plates are used to print the front and back of a press sheet. Sheet wise layouts are used for creating book signatures for multiple-page documents.

## SHINGLING

An adjustment for the way page images in a folded signature tend to move toward the outer or facing edge of a book. The amount of shingling needed steadily increases as you move toward the centre signatures in the book.

## SIGNATURE

A completed press sheet, before folding, collating, binding, and trimming.

## STEP-AND-REPEAT

A layout in which two or more copies of the same piece are placed on a single plate. This is useful for printing several copies of a small layout, such as a business card, on a single sheet. Also called a multiple-up layout.

## STRIPPING

The act of assembling individual film negatives into flats for printing. Also referred to as film assembly. The final positioning of film negative pages onto a goldenrod flat prior to plate making.

## SANS SERIF

A classification of typefaces whose letters lack serifs. Sans-serif letterforms are simpler, making them easier to recognize, though they are difficult to read in long blocks. Sans-serif typefaces are therefore most appropriate for headlines and short runs of text.

## SCRATCH DISK

A hard disk used by a program such as adobe Photoshop to store temporary (or "scratch") files while the program is being used. Image editing programs are often used to edit very large graphics files--files much too big to fit in the computer's memory. A scratch disk is used to store temporary copies of the image while it is being edited. Many programs require a great deal of free space on their scratch disks; image editing programs, for example, may want free space equal to five times the size of the file being worked on.

## SCREEN ANGLE

The angle of the imaginary "grid" of dots that make up a halftone pattern. When different halftones are printed on top of one another (such as is done for all colour printing), the halftone angles of each colour must be different in order to prevent a moiré.

## SEPARATION

The process of converting an image to CMYK. Each pixel in the image is analyzed for colour and reduced to the four primary colours cyan, magenta, yellow, and black. Separation is a complex process that can be done in one of many ways, depending on the type of printing press that will be used to print the final piece and the type of paper it will be printed on. (Analyzing an image and reducing it to other

colour models, such as hexachrome, is sometimes called “separation” as well.) A drum scanner performs colour separation as it scans the image.

### SERVER

A large, dedicated computer, connected to a computer network and used to store files and perform specific network-related tasks, such as spooling or acting as an opi server. Server computers are not used to perform tasks such as page composition or image editing; instead, they act as a central repository of files that can be accessed by other computers on the network. Servers usually have very large quantities of storage space, and often run a high-performance operating system such as UNIX.

### SPOOLER

A type of server which is used to process jobs being sent to a computer printer. A spooler sits between a computer and a printer. When the job is printed from the computer, it goes to the spooler, not to the printer; the spooler then sends it to the printer. This is done if the printer is slow (so the computer will not be tied up while the printer is printing the job), or if the spooler is required to perform some kind of action, such as replacing low-res opi images with their high-res counterparts, before the job reaches the printer.

### SPREAD

A trap created when a light-colour object is placed over a dark-colour background; the light colour object spreads out into the background. 2. A single set of pages placed together side-by-side for reading or printing. When two or more pages are printed on the same sheet of paper or film, the result is referred to as a “spread.”

### SPREADS

A set of pages placed side-by-side when printed (printer’s spreads), or for reading (reader’s spreads). To print spreads is to print two or more pages together on a single sheet of paper or film.

### STAMP

A small, low-resolution thumbnail of a high-resolution scan. This small thumbnail image can be transferred from place to place easily, and can be placed in page layout applications such as quark xpress even on computers without a great deal of ram. When the page is finished and is ready for final output, the stamp will automatically link to the high-resolution graphic. Stamps can be created by saving a graphic as a dcs image, or can be created by opi software.

### STOCHASTIC SCREEN

A special type of halftone screen which offers much greater image detail on press and avoids problems with moiré sometimes associated with traditional halftone screens. A stochastic screen does not use a regular pattern of dots; instead, it uses an irregular pattern of very small dots, distributed at different densities to simulate levels of colour. Stochastic screens are usually used only for very high quality, high-end printing applications. While they produce an extremely high-resolution image, they are more difficult

to produce and print than traditional halftone screens, and usually exhibit greater dot gain on press. Stochastic screens are not suitable for reproduction on high-speed web presses.

### SWOP

Standard for web offset proofing. A rigorously defined colour proofing standard designed to ensure consistency between the colour you see on a proof and the colour you will get on a printing press. Proofs which do not adhere to the swop standard should never be used to check or approve colour.

### SLUG

In traditional hot metal typesetting – such as linotype – a slug is a line of text from a line casting machine. Blank slugs were also used to apply leading between lines of type. This has now been super ceded by electronic desktop publishing.

In magazine design, the term slug is used for a heading that stays in the same position in each issue of the publication.

## T

### TIFF

Acronym for tagged image file format, a file format developed by aldis, microsoft (tm), and leading scanner vendors for bitmap images containing greyscale or colour information. An image file format that is supported by the majority of image-editing programs, running on a wide variety of computer platforms.

### TINTS

Various even tone areas (strengths) of a solid colour. Created by converting the area to a set dot size.

### TONAL CURVES

These curves are used to adjust smoothly the tonal range of a scanned image. Curves can be adjusted for the overall image, a selected portion of the image, or individual colour channels (CMYK). See the scanning section for more information.

### TRAPPING

The process of creating an overlap between abutting colours to compensate for imprecision in the printing process. Trim page size area of the finished page after the job is printed, bound, and trimmed.

### TRP

A file extension indicating that a file has been trapped in trapwise.

### TIFF-IT

A file format which can contain both raster and vector elements. Tiff-it, an extension of tiff, was developed as a way to transfer files that contain an entire page (or an entire job). Tiff-it files are often used to transfer pages to plateset-

ters and other high-end output devices; the pages can contain trapping and halftone screening information as well as graphic objects. Tiff-it stands for tagged image file format for information technology.

### TOTAL INK

A measure of the total percentages of ink printing in a certain area on a page, or a certain area in a CMYK image. For example, if a particular colour is being used on a page and that colour is made up of 60% cyan, 60% yellow, 15% magenta, and 10% black inks, then the total ink on that part of the page is 60+60+15+10, or 145. Different printing techniques and different types of paper have different limits on the maximum total ink that can be printed on the page; if such a limit is exceeded, the ink coverage is too high and the page may smear or skip while it is being printed. The total ink allowable for a CMYK image is sometimes called the dmax, or maximum density.

### TRACKING

The overall letter spacing of a particular piece of text. See also kerning.

### TRANSFER FUNCTION

A mathematical equation embedded in an image file, which is used to modify the image at the moment it is printed. Transfer functions are usually used to lighten images to compensate for dot gain.

### TRANSMISSIVE

An original, such as a 35mm slide or transparency, which light passes through to produce an image. Opposite of reflective. In general, transmissive originals produce higher-quality scans than reflective originals.

### TRAP

To compensate for possible misalignment of colours on a printing press by making objects of different colours overlap slightly (usually by no more than a few hundredths of an inch). When an image is printed on press, each colour if ink is printed in a separate pass on the page. If the page moves slightly or the printing plates are not in precise alignment with each other, the result is a slight misalignment of the colours. By causing objects of different colour to overlap each other very slightly, this misalignment is not noticeable in the final printed piece.

### TRIM

The edge of a printed page.

### TRI-TONE

An image produced by taking a black-and-white picture and printing it on top of itself in three different colours of ink to produce a subtle range of tone. The principle is the same as for a duotone.

### TRUETYPE FONT

A standard format for outline fonts which can be used on windows or Macintosh computers. The truetype format was developed by apple computer, inc. Truetype fonts generally are less reliable than their postscript counterparts. True-

type fonts consist of only a single file; there are no separate outline fonts.

### TYPEFACE

An alphabet of letters in a particular style. Typefaces can belong to any of several types (such as sans serif, decorative, blackletter, etc.). The term “font” used to refer only to a particular style of type in a particular size (for example, garamond 12 point), and “typeface” was used to refer to the entire collection of letters of a particular style in any size’ now, however, “font” and “typeface” are used interchangeably.



### UCR

Abbreviation for under colour removal, a technique for minimizing ink coverage. When trapwise converts RGB data to CMYK, it analyzes a bitmap image for excessive cyan, magenta or yellow in dark areas and replaces those colours with a similar percentage of black.

### UNSHARP MASK

A filter in adobe Photoshop used to make an image look crisper. The filter identifies where two tones adjoin and increases the contrast. The user can control the amount of contrast applied and the amount of pixels affected.

[www.capitalcolour.com/images/thestandard1\\_prepress.pdf](http://www.capitalcolour.com/images/thestandard1_prepress.pdf)

### UV COATING

Liquid applied to a coated sheet, then bonded and cured with ultraviolet light.

### UCA

Under Colour Addition - A technique used to increase the saturation and vibrancy of an image by adding cyan, magenta, and yellow inks to areas where a lot of black ink is printing. The result is more vibrancy but higher total ink.



### VECTOR GRAPHIC

A computer graphic made up of a mathematical description of lines, fills, and shapes. Vector graphics cannot be used to represent objects such as photographs; instead, they are used to represent objects with smooth lines and hard edges, such as logos or text. Since vector graphics are not made up of pixels, they can be resized, stretched, or enlarged indefinitely with absolutely no loss of quality. Vector graphics are created in a drawing program such as adobe illustrator. Contrast raster graphic.

## VIGNETTE

An image whose edge fades off softly into the background.

## VECTOR OBJECTS

Artwork or text characters constructed from mathematical statements instead of individual pixels. Vector objects usually take less disk space than bitmap images and can be scaled to virtually any size without losing visual quality. Fonts (such as postscript and truetype), illustrations from drawing applications, and files from page-layout applications are common examples of vector objects.

## VERSO PAGE

The left-hand page of an open book or spread. Opposite of recto page.

## VISUAL NEUTRAL DENSITY

The degree to which a colour is perceived to be light or dark. Prepress service providers measure visual neutral density using a densitometer with no process filters.

## VALUE

Another word for the shade or tone of a printing colour.

## VIEWING BOOTH

A viewing booth is an area, or even entire room, that has been specially set up with balanced lighting conditions, for viewing proofs and printed artwork.

## WATER PROOF

DuPont's trademarked laminate proof. Water proofs make excellent contract proofs; they offer outstanding colour fidelity, and can be produced using the paper on which the job will be printed. See also colour key, match print.

## WEB PRESS

A high-speed, high-throughput printing press which prints on a continuous roll of paper. The paper is then cut apart by a slitter to form final sheets. Web presses are usually used for high-volume print runs, because of their great speed; smaller runs are generally printed on presses that print a single sheet of paper at a time.

## WHITE POINT

The colour temperature of a white pixel on a computer monitor. Most computer monitors have a white point of 6500 Kelvin (or higher), which means that white objects on the monitor are actually blue-white, rather than pure white. This in turn means that colours displayed on the monitor are inaccurate.

## WORK-AND-TUMBLE LAYOUT

A layout in which a single plate is used to print both sides of a two-sided job. The paper is run through once, then flipped over, top to bottom, to run on the opposite side. The gripper edge changes from the edge that was the head on the first pass to the edge that was the tail.

## WORK-AND-TURN LAYOUT

A layout in which a single plate is used to print both sides of a two-sided job. The paper is run through once, and then flipped over, side to side, to run on the opposite side. Both sides use the same gripper edge to hold the paper for positioning.

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