

Glossary

A	
Absolute Colorimetric Rendering Intent	This method of translation color from one profile to another works the same as Relative Colorimetric but also maps the white of the source profile to the white of the destination profile, changing the color of the white to the color of the destination white. For example, when you convert to the profile of a yellow paper your image would appear yellow.
Additive Color Theory	The principle of creating color from projected light. The presence of equal colors of all light creates white (all light on); the absence of all light creates black (all light off). Monitors and scanners work in additive color (RGB).
Additive Primaries	RGB: Red, Green, Blue. The three primary colors that, when combined in varying amounts, produce the visible spectrum.
B	
Bit Depth	The number of colors a pixel can describe. 1-bit can describe two colors. 8-bit can describe 256. 24-bit can describe 16.7 million colors.
Bitmap	The digital grid of pixels representing all the image data in a file.
C	
Calibration	The process of adjusting the output of a device to an established standard.
Chroma	The color of an image element (pixel). Chroma is made up of saturation plus hue values but is separate from the luminance value.
CMYK	Cyan, Magenta, Yellow, and Key (for Black). These colors make up the subtractive color space used in the printing process.
Color Management System (CMS) or Color Management Module (CMM)	A software and hardware system that is used to translate a file from one color space to another utilizing profile information to obtain consistent predictable results.

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Color Model	Refers to the general system of describing color. For example, a press profile uses the CMYK color model using only cyan magenta yellow and black to determine color.
Color Space	The specific range of colors available in a device or working space's a color model. All CMYK devices use a cmyk color model but each would have a unique color space.
Colorimeter	A hardware device designed to measure color by responding to light in a method that is similar to the human eye. This device is affected by surrounding light and is used primarily for monitor calibration.
D	
Delta E (ΔE)	A value representing the amount of change or difference between two colors. Typically it is very difficult to notice the difference of 3 or less and the average observer may only notice a delta of 6 or higher..
Density	The degree of opacity generally used in reference to ink on paper.
Dot Gain	The optical and physical increase in dot size that occurs throughout the printing process from film to finished product.
Dots Per Inch (DPI)	The resolution measurement for output from printers and imagesetters. An imagesetter may use a resolution of 2400 dpi to create halftone screen film that is 150 LPI (lines per inch).
E	
Encapsulated PostScript (EPS)	File format used to describe both bitmap and vector information.
F	
File Compression	A technique for condensing a file so that it takes up less space. Lossy compression deletes some data (JPEG file format), while lossless compression retains all the original data (GIF/TIFF file format).

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G	
Gamma	A correction for the non-linear reproduction of light intensity by an output device. In profiles gamma defines the contrast of a device.
Gamut	The range of available colors that a particular device or process can reproduce.
GCR	Gray Component Replacement. The method creating black from by replacing the graying or contaminating component in color with black. For example, a percentage of the cyan in reds would be replaced with a percentage of black.
GRACoL	General Requirements for Applications in Commercial Offset Lithography. A new printing specification that relies on colorimetric data a standardized Neutral Print Density Curve (NPDC) rather than on ink density values as use for the SWOP specification. Also called G7 referring to the number of the latest version of the standard. .
Gradation	Transition between two colors or between black and white. Also known as a gradient, ramp or blend.
Graphics Interchange Format (GIF)	File format used primarily for the Web and multimedia which uses a color palette limited to 256 colors.
Gray Balance	The balance of colors combined to create a gray or white that is neutral or without the appearance or a color cast. Equal values of RGB create a grey balance.
Grayscale	An image containing shades of gray as well as black and white.
H	
Highlight	Refers to the lightest or brightest values in an image ranging from 0% to 25% (CMYK dot percentages) or 255 to 64 (RGB system values).

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Histogram	A graphical display that represents the distribution of tones within an image. The horizontal coordinate represents each pixel value possible from black to white. The vertical values indicate the number of pixels in the image that occur at each value level.
HSB	A color model that describes color using hue, saturation, and brightness.
Hue	A term used to describe color place in the spectrum without regard to luminance or intensity.
I	
Interpolation	Increasing the size of a graphic file by creating more pixels base upon the values in the surrounding pixels.
J	
Joint Photographic Expert Group (JPEG)	A common file format that uses a lossy compression (not without some quality loss) method used to reduce the size of a file to speed transfer time and save storage space.
K	
Kelvin [k]	A measurement of light based on a scale created from the color changes that occur when a black object is heated to different temperatures. Middle of the spectrum 5000K to 6500K is considered full spectrum or white. Lower the Kelvin light measures more red or yellow, while higher Kelvin is bluer.
L	
LAB Color Space	A device independent color model created by the Commission International del'Eclairage (CIE). Used as a uniform device independent color space in most color management systems when translating between profiles. For example a RGB file is converted to CMYK it is first converted to LAB then CMYK. (L=Luminance, A=red to green, B=blue to yellow.

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Lossless Compression	Any method of compression, such as LZW, that reduces the size of a file without any loss of data.
Lossy Compression	Any method of compression, such as JPEG, that when the file is compressed there is some loss of data.
M	
Midtone	Refers to the middle range values in an image around 50% (CMYK) or 128 (RGB system value).
Moiré	An undesirable artifact or pattern that can appear in output film or scanned digital files.
Monitor Calibration	The process used to bring a monitor's display of color, saturation and brightness into synchronization with a particular standard, another monitor or a final output device.
N	
Neutral	A tone that is created from a balance of all three primary colors such as browns, tans, whites or grays.
O	
OPI	Open Prepress Interface. The process of placing low resolution image in a document and having them automatically replaced with a matching high res at output.
P	
Pixel	Short for picture element. The smallest unit of image data.
Pixelization	Jaggedness in an image that results when pixels are large enough to be noticeable.

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Pixels Per Inch (PPI)	The unit of measure used to describe the resolution of an image.
Posterization	When a gradation does not appear smooth instead there are obvious steps from one value to the next.
Profile	The characterization of a device's ability to reproduce color. In a color management workflow, a profile is used to accurately translate color from one device to another.
Proof – soft/hard, contract or content	Simulating the output of one device on another. Proofing on a monitor is called soft proofing. Where as hard proofs refer to output to a physical form such as paper.
R	
Relative Colorimetric Rendering Intent	The method of translating from one profile to another by moving out of gamut colors to the nearest relative point in the gamut of the destination profile while minimizing the adjustment to the in gamut colors. The goal is to achieve the most accurate color with possible lost in the most saturated colors.
Resolution	Image resolution measures the amount of data per inch in an image. Printer resolution measures the amount of detail that a printer can create. Scanner resolution measures the amount of detail that a scanner can capture.
RGB	Red, Green and Blue. These colors make up the additive color space on your monitor or your scanner.
S	
Saturation	The percentage of white in a color or the intensity of a color.
Saturation Render Intent	This intent converts the color while trying to maintain saturation. This method is indented for presentation program graphics and rarely used for professional graphics.

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Shadows	Refers to the darkest values in an image ranging from 75% to 100% dot (CMYK) or 64 to 0 (RGB system values).
Spectral Highlight	An area in an image caused by the bright reflection on a shiny surface that has no detail, therefore can be printed using little or no dot.
Spectrophotometer	A hardware device that is used to measure the characteristics of light based on where it resides within the visible spectrum. Used primarily for fingerprinting colors and calibrating output devices it can read both reflected and transmitted light.
SWOP	Standardization for Web Offset Publications. Ink, screen ruling and stock specifications established to maintain consistent, predictable results among printed publications.
Subtractive Color Theory	The principle of reproducing color by reflected light. Light shines on a surface and is either reflected or absorbed by pigments applied to the surface. Cyan subtracts red light, magenta subtracts green light, and yellow subtracts blue light. The presence of all pigment theoretically creates black (all light absorbed), and the absence of all pigment creates white (all light reflected).
Subtractive Primaries	CMYK: Cyan, Magenta, Yellow and Black. The primary colors used in the printing process to reproduce as much of the visible spectrum possible with ink on paper. In theory, these are the only three colors needed but due to the impurities of ink and variation in the reflective surface, black is used to assure true blacks and deeper shadows.
T	
Tagged Image File Format (TIFF)	An popular uncompressed file format commonly used for graphic images.
U	

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Under Color Removal (UCR)	The process of creating the black separation by reducing the cyan, magenta and yellow inks from neutral shadow areas and replacing them with black. By reducing these three colors, you use less ink and have better shadow detail and more controllable neutrals.
Unsharp Masking (USM)	The process of creating the appearance of definition or sharpness in an image by increasing contrast along the edges of areas where there are color or luminance changes. In Adobe Photoshop, you perform USM by applying the various settings of Unsharp Masking Filter.
V	
Vector	Drawn images, not photographic or bitmap, composed of a series of points connected with straight or curved lines. These can be filled with color, gradients or patterns. These images are not subject to the resolution or sizing issues of bitmap images.
Visible Spectrum	The portion of the electromagnetic spectrum that is visible to the human eye.
W	
WYSIWYG	What You See Is What You Get