

Image File Types

FILE TYPES

GIF: A compressed file format used for the web, best for artwork composed of flat colors.

Note: This format is limited to 256 colors/greys, so it is *not* useful for continuous tone photos or for print.

JPEG: This type of compressed file is not used in commercial printing, but works well for saving and transferring continuous tone bitmap data (photographs, grayscale images, etc) via the internet or for the web. **USE THIS FILE TO PLACE LOGO IN WORD FILES.**

TIFF: This file format can be used to save photos or line work for printing from a Mac or PC. It is commonly used for commercial printing and other applications.

BMP: This is a bitmap file format for PC. It is not commonly used for printing or web applications.

Encapsulated Postscript (EPS or .eps)

You cannot generally view a Postscript formatted image -- it is text file. However, when importing Postscript files into other applications, it is always useful to be able to see a representation of the image. Encapsulated Postscript is a variation of Postscript that also contains a preview image. This is by far a more common and useful version of Postscript and can be used by many

COLOR

Grayscale: An image composed of black, white and shades of grey. When printed in low resolution, grayscale files can look fuzzy, so commercial printers usually prefer vector files or high resolution black-only bitmap files for crisp linework or text.

CMYK: The color model used by printers to create full color images using dot patterns composed of 4 basic colors: cyan, magenta, yellow and black. Images that will be printed on a 4-color press must use this color model.

RGB: A color model that uses the basic colors red, green and blue to represent color on a computer monitor. This model is used for web display, and can be printed to color desktop printers. RGB color files are *not used for 4-color process printing.*

Line art: Art composed of solid black lines, shapes or text on a solid white background. Best saved in vector formats or high resolution black-only bitmap.

Spot Color: A printing process using 2 or more premixed colors printed from separate plates, (rather than mixing the colors from 4 process

RESOLUTION

Resolution: Refers to the "density" of pixel information saved in an image file. The more pixels per inch, the higher the resolution.

High resolution: Usually a minimum of 255 pixels per inch and up for continuous tone images and 600dpi and up for line art. (255 pixels per inch does not mean that the file size is 255 pixels! For example: A 5-inch file that is 300 pixels per inch would measure 1500 pixels across.) Printers usually double the "line screen" (the dot pattern used in printing) to determine the resolution required for digital image files. For example, if the image will appear in a magazine that uses a "150 line" screen (dot pattern), the image needs to be scanned at full print size, at 300 pixels per inch.

If a photo was scanned or shot at a low resolution, it is NOT possible to improve it or enlarge it without rescanning or re-shooting. Even if your desktop application gives you the option of changing resolution, you can never expect to add quality that wasn't there to begin with. Your computer can only interpolate (guess) how to fill in the missing pixels.

Low resolution: Usually 72 pixels per inch. This is the standard resolution for files that will be viewed on the web or a monitor. Images to be viewed on the Web are usually optimized (saved at the smallest file size that achieves good viewing

Bitmap file: This type of file saves image information like a precise "mosaic" of pixels. The result is much like what you would achieve if you put a sheet of transparent graph paper over a photo and colored or shaded each square to best match the part of the photo that lay underneath. The more squares on your paper, the more exact your copy would be. In the case of a bitmap, the more pixels per inch (i.e. the higher the resolution), the clearer and more accurate the photo.

Vector file: Vector files use mathematical descriptions to define the coordinates, lines, and fills of the art. Unlike bitmap files, vector files can be resized without losing resolution.

applications as an exchangeable format. It is a highly recommended vector format.

Portable Document Format (PDF or .pdf)

This is a hybrid format based on Postscript that can contain both raster and vector information. It provides the highly compatible exchange of all kinds of documents across virtually all platforms. It is based on Adobe's Acrobat system of tools. In order to view PDFs the user must have the Adobe Acrobat Reader and associated operating system files installed. The reader and its Web browser plug-ins are freeware and are available from the Adobe Web site. To create PDFs a special printing driver or separate conversion utility is required. This software is called Acrobat Exchange or Acrobat Distiller and is only available for purchase.

Photoshop Document (PSD or .psd)

Although the Photoshop format is a proprietary format, due to its prevalence as a standard image-editing application, it is an extremely useful format for exchange. The native PSD format is cross-platform and can be used by both Macs and PCs. The PSD format is primarily a raster format that provides extended support for features such as layering, alpha channels, true spot color, vector type and paths, and many other features. Converting a PSD to another raster format will "flatten" or disable many of

colors combined in a dot pattern). Spot color files are usually created by assigning spot colors to black-only bitmaps, or grayscale tiffs using a desktop publishing application. Spot colors can also be assigned within a vector eps file.

[More about color...](#)

quality). One example of optimizing an image is using the "save for web" feature in Photoshop. images that have been optimized for Web viewing are not usually appropriate for print reproduction.

these features. It is a highly recommended format where professional image editing may be required.