

Artwork and Logos

Vector vs. Raster Graphics

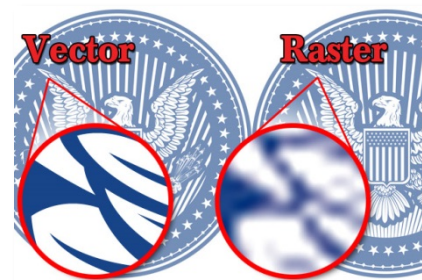
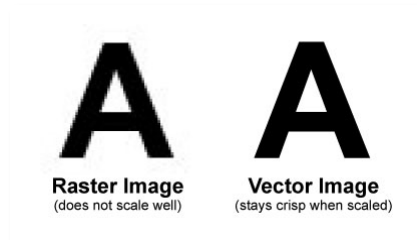
Overview This document discusses the differences between Vector and Raster graphics, how to know the difference, and the reasons why this is important.

Difference between Raster and Vector

Raster images use many colored pixels or individual building blocks to form a complete image. JPEGs, GIFs and PNGs are common raster image types. Almost all of the photos found on the web and in print catalogs are raster images.

Because raster images are constructed using a fixed number of colored pixels, they can't be dramatically resized without compromising their resolution. When stretched to fit a space they weren't designed to fill, their pixels become visibly grainy and the image distorts. This is why altered photos may appear pixelated or low resolution. Therefore, it is important that you save raster files at precisely the dimensions needed to eliminate possible complications.

Vector images, alternatively, allow for more flexibility. Constructed using mathematical formulas rather than individual colored blocks, vector file types such as EPS, AI and PDF* are excellent for creating graphics that frequently require resizing. Your company logo and brand graphics should be created as a vector and saved as a master file so you can use it with smaller items such as your business card and letterhead, but also on larger surfaces, such as your corporate jet. When necessary, always create a JPG or PNG for use on the web from this master vector file. Just be sure to save the new raster file in the exact dimensions needed.



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Vector vs. Raster Graphics, Continued

File Types

The graphic here shows the list of file types that are typically Vector and Raster. If a Vector file is saved in a Raster file type (i.e. .jpg), the graphic is now converted into a Raster file. However, if a Raster file is saved in Vector format it does not make them Vector graphics.

Vector		Raster	
WEB USES			
SOURCE files for logos, charts, icons, or any hard-edged graphics		OUTPUT files for most web graphics displayed on the screen	
PRINT USES			
SOURCE files to be sent to the printer		HI-RES files can be printed at 300dpi	
FILE TYPES			
.ai .eps .pdf .svg		.jpg .gif .png .tif	