Art Specs
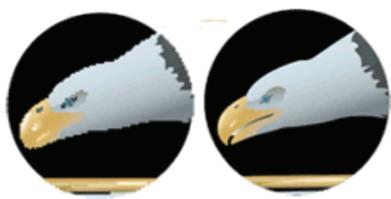
Vector Artwork vs. Raster Art
Advantages and Disadvantages

Zoom in on any graphic and it will either have ragged or clean, crisp edges. All digital images are one of two fundamental types: (1) Vector Art   or (2) Raster Art (bitmap, pixel)

Raster Graphics (commonly called bitmap images) are made of pixels. Photographs are an example of a bitmap image. They have a fixed resolution and cannot be resized larger without losing quality. Common bitmap file formats end in: .gif   .jpg .png .tiff & .bmp

Bitmap images typically have much larger file sizes than the same image as a vector graphic so they are often compressed to reduce their size. Bitmap images can be converted from one format to another with programs such as Photoshop.

Vector Graphics are images that have been created in a drawing program such as Adobe Illustrator. They use paths to create lines and curves at connecting points called "nodes" to store the graphic's information mathematically. Vector art is resolution independent; whether you enlarge or shrink the image, the output quality is never compromised. This is why logos should always be created in vector art format.
Common vector art file formats for include: .ai .eps & .pdf

Understanding raster graphics v.s. vector graphics is important in choosing which design program to use for a particular project. Logos should always be created in vector art format because you want your corporate logo to be scalable — able to be enlarged without any loss of quality.

Why Logos Need to be a Vector Art File

— **Reason One:** Lack of scalability—

If you found this article on a Google Search, chances are it is because you have found the logo art that you provided to a commercial printer can not be used for the purpose you intended. The most common issue is scalability. As demonstrated above, a logo that is raster art can't be enlarged for a big sign or banner without looking very pixelated.

— **Reason Two:** Color Versatility —

To reproduce a photograph, you basically only have two choices: full color or black-and-white reproduction. A logo that is raster art is basically just a "picture" of your logo – nearly impossible to color separate into just 2 colors; it is either full color or one color (usually black). In Photoshop it could be jimmy-rigged and forced into just 2-color art, but this is not recommended.

Many commercial printing processes, such as silk screen printing, require vector art for color separations. This is especially true if you want to print in 2-color instead of full color. As an added bonus, if you ever want to change the ink colors of your logo is it very easy to perform with vector art.

— **Reason Three**: Background Overlays —

Often you may wish to overlay your logo on top of a background tint or image. Trying to get a nice, smooth blending between the two is challenging due to the pixelated edges as they meet the background.

How Can I Make My Logo into Vector Art?

If your logo never was vector, or if the original art file has been lost, the only real alternative is to have a professional graphic artist recreate the logo from scratch in a vector art drawing program. Although it is possible to convert raster art into vector with methods such as "LIVE TRACE" in Adobe Illustrator, the results are usually less than satisfactory when used on a corporate logo.

— Saving your Logo to a Different File Format —

It is a common misconception that saving a raster art file (such as a logo) to a vector art file format will somehow fix the problem. Pixel-based raster art will always be made out of pixels, regardless of what file format one saves the image as.

Is Vector Art Always Better?

Most marketing materials actually contain a combination of both raster and vector art formats. An understanding of the advantages & limitations of each format and the relationship between them is most likely to result in efficient and effective use of tools.

Vector art is complementary, and not necessarily always "better" than raster art. For one, a real photograph can't be vector art, that would be an illustration. To maximize the crispness of your printing, it is best that all of the type in a document be vector as well. Photoshop can create some phonominal graphics, to be sure, but is not a stand-alone art program.