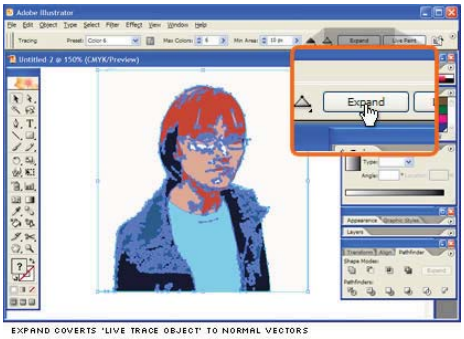

INTRODUCTION TO GRAPHICS

Auto Tracing in Illustrator

Information Sheet No. XXXX

Illustrator's Autotrace tool is used to create vector objects from raster images. The tool works by identifying areas of similar color and creating paths around those areas. There are several techniques that can improve your results.

Results are often less-than-satisfying when working with the Autotrace tool. Much depends on the original raster image from which you're attempting to create vector art. There are a couple of steps you can take in Illustrator to prepare an image for Autotrace. Adobe Photoshop offers even more powerful options. First, let's take a look at the basic operation of the Autotrace tool and what it's designed to do. You'll find the Autotrace tool nested in the Toolbox with the Blend tool. There are a couple of options for the tool's performance, which you set in Preferences> Type & Auto Tracing.

With a raster image placed into an Illustrator document, you click near the edge of an area to trace the outline of the 'object.' Autotrace works by using color change to identify edges, then placing a path along that edge. By default, the path will be stroked and filled with the current stroke and fill colors. You should click within six pixels of the edge of the object that you're tracing, and click on the inside of the object. The path is created on the active layer, which need not be the layer on which the raster image is placed. The Auto Trace Tolerance option determines how closely the path will follow the original edge (which also, of course, affects the complexity of the path). The Tracing Gap option enables you to specify how large an irregularity in the edge Autotrace can ignore.

[NOTE: If you prefer to manually trace raster images with Illustrator's Pen tool, you might find these techniques valuable, too.]

Because Autotrace is sensitive to changes in color (which is how it identifies edges), you can often improve the performance by applying a Gaussian Blur effect or filter to noisy or busy raster images before tracing. By blurring, you're reducing the variation of color with the image, creating areas of more uniform color, which Autotrace can more easily identify.

Illustrator offers a couple of other effects and filters that can be used to prepare an image for tracing. Stylize> Glowing Edges can be effective with some images, particularly those that already have reasonably well-

defined areas of color. The like-colored areas will be shaded, with bright-colored edges defining them. Since Autotrace is concerned only with edges (and your vector art will be filled and stroked later), the color shift within the image is insignificant. Brush Strokes> Ink Outlines and Brush Strokes> Sumi-E can also be applied prior to tracing. These, too, better delineate the edges within the image. Perhaps the most effective of Illustrator's effects for preparing an image prior to using the Autotrace tool is Poster Edges. Found with the Artistic effects and filters, it can be used very effectively to create well-defined areas of solid color. Compare the original in the upper left (a cropped version of PhotoSpin image #0370025) to the posterized version.

While it's apparent that paths will need some adjustment, it's also obvious that Autotrace will have a much easier time defining edges in the lower image. One of the key variables when preparing an image with Poster Edges is Posterization. This slider determines how like colors will be combined. The lower the setting, the more colors are merged. Generally, a setting of 0 give the best results for Autotrace.

If you have Photoshop available, you've got even more options for preparing the image, prior to placement within Illustrator. One of the most powerful is the seldom-user Smart Blur filter. This blur filter does an excellent job of preserving well-defined edges, while smoothing colors within those edges. Perfect for Autotrace preparation!

After Smart Blur, a Curves adjustment can be applied to further reduce contrast with areas of similar color.

A few moments with the Magic Wand tool (with an occasional assist to the Lasso) and the Fill command, and you've got an image that Autotrace can really work with.

Remember, too, that you can change the fill colors from those in the original raster image to increase contrast, further assisting the Autotrace tool.

While not as precise as vector tracings produced by Adobe Streamline, Illustrator's Autotrace tool can produce vectors with which we can work, especially when the raster artwork is prepared.