

## Bottomline for Vector (EPS) Art

**V**ector graphics are made of bezier curves and created with object-oriented drawing programs such as Adobe Illustrator, Macromedia Freehand, CorelDraw, and CAD applications. Bezier curves are made up with points described mathematically on an x-y axis (Cartesian geometry).

Vector graphics are resolution independent, unlike bitmap (Photoshop) graphics. They print out at the resolution of the printing device: laser printer, imagesetter, plate-setter, etc. Vector graphics can be scaled and keep their clean sharp look.

### EPS format

For placement into a page layout program, illustrations must be saved in EPS format. InDesign is the only exception. Because it's an Adobe product, it will import a native (.ai) Illustrator files. That said, it is generally recommended to save all files as EPS for placement in page layouts.

Page layout applications such as QuarkXPress, InDesign, and PageMaker can save or export pages as EPS as well. This turns all the elements on a page into a complex EPS graphic. The EPS is then editable in Illustrator, but is particularly problematic with text edits. It breaks lines into multiple text blocks. Depending on the EPS page and what will be done with it, sometimes PostScript errors can occur.

### Vector Graphics and PostScript Errors

As some illustrations are very complex (such as page layout pages converted to EPS), they can generate PostScript errors when attempting to print due to too many points. Other potential PostScript errors can be caused by single paths that cross over themselves or handles that cross each other. PostScript errors aren't limited to these issues, but they are good things to avoid. Avoiding potential problems will save time troubleshooting errors. Vector art files are the first place to look when PostScript errors occur.

### Splitting Long Paths

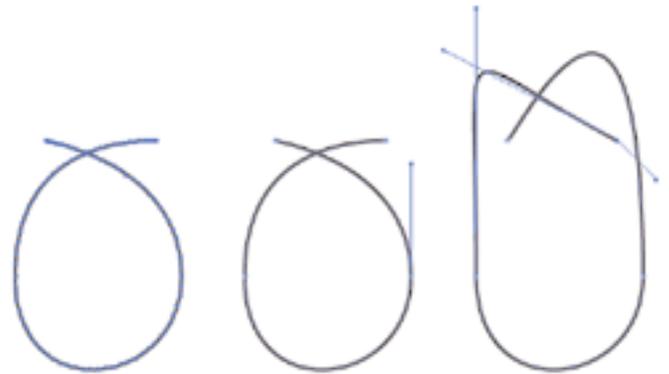
For complex graphics that are causing printing problems, another solution is to "split long paths". In Illustrator this is available in the File menu: File > Document setup > Printing and Export. The default, 800 DPI, is setup for a laser printer. It can be set as high as 9600 DPI for image- or plate- setting. Heed the warning and save a duplicate copy of the file before splitting the paths. Editing a document whose paths have been split can be very difficult.

### Type Outlines

Another way to avoid potential problems with illustrations is to convert type to outlines. In Illustrator, Type > Create Outlines makes editable type into an art object. This avoids potential font issues later on. One top 5 ad agency we know uses Illustrator almost exclusively for ad creation and converts all type to outlines, avoiding font issues wherever the ad is sent.

### Put bitmaps from Photoshop into Illustrator

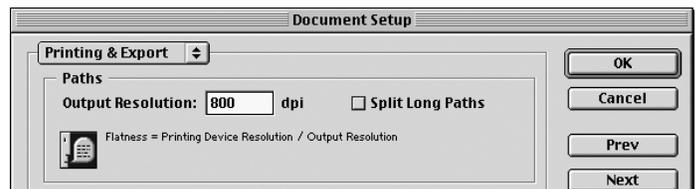
When combining graphics and photos, always do it in the drawing program, not Photoshop. Opening an EPS illustration in Photoshop rasterizes vectors, converting them to a bitmap. The graphics are now resolution dependent.



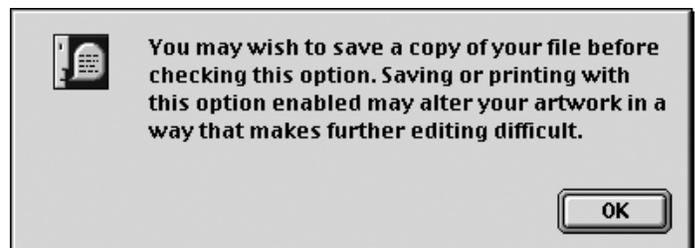
Three examples of potential PostScript errors:

1. Too many points. Although this simple example won't cause a PostScript error, a complex illustration with too many points could.
2. A path that crosses over itself. This also has PostScript error potential and should be avoided. Thinking of the mathematical description of this path makes it more apparent why this could be a problem.
3. Paths and handles that cross-over themselves, a double-whammy for potential errors.

The reality is this that simple Illustrator file did print, but having these elements in a complex illustration can be problem. If a PostScript error occurs, elements like these are things to look for when troubleshooting.



Illustrator's Split long Paths option. Be sure to heed the warning dialog below and save a copy of the file before checking this option.



# OUTLINES

Convert type to outlines to avoid font issues

### Vector art uses

Use vector art files for logos and illustrations where precision, scalability, and a clean illustrated look are desired.