Graphics File Formats

There are a bewildering amount of graphics file formats out there. When the pixels settle, the most common file formats in the graphic design world can be counted on two hands.

Vector (Adobe Illustrator, Macromedia Freehand, Macromedia Flash)

* Encapsulated Postscript (EPS)
* Adobe Illustrator (AI)
* Windows Metafile (WMF)

Bitmap (Adobe PhotoShop, Dreamweaver)

* TIFF
* JPG
* GIF

A word about "native formats": almost every software program has a file format that is native to that program, and that program alone. Photoshop's is PSD; CorelDRAW! is CDR; and so on. Always save your graphic in your software's native format before saving it in the file format you'll be using in the end. That makes it really easy to make changes to the original graphic. So which format do you use?

Hopefully by now you understand the difference between bitmap and vector graphics. You may even already suspect when you should use which. But I won't leave you wondering.

At the moment, the only format that can be easily viewed on the Web is bitmap graphics, GIF and JPG. There are a few vector formats that can be viewed on the Web, but as of this writing, they all require plugins. Your viewers shouldn't be left in the cold if they don't happen to have a plugin installed. (ie. Flash graphics require a plugin to view)

Given the limitations of the bitmap format, you may be wondering why you'd ever use it outside of the Web. If you scan a photograph, you'll be forced to save it as a bitmap; the same is true of digital pictures.

Vector graphics are great because of their easy scaleability. Be careful, though: EPS graphics require a PostScript printer to print correctly. If you try to print an EPS graphic to a non-PostScript printer, the only thing that will print is the low resolution header.

On the Windows platform, WMF is a common vector format. But if you'll be going to a service bureau, chances are they won't know what to make of your WMFs. WMF is fine if you'll be use your laser printer output as camera ready art, but if you'll be getting film run stick with EPS or AI (talk to your service bureau or printer about what they can handle). This is a major reason why the Mac format is the accepted standard industry-wide.

Related Sites

Other File Formats
Kodak has good, short explanations of native file formats and the typical file formats used in graphic design. Also, a humorous look at why file formats can be so bewildering to the beginner.

The Ultimate Homepage Index: image formats
If you want to quickly get at different search engines' links to file formats, start here.

A Look Inside Bitmap Files
Really good explanation, albeit a bit technical, of the various bitmap formats: BMP, GIF, JPG, PCX, PNG, and TIF.

Web Graphics Formats
The folks at JASC have some tips about when you should use TIF, JPG, or GIF.

Graphic File Formats
This page takes a while to download fully, but it's worth the wait. The page discusses many common graphic file formats, native file formats, bitmap vs vector graphics, and file converter software.

Vector Illustrations Go GIF
How you can use illustration programs to create Web graphics, with step by step instructions for CorelDRAW!, Adobe Illustrator, and Macromedia FreeHand.

Bitmapped or Vector Based Computer Graphics?
Another take on when you should use which format.

Vector Graphics File Formats
PC Webopedia has a chart of some of the common vector graphics file formats.

Graphics: Bitmap/Vector Formats
Our Desktop Publishing Guide has Net links to more information on many of the popular graphics formats.