Techno-babble

ORIGINAL GRAYSCALE RASTER IMAGE
8.2" X 12.6" AT 266PPI

ORIGINAL
VECTOR IMAGE

EPS file
7.516 MB

TIFF file
7.35 MB

JPEG file
1.049 MB

EPS file
36 KB
exported from 24K
FreeHand file

Save – and save often in the right format

Everyone has learned to **save** and save often. But working with scanned **images** or **artwork** also means knowing what **format** to save the file in. • **By Bradley Wilson**.

"Sliders" is a hit Sci-Fi channel show. It's about a group of people who "slide" between dimensions to different Earths.

Clearly, the writers of the show are talented writers of technobabble -- they use plenty in every show.

However, in a recent show, they dealt with digital image manipulation (putting a mistress with the President) – science fact, not fiction.

In today's world of digital images, there are nearly 20 file formats you can save an image in. Like many of us, the writers of "Sliders" confused their terms. It was rather humorous.

So, for the writers (and the rest of us), here's a quick review.

Adobe Photoshop has its own, native format – **Photoshop**. Pretend like that's Latin. No other programs speak in Photoshop's native format. While Photoshop works well for Photoshop files with layers and other characteristics that can't be exported, to import a file onto a page, the file has to be in a format (language) the other software can understand.

Therefore, most people save digital images created in Photoshop in TIFF (Tag Image File Format). TIFF, like German, is a much more common language and many programs can read files saved as TIFFs. Plus, TIFF tends to be a reliable, and reasonably small, file format.

TIFF is widely recognized on both Macintosh and IBM/compatible platforms, and TIFF files can be imported into PageMaker, QuarkXPress and most other common programs.

For images produced on the Web, however, even TIFF files contain a lot of unneeded information. So digital images create for the Web are most-often saved in **JPEG** (Joint Photographic Experts Group) format – think French. JPEG creates much smaller files and is recognized by most Web browsers (even America Online's browser). CompuServe first developed **GIF** (Graphics Interchange Format) for this purpose. GIF files, however, only contain a limited (256) number of colors. JPEG, with unlimited colors, quickly replaced it.

The Macintosh platform uses **PICT** (think Italian) as its native language. However, PICT files (such as those copied into the clipboard) are notorious for causing printing problems. Avoid importing PICT files into any file that is going to be printed on a PostScript imaging device.

Photoshop specializes in raster graphics that consist of pixels (picture elements). When these pixels are enlarged, they look like large squares. No matter what format raster graphics are saved as, they still can't be enlarged very much without a noticeable loss of quality.

Vector graphics such as those created with points and curves in programs such as Macromedia FreeHand and Adobe Illustrator, however, are vector graphics. Because each portion of the shape consists of points and curves that can be enlarged simply by changing the mathematical formula of the curve, vector graphics can be enlarged and reduced with no loss of quality.

Further, most "draw" or "illustrator" programs either save their files or require that their files be exported in **EPS** (Encapsulated PostScript) format. Since most printers think the language of PostScript (think English), they tend to print faster. However, they also tend to be large files.

Now you know why the show's writers need a technical consultant.
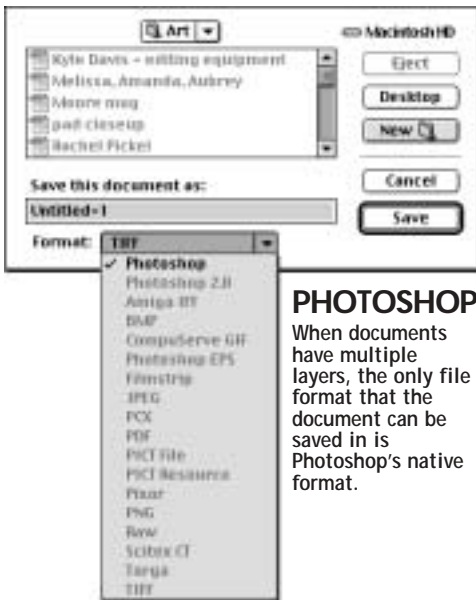
PHOTOSHOP

When documents have multiple layers, the only file format that the document can be saved in is Photoshop's native format.
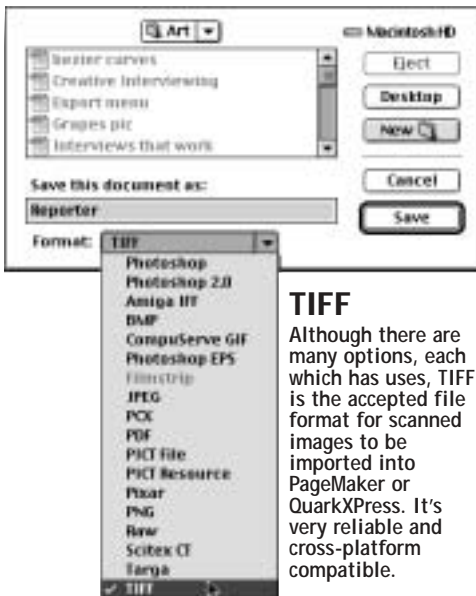

A Photoshop image, regardless of what file format it's saved in, consists of a myriad of tiny pixels (picture elements). Each of these pixels has its own hue, lightness and saturation characteristics. When such an image is enlarged, the pixels become evident.
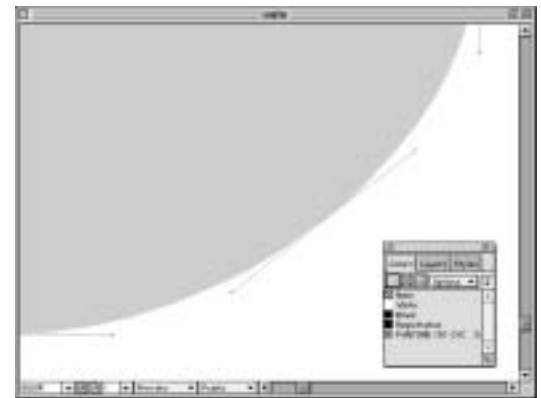
CURVES IN A DRAW PROGRAM

Bezier curves consist of a point (connected to another point) with handles that can alter the direction and angle of the line from that point. Photoshop uses Bezier curves in its "paths" option – particularly for creating clipping paths. However, in Photoshop this "path" is only used to define an area. In a vector drawing program such as FreeHand or Illustrator, the path *is* the object. Shapes drawn as objects in such programs can be rotated, filled and transformed independent of the other objects in the drawing.

EXPORT

Like objects in Photoshop's native language, objects in Macromedia FreeHand must be saved in a file format that other programs can recognize before they can be placed on the page. FreeHand accomplishes this through the Export function. Illustrator documents are automatically saved in EPS format which both PageMaker and QuarkXPress recognize.

TIFF

Although there are many options, each which has uses, TIFF is the accepted file format for scanned images to be imported into PageMaker or QuarkXPress. It's very reliable and cross-platform compatible.
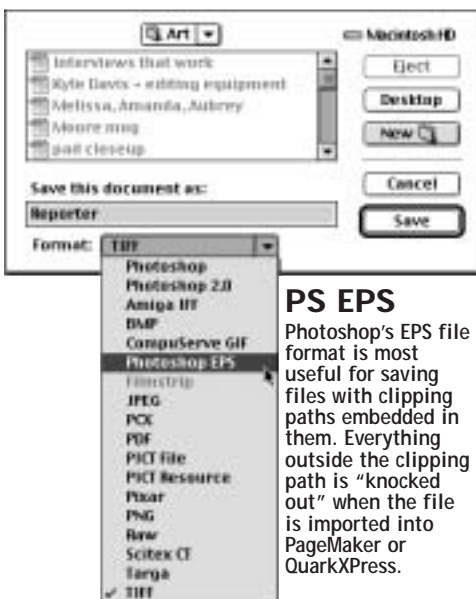

Programmers specifically created the TIFF file format for scanned images. When saving a file from a Macintosh to be used on an IBM PC, be sure to select the right byte order (and visa versa). Both PageMaker and QuarkXPress support LZW Compression which makes the files slightly smaller by organizing the bytes in a different manner. In general, use LZW Compression.

PS EPS

Photoshop's EPS file format is most useful for saving files with clipping paths embedded in them. Everything outside the clipping path is "knocked out" when the file is imported into PageMaker or QuarkXPress.

PATHS

Photoshop's EPS file format allows the user to specify the clipping path ("head" in this case).

EPS

Notice that when this file was exported as an EPS file and placed on the page, it could be enlarged (from the small version on the previous page) to the large version on this page with no noticeable loss of quality. This vector image was made up of lines and curves, not pixels, unlike a Photoshop image.