

Bitmap, vector, and metafiles

Traditionally, computer graphics files have been saved as either *bitmap* or *vector* files. Bitmap file formats, such as TIFF, GIF, and JPEG, are great for saving natural, organic scenes with subtle texture, shading, and color, such as photographs and sketches. Vector files are great for describing precise, clean-edged line art, logos, and drawings.

Bitmap files are stored as a grid of colored dots, and have usually come from scanners or software such as Adobe Photoshop. Vector files are stored as a mathematical description of curves and objects, and usually come from Adobe Illustrator, CorelDRAW, or FreeHand.

The latest versions of Illustrator and Photoshop make this distinction between bitmap and vector less clear. For example, Illustrator 9, traditionally a vector application, has several new features that allow bitmap object creation and editing. Likewise, Photoshop 6, traditionally a bitmap application, now has the ability to create and manipulate certain types of vector objects. The resulting files, which can contain both bitmap and vector information, are usually saved in the EPS file format.

EPS is a *metafile* format. This means that EPS files can contain both bitmap and vector data in the same file. Within such

a file, the vector portions will behave as they would in a vector file, and the bitmap portions as they would in a bitmap file. In other words, if you enlarge an EPS file that contains both bitmap and vector data, the bitmap data may become jagged, as the image pixels become larger and more visible, but the vector data will remain crisp and smooth.

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