CHAPTER 18: METAFILES

Metafiles vs. Bitmaps: Metafiles are to vector graphics as bitmaps are to raster graphics. Metafiles are constructed by humans, while bitmaps generally originate from real-world images. Metafiles consist of a series of binary records that correspond to graphics function calls, while bitmaps are a collection of pixels.



Creating and Editing: "Paint" programs create bitmaps, while "draw" programs create metafiles. In a well-designed drawing program, you can easily grab and move individual graphical objects because they are stored as separate records. In a paint program, you are generally restricted to moving or removing rectangular chunks of the bitmap.



Scaling: Because metafiles describe an image in terms of graphical drawing commands, the metafile image can be scaled without loss of resolution. Bitmaps, on the other hand, cannot be scaled without losing resolution.



Converting: A metafile can be converted to a bitmap, but with some loss of information. Converting bitmaps to metafiles is much more difficult and usually requires a lot of processing power.

 

Uses: Metafiles are most often used for sharing pictures among programs through the clipboard, although they can also exist on disk as clip art. Because metafiles take up much less space and are more device independent than bitmaps, they are generally the preferred format for sharing and storing images.



Windows Metafile Formats: Microsoft Windows supports two metafile formats: the original metafile format, which has been supported since Windows 1.0, and the enhanced metafile format, which was developed for the 32-bit versions of Windows. The enhanced metafile format has several improvements over the old metafile format and should be used whenever possible.

