

Common Raster Image Formats

Windows Bitmap (.bmp)

A common image format in Windows programs. Good for printing images

Advantages

- No loss in quality
- Millions of colours
- Preferred format in some Windows applications

Disadvantages

- Large File Size
- Only used in Windows and may not be recognised in other systems

Tagged Image File Format (.tif)

An image format recognized by most computer systems. Useful if compatibility with non-windows systems is an issue. Used as the preferred image format by many professional printers due to its high quality.

Advantages

- No loss in quality
- Millions of colours
- Not specific to Windows – used on other operating systems such as Mac and Linux

Disadvantages

- Large File Size
- Not compatible with some windows applications
- More options than BMP

Joint Photographic Experts Group – JPEG (.jpg .jpeg .jpe)

A common image format for use on the Internet and in digital cameras due to its small file size. It uses complicated compression algorithms to reduce the size of files while sacrificing a small amount of image quality. Information discarded is often not visible to the human eye. When a picture is saved as a JPEG file, most editing programs allow you to choose the compression ratio. More compression means a smaller file but poorer image quality.

Advantages

- Millions of colours
- Recognised these days on most computers and in most applications
- Format used by many digital cameras
- Common format for pictures in websites
- Progressive image rendering

Disadvantages

- Small file size
- Some loss in quality
- Doesn't look as good when used in professional quality print jobs



High quality
JPEG
86kb



Low quality
JPEG
9kb

Graphic Interchange Format (.gif)

The first image format to be used on the World Wide Web. Gif images are good for images with a limited number of colours, such as logos, graphs and drawings, but are not as good for photos and more complex images.

Advantages

- No loss in quality
- Small file size due to method of storing image information
- Progressive rendering (interlacing)
- Transparent areas
- Animation

Disadvantages

- Limited to a maximum of 256 colours in an image so some types of images won't look good in GIF format
- Uses a patented technology for compression, so any program using it must pay a license fee

Portable Network Graphic (.png)

A fairly new image format which was created to be a licence free improvement on the GIF format.

Advantages

- Can have 256 colours like a GIF or millions of colours like a JPEG
- Supports alpha channels allowing full and partial transparency
- Progressive rendering
- Small file size due to compression

Disadvantages

- Files with millions of colours are often larger than similar JPEG images
- Not yet supported in some programs
- Doesn't support animation like GIF

For good information on the differences between GIF, JPEG and PNG see http://www.webopedia.com/DidYouKnow/Internet/2002/JPG_GIF_PNG.asp

Common Raster Image Editing Programs

Adobe Photoshop

Macromedia Fireworks

Corel Paint

Jasc Paintshop Pro

GIMP

