

A Practical Guide to Working with Images

Most home computer users have reasonably simple needs and applications for digital images. Exchanging images via email, printing them out, or maybe inserting them into a document is as far as most people go – so let's discuss the basics.

Formats

JPEG - The Internet community has unofficially adopted the .JPEG file extension as the standard – it's universally readable in Windows, Mac, Linux and Unix, allows for small file sizes and faster transmission times, and doesn't sacrifice image quality. JPEG is usually the best choice for general purposes.

GIF – Gif is still in wide use also, mostly for Web page applications. Gif images are similar to bitmap images in that they use a set number of colors and set color palate, and also allow for transparent backgrounds (allowing an underlying color, for instance, a page background, to show through “blank” areas of the image). Additionally, simple animations can be made with a GIF file. For these reasons, GIF is still a common format, and may be a good choice for Web page graphics or where a transparent background is needed.

Bitmap (.bmp), Tiff (.tff), PortableNetworkGraphic (.png), and other formats are occasionally used, but are unimportant for our purposes. Feel free to look them up on Google or Wikipedia for more info if you're curious.

Size and Quality

The visual size of a digital image is measured in pixels rather than inches.

First, let's define a pixel. A pixel is a very small, single dot on your computer's monitor. All images are made up of lots of little pixels, so small and close together that the human eye sees them as a single, smooth image.

Most computer screens are 1024 pixels across by 768 pixels high, for a total of 786,432 pixels. Some computers use screens as small as 800 pixels high by 600 pixels wide, for a total of 480,000.

So, a 640 x 480 pixel image would be very large on the smaller (800x600) screen, taking up almost the whole display. But it would be significantly smaller on the larger (1024x768) screen, taking up only a small portion of the display, but shown in equally high resolution. This is why digital images (and web pages, and many other graphical interface items) are measured in pixels rather than inches.

There is a direct relationship between the graphical (pixel) size of an image, and the file size (hard drive space used) of that image. The larger an images file size, the longer it will take to transmit via email (or download on a Web page, etc...).

Some modern digital cameras take photos at an extremely high resolution, taking excellent pictures – at a price of large file size. My camera, for instance, is a 2-or-3-year-old Canon 7 MP (megapixel) model. It takes photos at 3072x2304 pixels, for a file size of about 20 megabytes. Although extremely sharp looking, this is much too large to send via email – two megabytes is a reasonable limit for most purposes, and even smaller file sizes should be used if sending to or from a dialup Internet account. This is where resizing images comes into play.

Resizing an Image allows you to shrink it, lowering both its pixel size and file size. There are lots of free programs to do it, and I recommend a standalone little application called Fotosizer (can be found and downloaded easily with a Google search).

When resizing photos, make sure to keep the ratio intact. In all of the resolutions mentioned so far (640x480, 800x600, 1024x768, and even 3072x2304) the ratio is 4 to 3 – four units across, three units high. This is the ratio for “landscape” oriented shots – it’s the opposite for “portrait” oriented shots. Disturbing this ratio will make the picture look “stretched” or “squished” depending on which way the ratio is altered. I resize any “landscape” oriented image to 800x600 pixels for email – this size can be displayed properly on any monitor, retains enough resolution to look good, and produces a file size of less than 512k (half of one megabyte). When resizing images, remember to keep a copy of the image full-resolution incase you decide to print the image later on – the full-resolution copy will make a better print.

To check an image’s file size, simply right-click it and click Properties.

Sending images via Email - Most email clients give you a choice between attaching and embedding an image – attaching the image sends the image file along with the email, in an “attachment” which must be opened separately by the recipient, while embedding the image displays it directly in the text of the email. The exact procedure is different with every email client, and a quick Google search of “How to (Attach/Embed) an image with (Email Handler)” will yield instructions.

Saving an image - rather it’s from an email or from a Web page, you can almost always save an image by right-clicking on it and then clicking Save As or Save Image As. Choose a location to save it to, optionally change the file name, and click Save.

Uploading an image to the Web - Another option for sending an image to friends is to upload it to a free hosting service. This sounds difficult and complicated but it’s actually no more difficult than sending an image via email. The advantage to using a free hosting service is that you only send a link to your friends, not the image itself – this way if some of them are on dialup internet, or have small email inbox size limits, the file won’t be clogging up their inbox, they can simply click the link you send them to view the image. My favorite image hosting service is www.imageshack.us – that’s ImageShack.US . You can upload any image under 1.5MB. If your image is larger than that, you’ll need to resize it with a tool like Fotosizer before uploading.

- § From their home page, click the Browse button, and navigate to the image you want to upload. Highlight the file and click Open.
- § You don’t need to put in your email address in the box below – just ignore it.
- § You can choose to have ImageShack automatically resize the photo for you – if it’s a large image, you may choose to drop it down from here. If you’re happy with the image’s size, just ignore that box.
- § Either way, click “host it!” to upload.
- § After the file uploads, you’ll be shown a page with a thumbnail preview of your image, and several different links. The different links are provided for different purposes, and are labeled, such as “Thumbnail for websites” “Thumbnail for forums”, etc...
- § Highlight the link labeled “Direct Link to Image” (it’s the last one) and copy it to the clipboard (Edit > Copy or Ctrl + C on the keyboard).
- § Paste that link into the email you want to send.

ImageShack provides a great plugin for FireFox that allows you to upload multiple images at once.

Printing Images

Windows provides you with a great utility for printing images.

- § First, gather all the images you want to print into a folder (by copy-and-pasting or dragging-and-dropping them). Remember, you can save an image into a folder from an email or Webpage by right-clicking it.
- § Highlight all the images you want to print, and then click the “Print the Selected Pictures” link in the upper left corner of the window, or right-clicking them and clicking Print..
- § This launches the Photo Printing Wizard.
- § Click Next.
- § Uncheck the boxes of any pictures you don’t want printed, or duplicates and click Next.
- § Select the printer you want to use. If you want to view the options for your printer, you can click Printing Preferences here. Click Next.
- § Choose the size and number of prints on a page. Using the scroll box on the left, you can choose several options – one 8x10” photo per page, wallet size prints, two 5x7” prints per page, three 4x6” prints on a page, etc...
- § Click Next again to print.

Inserting an Image into a Word or Publisher document

- § In any Microsoft program, insert your cursor where you want the image to go, then click the Insert toolbar > Picture > From File. Browse to the location of the image and double-click or click Open to insert it.
- § You can resize the image on the page by clicking-and-dragging the small black “handles” at the corners of the image.
- § You can change the position of the image by right-clicking on it, then clicking Format Picture > Layout. In the some of the modes, you can click-and-drag an image around on the page – play with the modes in this Layout tab to achieve the desired result.

Setting a Desktop Background

- § Right-click any open spot on your desktop
- § Click Properties
- § Click the Desktop tab
- § Click Browse
- § Browse to the image you want and double-click it or click Open.
- § Choose rather you want the image “stretched” (takes up the whole screen), Centered (in the middle of the screen, for images too small to fill up the whole screen), or Tiled. You can try each option and “preview” it in the little box to see which looks best.
- § Click Apply, then OK.