Graphics in Communications and Presentations

In pre-email days, we didn't have to think twice about placing a graphic in our communications or presentations. Today, when the majority of our communications are being sent via email, we need to consider how these graphics add to the size of the file we are sending.

Those we are sending files to by e-mail don't necessarily have the most efficient speed available, so sending a large file can result in long download times. Depending upon whether our mail recipients are receiving our communications via a telephone line modem or a fast downloading cable line, download times vary-seconds vs. minutes as this chart shows.

How long does it take to download a document?

This is the download time of a document with a file size of 1M (megabyte) =1,000K (kilobyte)

Modem Speed	Download time
32K (typical speed for 56k phone modem)	4 minutes
128K ISDN line	1 minute
750K DSL or cable modem line	10 seconds
1,500K T1 line	5 seconds

Generally it is wise not to attach a file larger than 300k - 400k maximum when using email.

Understanding File Size

Make sure you have the view selected that reveals the size of your file. Select the details button on the tool bar to see the size of a file.

The standard measurement units used on your computer are gigabytes, megabytes, kilobytes and bytes. Kilobytes (KB) is the default setting on your PC.

	Term	Approximate	Actual
Largest	Gigabyte (GB)	1,000,000,000	1,073,741,824 bytes
Larger	Megabyte (MB)	1,000,000	1,048,576 bytes
Large	Kilobyte (KB)	1000	1024 bytes (about 1MB)
Basic Unit	Byte	1 byte	1 byte

To give you an idea of a typical file size - a one page word document without graphics is approximately 25K. -- Add one generic Microsoft Clip Art Gallery Graphic and your file size increases to 41K. So far, you're pretty safe.

But if you use a graphic from another source (scanned, digital camera etc.) to give a visual definition to your text, the size of your graphic file will increase dramatically. Remember, too, that color photos also dramatically increase file size. A typical medium resolution graphic from a digital camera or scanner can be 300-500K. That's huge. Resizing the picture/photo in your Microsoft Word document will NOT make the file size of the picture smaller - it will only make the picture look smaller in your document.

If you do not resize the actual picture, adding a 300K graphic to your document can increase the size of your document to around 4M! Sending this using a phone line modem could result in their having a 10-minute download for your e-mail alone.

### How do I change the size of my picture?

Open up your photo in Microsoft Photo Editor. Microsoft Photo Editor is part of the Microsoft Office package in 97 and 2000. Press Start Button/Choose Programs/Microsoft Office Tools. (If you have Windows XP, Windows Picture and fax viewer is the tool to use.)

Make sure you are viewing your photo at 100%.

Choose the 4th menu item - Image/resize and then resize the photo to suit.

Save your picture and then insert into your document.

December 13, 2002
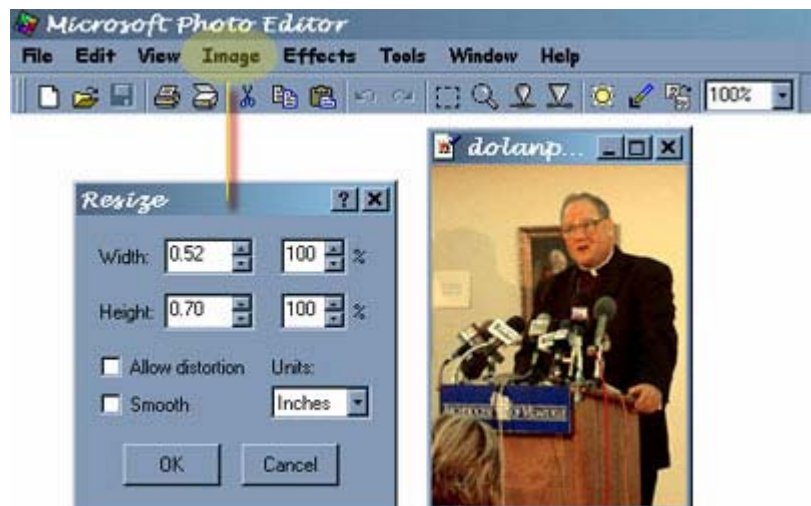
While this may be an extra step for you in putting your communication together, the hundreds you serve and send e-mail to will appreciate the shorter download time.

Common Graphic File Formats

BMP - Windows Bitmap - A commonly used format for high quality scanned images. The images are based on square bits of information called "pixels" to build the image, where each pixel is a separate color and the entire picture is made up of a patchwork of these color pieces. The resolution is an important part of how the bitmap will look.

JPEG - This bitmapped format is probably the most common format for receiving photographs. JPEGs use a type of built in compression to reduce file size. JPEGs are also very common for photographs on the web.

TIFF-Tagged Image File Format - This bitmap form is probably the best type of image to use in print for high quality images, especially for scanned images such as photographs. A tiff file does not lose any of its quality when resized and can be used across many software platforms. This quality causes tiff images to be VERY large. Having a tiff file as your original and then saving in different formats for transporting via e-mail etc. gives the best quality original to work with.

GIF- Graphics Interchange Format (GIF) should NEVER be used in print. This format was designed specifically for on-screen viewing where quick download time was more important than quality. Gif files are great for creating on screen animations for the web or for a Power Point presentation where the audience will be viewing via a monitor screen rather than a printed piece. Note that many of your Microsoft Clip Gallery pieces that are available for download on the web are gif files.

To illustrate size differences in file types, let's suppose we take a color graphic of approximate 300 x 300 pixels (1 inch x 1 inch). When saved, the files compare as follows:

File Type	*Size*
tif	232K
bmp	226K
pdf	53K
jpg	52K
gif	26K