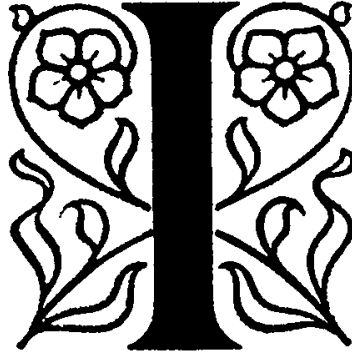


# The New York Society Library Presents:



## Digital Images

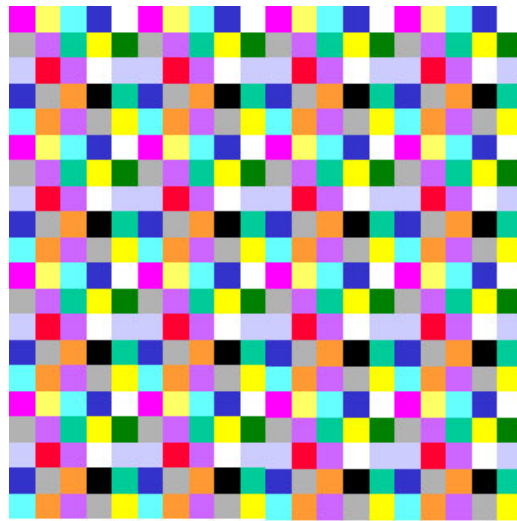
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## DIGITAL IMAGES



### DEFINITIONS:

Images are made up of tiny dots that have been assigned, or "mapped," to a given space. These dots are referred to as pixels. The resolution of an image is defined by the number of pixels per inch that make up the image. High resolution images contain more (smaller) pixels per inch than low resolution images.

Bit depth is a measure of how much computer memory is used by each pixel of the image. Each pixel has a bit depth ranging from 1-32. The larger the number, the more memory used and the better the quality of the image. Simple black and white images, which have a bit depth of 1, will have a much smaller file size than the same image saved in 24-bit depth in 16 million colors

### TYPES:

#### BMP - Bitmap

Standard image format on DOS and Windows-compatible computers. The BMP format supports RGB, indexed-color, grayscale, and bitmap color modes. True-image format - can be edited and resaved without loss of information.

#### TIFF - Tagged Image File Format

A type of image file format, TIFF files can include color or grayscale. The quality of the image is determined by its resolution or dpi. Especially useful for graphics that will be used in many applications or on more than one computer platform. True-image format

#### GIF - Graphical Interchange Format

One of the two most common image file formats on the Internet today, especially for banners and logos. A GIF image can consist of a maximum of 256 colors (8-bit color depth). Compressed-image format. Editing and resaving image will degrade image.

#### JPEG - Joint Photography Experts Group

A common file format for photo-realistic images. Not as common as GIF for banners because JPEG compression has a tendency to blur small text. Compressed-image format with 24-bit color depth.

## DIGITAL IMAGES



## INTERNET

One way to get digital images onto your computer is by downloading them from the Internet. The easiest way to find these images is by using search engines or photo sharing groups. Load the web page containing the picture and right-click the picture with your mouse. Choose "Save Picture As" and choose a location on your hard drive. Caution: many pictures on the web are copyrighted.

Some places you may wish to start to look for images:

### SEARCH ENGINES:

- Google Image Search: <http://images.google.com>
- Altavista Image Search: <http://www.altavista.com/image>
- PicSearch: <http://www.picsearch.com>

### CLIP-ART DOWNLOADS:

- Microsoft Office: <http://office.microsoft.com/clipart/>

### PHOTO SHARING:

- Flickr: <http://www.flickr.com>
- PhotoBucket: <http://www.photobucket.com>
- SmugMug: <http://www.smugmug.com>

To organize downloaded images on your computer, you may wish to use a program such as Google's Picasa (<http://picasa.google.com/>) Picasa searches your computer (or select folders) for images and organizes them in one program. It also has minor editing features. Best of all, it's also free.

### COMPUTER SNAPSHOT:

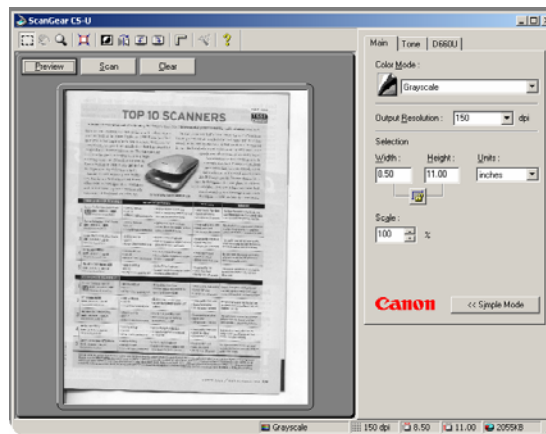
To take a snapshot of your computer screen, hold down <SHIFT><Print Screen> simultaneously. Open a graphics program (example: Start→ Programs→ Accessories→ Paint) and select Paste.

## DIGITAL IMAGES



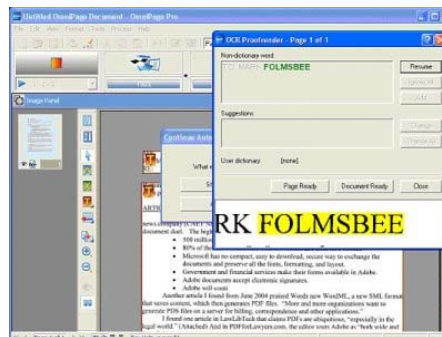
## SCANNERS

A secondary means of converting photos and clippings into digital format and onto your computer is by using a scanner. Scanners work on a premise similar to a photocopier. The two major types of scanners are: flatbed (desktop) and hand-held (portable).



To scan a photo, place in the upper-right hand corner of the scanner. Open your graphics program and select File→ Scan Image. Click "Preview" to load the new image. Highlight the portion you want scanned and select "Scan".

There are several additional settings off to the right that you may also wish to modify, including color mode (black & white, grayscale, color), resolution (dpi) and size (in inches, centimeters or pixels).



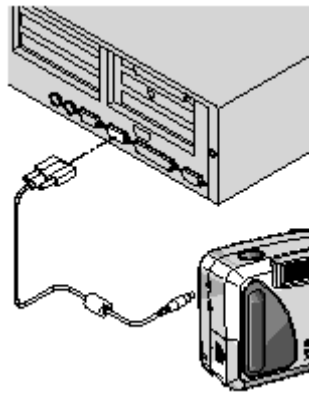
To scan text (such as a document or book), your scanner will need to have OCR (Optical Character Recognition) software installed.

## DIGITAL IMAGES



## DIGITAL CAMERAS

Another way to get pictures into your computer is with a digital camera. Digital photographs are already in a format that makes them incredibly easy to distribute and use. With many cameras you can immediately see your images on a small LCD screen on the back of most cameras. More information on digital cameras (including buying tips) at: <http://www.shortcourses.com/choosing/contents.htm>



To get pictures from your camera onto your computer, you'll need a special USB cable and the software from your camera. Plug your camera into the cable and the cable into your computer.

If the pictures don't start transferring automatically, click on Start→ Settings→ Control Panel→ Scanners and Camera. Double-click on your camera to start the picture transfer. You may also have the option to delete the photos after the transfer.

## DIGITAL IMAGES

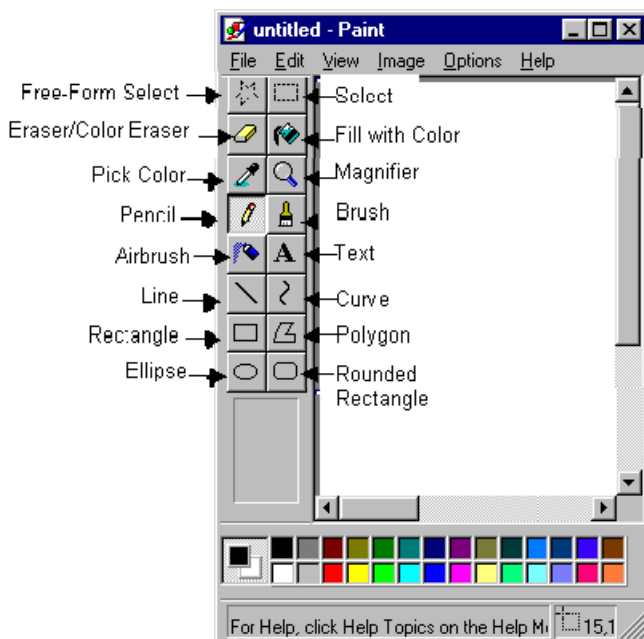


### MICROSOFT PAINT

Click Start→ Programs→ Accessories→ Paint

Paint is a drawing tool you can use to create simple or elaborate drawings. These drawings can be either black-and-white or color, and can be saved as bitmap files. You can print your drawing, use it for your desktop background, or paste it into another document. You can even use Paint to view and edit scanned photos.

You can also use Paint to work with pictures, such as .jpg, .gif, or .bmp files. You can paste a Paint picture into another document you've created, or use it as your desktop background.



The buttons at the top left of the screen (many which will cross over into other graphics program) are:

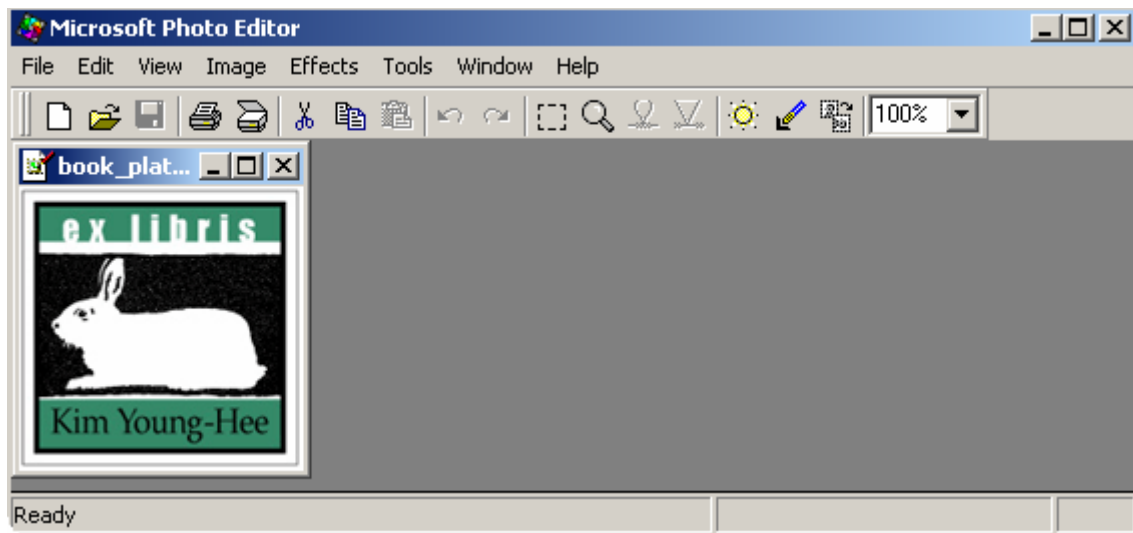
LEFT:

Free-Form Select, Eraser, Pick Color, Pencil, Airbrush, Line, Rectangle, Ellipse

RIGHT:

Select, Fill With Color, Magnifier, Brush, Text, Curve, Polygon, Rounded Rectangle.

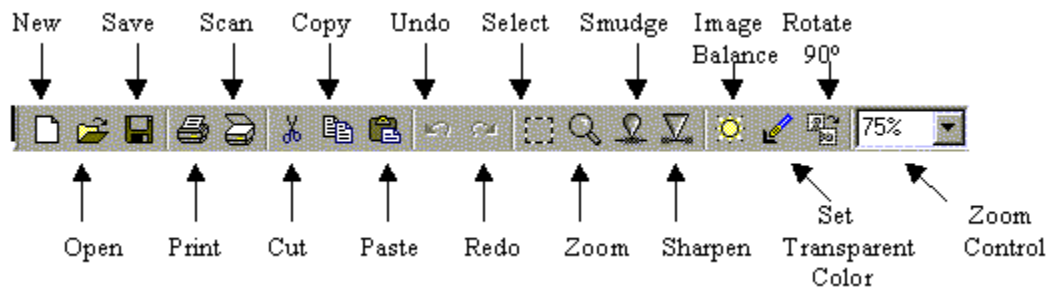
## DIGITAL IMAGES



### MICROSOFT PHOTO EDITOR

Start→ Programs→ Microsoft Office→ Microsoft Office Tools

Microsoft Photo Editor is an imaged editing program that is part of Office Tools. If you have Microsoft Word or Excel installed on your computer, you might also have Microsoft Photo Editor installed.



#### To Resize an Image

1. Pull down the Image menu Resize . . .
2. Enter the new width and height or the percentage of the original
3. Click OK

#### To Crop an Image

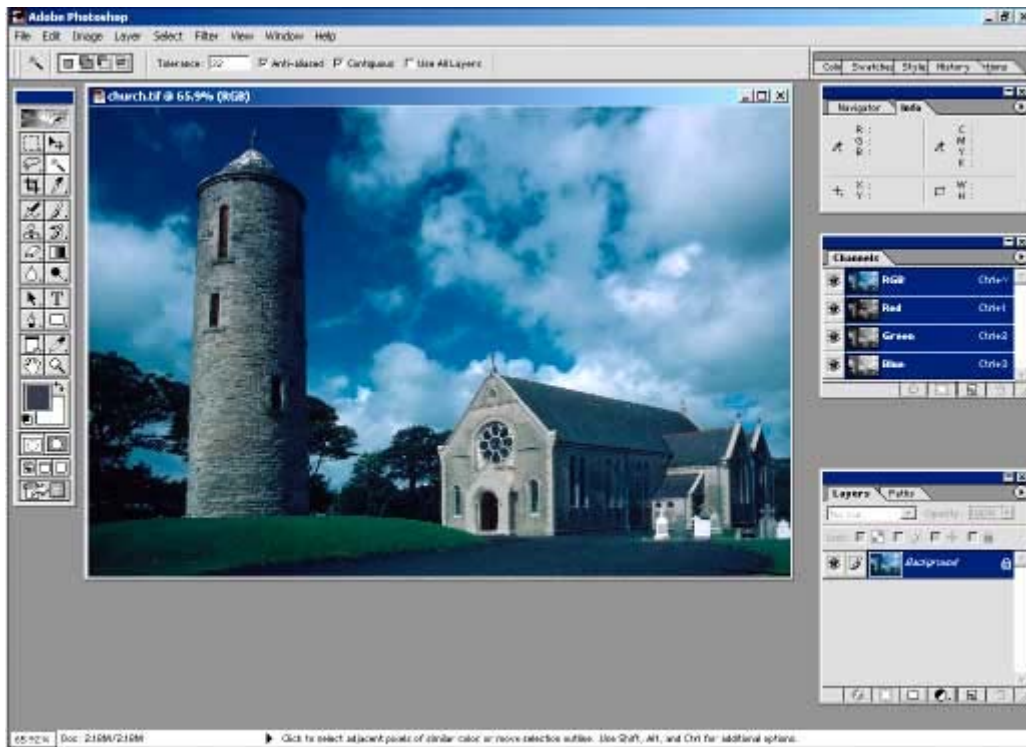
1. Click on the Select icon on the toolbar
2. Drag the mouse over the area you want to keep
3. Pull down the Image menu Crop
4. Click OK

#### To Adjust Image Brightness/ Contrast/ Color Balance

1. Either click on the Image Balance icon or pull down the Image menu and choose Balance . . .
2. Slide the Brightness bar to change the brightness
3. Slide the Contrast bar to change the contrast
4. Slide the Gamma bar to change the color balance
5. You can change individual colors by pulling down the All colors menu
6. Click OK when done



## DIGITAL IMAGES



**ADOBE PHOTOSHOP (\$500-600)**  
Start→ Programs→ Adobe Photoshop

### The Menu Bar

The menu bar consists of nine menus: File, Edit, Image, Layer, Select, Filter, View, Window, and Help. Some menu commands are followed by a right pointing arrow. This indicates a submenu of related commands.

### The Status Bar

The status bar at the bottom of the window displays useful information--such as the current magnification and file size of the active image, and brief instructions for using the active tool.

### The Toolbox

The toolbox appears on the left side of the screen. Some tools in the toolbox have options that appear in the context-sensitive tool options bar. These include the tools that let you use type, select, paint, draw, sample, edit, move, annotate, and view images. Other tools in the toolbox allow you to change foreground/background colors, work in different modes, and jump between Photoshop and ImageReady applications.

### The Palettes

Palettes help you monitor and modify images. By default, palettes appear stacked together in groups.

### Additional Help

For more information on using Adobe Photoshop, open Photoshop and select "Help" and "Contents." This will bring up an interactive user's guide to Photoshop (installed locally on your computer).

**DIGITAL IMAGES**

**NOTES:**