

Intro to Computer Graphics CIS 225/M-F.

Photoshop is a Raster image editing program. The native file format extension is .psd. EX.] filename.psd

What is Raster? Raster/bitmap: In computer graphics, bitmap (or raster graphic) is a digital image composed of a matrix of dots. When viewed at 100%, each dot corresponds to an individual pixel on a display. In a standard bitmap image, each dot can be assigned a different color. Together, these dots can be used to represent any type of rectangular picture.

Web image formats: PNG JPEG GIF PNG Portable Network Graphics format. PNG (usually pronounced “ping”), is used for lossless compression. The PNG format displays images without jagged edges while keeping file sizes rather small, making them popular on the web. PNG files are generally larger than GIF files. 8-bit and 16-bit JPEG is a commonly used method of lossy compression for digital images, particularly for those images produced by digital photography. The degree of compression can be adjusted, allowing a selectable tradeoff between storage size and image quality. 8-bit GIF (Graphics Interchange Format) GIF images display up to 256 colors. It supports animation and allows an individual palette of 256 color for each frame. The color limitation makes the GIF format inappropriate for reproducing color photographs and other images with consistent color. GIF images are compressed using the LZW lossless data compression method to decrease the size of the file without corrupting the visual quality. Animated GIF A small animation based on continuous GIF images, giving the impression of movement or action.

Lossless Refers to a form of data compression where the detail is maintained and no data is lost after file downsizing. The lossless compression method is often used in TIFF and GIF formats.

Lossy A form of data compression where detail is deleted as the file size is decreased. JPEG is an example of a lossy compression method.

Resolution The resolution of an image is an important factor in deciding the attainable output quality. The higher the resolution of an image, the less pixelated it will be and the curves of the image will appear smoother.

DPI (Dots Per Inch) A term to describe the measure of sharpness within an image. Used when an image will be used on a printed design.

PPI Pixels Per Inch. A measurement of the resolution of a computer display. Used when images will be displayed on a screen as opposed to printed.

Pixel The smallest picture content that can be individually assigned a color.

High-Resolution Image An image with an extreme level of sharpness/clarity.

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Larger Image file formats: TIFF and PSD TIFF (Tagged Image File Format) A graphic file format used for storing images . TIFF is a commonly used file format for high color depth images.

PSD is the native file format for Adobe Photoshop. Sometimes it is beneficial to keep images in this format for reasons which will be discussed more when we get into using Adobe InDesign.

RGB (Red, Green, Blue) RGB is the color model used to project color on a computer monitor. By combining these three colors, a large percentage of the visible color spectrum can be represented.

CMYK Stands for Cyan, Magenta, Yellow, and Key color (aka — black); this color model (also called process color, four color process) is a subtractive color model used in color printing.

Royalty-Free Photos Intellectual property like photos and graphic images that are sold for a single one-time standard fee. These can be used repeatedly by the purchaser only, but the company that sold the images usually still owns all the rights to it.

Rights-Managed Photos: The buyer pays a licensing fee in order to be able to use the image. That licensing fee is based on usage. For example: location, type of media, length of time the photo will be used, etc. The buyer can also opt to pay for exclusive rights and there can be restrictions that apply based on all of the above factors.

<http://blog.imagebrief.com/the-difference-between-rights-managed-and-royalty-free/>

Watermark Translucent design impressed on paper created during manufacture, it is visible when held to light. You can also create a digital watermark and overlay it onto an image

Zoom Most design software lets you zoom in or out on an image to get a closer or farther away look. Zooming in is especially useful when photo retouching or working on tiny details. Ctrl +/- (or Command +/- on a MAC) **Canvas Size** Allows you to change the complete size of the document without adjusting the contents of the document

Opacity The degree of a color or tonal value. The opacity of an image or object that can range from transparent (0% opacity) to opaque (100% opacity). The ability to edit the opacity of specific objects allows the designer to create images that seem to flow into and through one another.

Crop A tool that removes portions of an image. It is usually used in digital photography.

Selection Selection refers to an area of an image that is isolated so it can be edited while the rest of the image is protected.

Thumbnail A thumbnail is a reduced-size version of the original image.

Key commands to remember:

Ctrl/Z to undo and redo one time

Ctrl/Z/Alt to undo more than one time Ctrl

+ or – to zoom in or out Ctrl/A to select all

Ctrl/C to copy Ctrl/V to paste