

Digital Image Vocabulary

by Peggy Ash

Digital Image- A numeric representation of an image

Pixel- “Picture Element”, smallest element in a digital image, it has a numeric color value based on RGB color. Each pixel is only one color. A digital image is measured in pixels in the form of the number of pixels wide by the number of pixels high (1798 x 1199). This is determined by the number of color sensors in a digital camera. A 12-megapixel camera has 12 million sensors and thus can produce that many pixels lined up in rows and columns. Compression reduces the size. In scanning, the number of pixels are determined by the resolution and size of the scanned image. To find this information on a photo right click on the photo and choose “PROPERTIES”.

Mega Pixel- One million pixels

RGB Color- “RED, GREEN, BLUE” Each of these colors has a numeric range from 0-255. When combined, there are 16,777,216 possible color combinations! Color photos always use RGB color. Each pixel has three numeric values representing each of these three RGB colors.

	R	G	B
Pixel example: Yellow =	255	255	0
Magenta =	255	0	255
Cyan = 0	255	255	0
Black =	0	0	0
White =	255	255	255
Gray =	50	50	50(or any equal RGB numbers depending on shade)



“Grayscale” uses shades of gray for other black and white images that don’t need the sharp lines that text does. **But always do black and white photos in color mode!**

dpi- “Dots Per Inch” with printers or with digital images it means “Pixels Per Inch”

ppi- “Pixels Per Inch”

JPEG(.jpg)- “Joint Photographic Experts Group” named after the group that created it. A “lossy” (lose quality) compression for digital images which was designed for use with email and web postings. Each time a file is saved there is more compression and loss of quality. When editing a photo, or rotating a photo it is resaved, recompressed, and thus loses quality. File size is relatively small due to compression.

TIFF(.tif)- “Tag Image File Format” is a “lossless” file format that can be used for many different purposes. It can be resaved without losing quality but is a much larger file. Best for all purposes especially archival.

LZW- “Lempel-Ziv-Welch” which are the creators. It is a type of lossless compression used in TIFF files.

PNG- “Portable Network Graphics” A “lossless” newer file format that is becoming more widely accepted. A little smaller file sizes but has slower read times.

RAW- A digital image with lots of information included in its original form. It is considered the negative form of a digital image because it must be converted to another image format before it can be used. It is completely “lossless” and can never change. Stores as a large file. Mainly available in cameras but is the best “lossless” file format.

SCANNING

Scanners: I recommend getting a simple PHOTO scanner that is highly rated and not very expensive. The bells and whistles of a more expert scanner will be confusing and not used unless you really get into it. If you do get into it then you will know what to buy in a more expensive one. The following designations will probably be different on your scanner but similar.

Mode: AUTO (NO! You have no control), HOME, OFFICE (don't use with digital images), PROFESSIONAL. Go with the one that is easiest for you. Play around with it! You can always undo what you have done and scan things again. I use HOME the most often.

Document Type: your scanner might say things like: photograph, positive film (slide), color negative film, black and white negative film, etc. The scanners are pretty smart and know what is generally best for the document type you are doing and will set it up automatically then let you make adjustments. Always choose negatives over a photo. A negative is meant to contain a lot of detail for enlarging, a photo isn't. However, sometimes the color processing of the photo enhances the color of the negative, so you might want to scan the photo in that case.

Image Type: COLOR even if it is black and white!

Destination: Choose whatever saves the file to your computer. Mine is “Other”.

Resolution: 300 dpi is considered a standard scan but it really depends on the size of your photo
Small photo= higher resolution, Large photo=lower resolution. Always look at the pixelization on the face to determine the best resolution.

File Sizes: Kilobytes=small, Megabytes-medium, Gigabytes=big, Terabytes=huge

FAMILY SEARCH LIMIT=15 MB

Image Adjustments: Play with them and see what happens! “Color Restoration” can be incredible for yellowed photos but you may want to copy the original as is and then play.

File Format: Select TIFF, it is a bigger file so just plan on getting and using more storage space.

Name the File: It may not give you much space so if the name doesn't fit, just identify it and finish naming it later.

Save Location: I usually save to my desktop then rename, fix, and group photos into files before transferring them to their final destination. You can do what works for you.