



Peninsula College Continuing Education – Digital Photography

Week 5 - Final output

■ Learn the key aspects of printing, web output, and archiving of digital images

Printing with Photoshop Elements - What you see is not what you get.

Digital printing usually uses the **CMYK** color space/model (cyan, magenta, yellow, and black) while we work on screen in RGB (red, green, blue). The **color gamut** is a certain *complete subset* of color. If a color is out of gamut, that means it can be viewed, but not printed exactly. Over the years, there have been attempts to expand the gamut of the printing process by adding inks of non-primary colors like orange, green, light cyan, and light magenta. You can spend a lot of money to try to improve your output or pay someone else to try reproduce what you see. But, sometimes it is better to give in to the idea that it is “good enough” and most people can’t perceive the difference.

The terms “Giclée” or “Iris” prints has come to be associated with prints using fade-resistant “archival” inks, papers, and the inkjet printers that use them, as well as, a means to market digital prints as fine artwork.

You will find that different printing media will give you totally different results. If you can, try out several different papers before committing a big project. I create a test file that contains most of the prime colors I use and a photo with flesh tones to try out on different papers.

Print Image Matching (PIM) technology ensures that PRINT Image Matching-enabled digital cameras and printers work together to produce the best possible prints. The PIM technology lets the Epson® printer identify print-specific information for each image captured by the digital camera and provides improved color, quality, and detail in prints.

Exchangeable image file format (Exif) uses the information (Exif tags) in photos from digital cameras that support Epson’s Exif 2.2 (Exif Print). The Exif Print-supported printer uses these Exif tags to ensure optimal processing and enhance the print output. Check your printer’s documentation for details.

Not all printers or images work with this technology.

Photoshop Elements has different printing options: Individual photos, Contact sheet, Picture package, and Labels. You’ll find this info in the Help Menu!

Media

Your paper choice can make a HUGE different. You can have the best printer on the block, but with bad paper – your prints will be a sad waste of ink.

It is best to use paper that is recommended by your printer’s manufacturer. But, there is better paper out there! You can order art and archival papers from other companies. I recommend you try a sample pack to see what you like first. Read reviews. Find out what is in fashion or required for an exhibit. Matte, gloss, or fine silk.

Yup! I print on silk! It isn’t easy on the printer, but it has been worth the risk so that I can make apparel with my digital designs.

File Delivery

You can export photos to a folder for backup purposes, or to a mobile phone for viewing. When you export a photo, the original remains protected in your catalog. You can control the exported photo's size and file format.

In the Photo Browser, select the items you want to export, and then select one of the following (you can't export projects): File > Export > As New File(s) to export items to a folder.

File > Export > To Mobile Phone to export items to a mobile phone connected to the computer.

If you chose As New File(s), specify any of the following options:

File Type Specifies the file format for the exported photo. Choose Use Original Format to keep the file in its current format.

Size And Quality Changes the pixel dimensions, file size, compression, and quality of the photo. You can't increase the original image size when exporting using the Original Format file type.

Location Specifies the folder in which to store the exported file. Click Browse to specify a different folder or drive.

Filenames Specifies the name of the exported file. Select Original Names to use the current name of the photos. To export files with the same name plus a sequential number, select Common Base Name and type a name. If a filename already exists in the target folder, the exported file's name is modified to avoid overwriting an existing file.

Click Export.

If you don't use the Export when you plan to send photos via email, think about resizing them.

Saving Options dialog box – when you Save As, you have lots of choices.

Image Compression Specifies a method for compressing the composite image data.

Pixel Order Choose Interleaved to be able to add the photo to the Organizer.

Byte Order Most recent applications can read files using Mac or Windows byte order. However, if you don't know what kind of program the file may be opened in, select the platform on which the file will be read.

Save Image Pyramid Preserves multiresolution information. Photoshop Elements does not provide options for opening multiresolution files; the image opens at the highest resolution within the file. However, Adobe InDesign® and some image servers provide support for opening multiresolution formats.

Save Transparency Preserves transparency as an additional alpha channel when the file is opened in another application. (Transparency is always preserved when the file is reopened in Photoshop Elements.)

Layer Compression Specifies a method for compressing data for pixels in layers (as opposed to composite data).

Baseline (Standard) Uses a format that is recognizable to most web browsers.

Baseline Optimized Optimizes the color quality of the image and produces a slightly smaller file size. This option is not supported by all web browsers.

Progressive Creates an image that is gradually displayed as it is downloaded to a web browser. Progressive JPEG files are slightly larger in size, require more RAM for viewing, and are not supported by all applications and web browsers.

Normal Displays the image in a browser only when the image is fully downloaded.

Interlaced Displays as a series of low-resolution versions of the image while the full image file is downloaded to the browser. Interlacing can make downloading time seem shorter and assures viewers that downloading

is in progress. However, interlacing also increases file size.

Include Metadata Includes copyright information from the File Info dialog box and saves the names of saved selections.

Understanding File Compression

Many image file formats compress image data to reduce file size. **Lossless** compression preserves all image data without removing detail; **lossy** compression removes image data and loses some detail.

The following are commonly used compression techniques:

RLE (Run Length Encoding) Lossless compression technique that compresses the transparent portions of each layer in images with multiple layers containing transparency.

LZW (Lemple-Zif-Welch) Lossless compression that provides the best results in compressing images that contain large areas of single color.

JPEG Lossy compression that provides the best results with photographs.

CCITT A family of lossless compression techniques for black-and-white images.

ZIP Lossless compression technique that is most effective for images that contain large areas of a single color.

File Formats for Saving

BMP A standard Windows image format. You can specify either Windows or OS/2 format and a bit depth for the image. For 4-bit and 8-bit images using Windows format, you can also specify RLE compression.

CompuServe GIF (Graphics Interchange Format) Commonly used to display graphics and small animations in web pages. GIF is a

compressed format designed to minimize file size and transfer time. GIF supports only 8-bit color images (256 or fewer colors). You can also save an image as a GIF file using the Save For Web command.

JPEG (Joint Photographic Experts Group) Used to save photographs, JPEG format retains all color information in an image but compresses file size by selectively discarding data. You can choose the level of compression. Higher compression results in lower image quality and a smaller file size; lower compression results in better image quality and a larger file size. JPEG is a standard format for displaying images over the web.

JPEG 2000 Produces images with better compression, quality, color management, and metadata capability than JPEG. JPEG 2000 also supports transparency in layered images and retains any saved selections. Photoshop Elements saves images in extended JPEG 2000 (JPF) format, which is a more comprehensive file format than standard JPEG 2000 (JP2). You can make files JP2 compatible by selecting an option in the JPEG 2000 dialog box.

PCX A bitmap format widely supported on a variety of platforms.

Photoshop (PSD) The standard Photoshop Elements format for images. You should generally use this format for edited images to save your work and preserve all your image data and layers in a single page file.

Photo Creations Format (PSE) The standard Photoshop Elements format for multiple page creations. You should generally use this format for photo creations to save your work and preserve all your image data and layers in a multiple page file.

Photoshop PDF (Portable Document Format) A cross-platform and cross-application file format. PDF files accurately display and preserve fonts, page layouts, and

both vector and bitmap graphics.

Note: *PDF and PDP are the same except that PDPs are opened in Adobe Photoshop® and PDFs are opened in Acrobat.*

Photoshop EPS (Encapsulated PostScript)

Used to share Photoshop files with many illustration and page-layout programs. For best results, print documents with EPS images to PostScript-enabled printers.

PICT Used with Mac OS® graphics and page-layout applications to transfer images between applications. PICT is especially effective at compressing images with large areas of solid color.

When saving an RGB image in PICT format, you can choose either 16-bit or 32-bit pixel resolution. For a grayscale image, you can choose from 2, 4, or 8 bits per pixel.

Pixar Used for exchanging files with Pixar image computers. Pixar workstations are designed for high-end graphics applications, such as those used for three-dimensional images and animation. Pixar format supports RGB and grayscale images.

PNG (Portable Network Graphics) Used for lossless compression and for displaying images on the web. Unlike GIF, PNG supports 24-bit images and produces background transparency without jagged edges; however, some web browsers do not support PNG images. PNG preserves transparency in grayscale and RGB images.

Photoshop Raw Used for transferring images between applications and computer platforms when other formats don't work.

Scitex CT Used in the prepress industry.

TGA (Targa) Designed for systems using the Truevision video board. When saving an RGB image in this format, you can choose a pixel depth of 16, 24, or 32 bits per pixel and RLE compression.

TIFF (Tagged-Image File Format) Used to exchange files between applications and computer platforms. TIFF is a flexible bitmap image format supported by most paint, image-editing, and page-layout applications. Most desktop scanners can produce TIFF files. In addition, Photoshop Elements can open files in several other older formats: PS 2.0, Pixel Paint, Alias Pix, IFF format, Portable Bit Map, SGI RGB, Soft Image, Wavefront RLA, and ElectricImage.

Web Formats

JPEG In most cases, this is the best format in which to save photographs.

PNG-24 Like JPEG, this is a good format for photographs. Choose PNG-24 rather than JPEG only when your image contains transparency. (JPEG does not support transparency; you must fill it with a matte color.) PNG-24 files are often much larger than JPEG files of the same image.

GIF GIF is the format to use for line art, illustrations with large areas of solid color and crisp detail, and text. Also, if you want to export an animated image, you must use GIF.

PNG-8 PNG-8 is a lesser-known alternative to GIF. Use it for the same purposes (except animation).

Save for Web

You can view your best options for file optimization to use on the web using File> Save for Web. There you can compare image quality, download time, and file size.

What to use when? Ask whom it is going to. They know what they want. Hopefully!

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