

## CSGD 254 PHOTOSHOP I

SEP 13–DEC 06, 2016 | FOX BUILDING, ROOM 421 | TUESDAY 6:30p–9:45p

Instructor: Randy Morgan – morgan@studioix.com – 410-961-1969

## FUNDAMENTALS OF DIGITAL IMAGING

### Basic Functions of Adobe® Photoshop®

**Adobe Photoshop** is the industry-standard, image editing application used worldwide by artists, designers, photographers, scientists and other creatives. This extremely powerful application is only limited by the user's imagination.

In all its glory, all Photoshop really does is...

1. **Changes the color of pixels:** examples include color correction, image adjustments, filtering, painting and blending modes.
2. **Resizes digital images:** examples include cropping, image size, canvas size, transformations and content-aware scale.
3. **Saves digital images in a variety of file formats** (more than 20 unique formats!): examples include PSD (native format), TIFF, EPS, JPG, GIF & PNG.

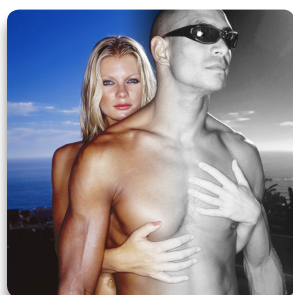


Image manipulated in Photoshop with a **Black & White Adjustment Layer**. A gradient mask is utilized to create a blend of the original color photograph to black & white.

### Properties of Bitmap Images

Digital images (bitmaps) are generated from a variety of sources; digital cameras, scanners, screen captures and from digital imaging applications such as Photoshop, Corel® Painter™, Adobe Fireworks® and others.

All digital images share the following three properties:

1. **Physical dimensions:** width & height.  
**Note:** all digital images are *quadrilaterals* (rectangles or squares). However, the *illusion* that an image is curved, triangular or something other than a rectangle can be achieved in Photoshop (see sidebar).
2. **Image resolution:** rows and columns of pixels used to *resolve* the digital image. Resolution is usually described in **ppi** (pixels per inch). **Note:** images with 72 ppi resolution are referred to as *low resolution* images suitable for monitor or device display (presentations, email and the Internet). Images with 300 ppi resolution are referred to as *high resolution* and are suitable for fine art and commercial printing.
3. **Color mode:** Bitmap, Grayscale, RGB, CMYK and Lab are the popular color modes.  
**Note:** digital images can only exist in a single color mode at any given point in time. However, the *illusion* that an image is both, color and black & white can be easily achieved in Photoshop (see image above).

### The Quadrilateral Canvas

Don't let the fact that all digital images are rectangles or squares inhibit your creativity! The following images are examples of what can be achieved in Photoshop.

#### Vignettes

The dotted border reveals the width & height of the image. Only the photograph with the feathered edges will print.



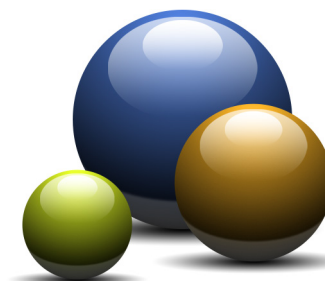
#### Photos in Text

The dotted border reveals the width & height of this example of image in text.



#### Glossy Orbs

The dotted border reveals the width & height of this example of glossy orbs from Photoshop.



Without the dotted borders, these example images would appear to be *floating* on the white page.

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### Methods of Working in Adobe® Photoshop®

Photoshop is an incredibly deep and expansive image editing program and it's easy to get overwhelmed with the incredible array of tools, menu commands, filters, layer effects and other features. However, if you synthesize Photoshop down to the bare necessities, there are really **three basic methods of working** with this fantastic application to create your unique works of art.

1. **Globally:** examples include basic color correction, resizing, rotating, image adjustments, mode changes and filtering.
2. **Locally** (selectively): examples include working within selections, working with layers and masks, as well as working with color and alpha channels.
3. **Specifically:** editing images with various tools that utilize brushes, retouching, eyedroppers, colors, image adjustments and commands.

Consciously working with the above methods and any combination thereof, you can begin to master Photoshop and other software in less time.



**Note:** This same principal works with applications such as Microsoft® Word®. An example would be a letter you composed in Word and you decide to change the font from Times New Roman to Arial – **global change**. You select a paragraph and indent it – **local change**. Finally, you run Spelling and Grammar and fix a misspelled word – **specific change**. You'll find that most software operates in this manner. ☺

### Combining Methods

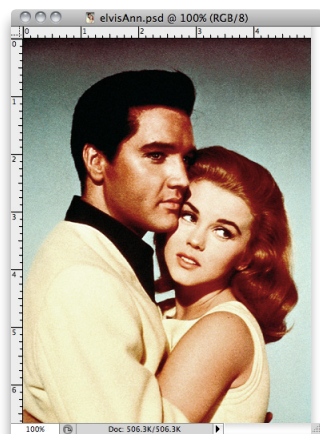


Working methods can be **combined** to create incredible images in Photoshop. The image on the left includes a selection around the model. The selected pixels are currently the only *active* part of this digital file.

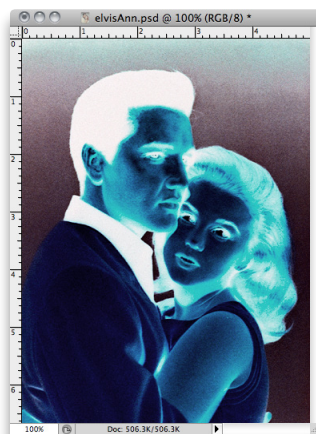
The image on the right has a shadow painted with the **Brush Tool (B)** within the selected area. The pixels of the model (not selected) remain untouched.

Using selections, brushes and filters on **layers** and/or **channels** are simply other examples of working *locally* in Photoshop to create your masterpiece.

### Working Methods Illustrated



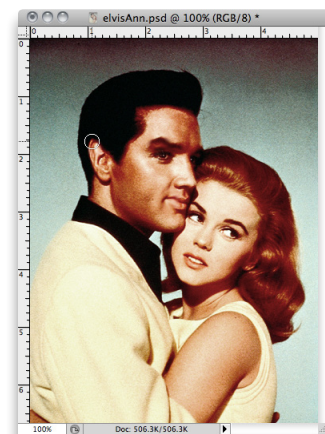
**Original photograph**  
Elvis Presley and Ann Margaret,  
*Viva Las Vegas*, c. 1964



**Global Change**  
The entire image has been inverted,  
**Image ▶ Adjustments ▶ Invert** or **⌘I**



**Local Change (selections)**  
A rectangular selection (selection edges are visible in image) drawn with the **Rectangular Marquee Tool (M)**, then inverted, **Image ▶ Adjustments ▶ Invert** or **⌘I**



**Specific Change (details)**  
The image has been altered with the **Smudge Tool** (brush is visible at tip of ear). Compare this image to the original at left.