Photo Retouching Tool Definitions

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TONE

Exposure - brightens or darkens the entire image

Highlights - brightens or darkens only the light areas

Shadows - brightens or darkens only the dark areas

Contrast - increases or decreases the difference between light and dark areas

COLOR

White balance - the color balance of a photograph. Different sources of light have a different 'color' (or temperature) to them, ranging from the very cool light of blue sky through to the very warm light of a candle. Common White Balance presets:

- Auto – this is where the camera makes a best guess on a shot by shot basis. You'll find it works in many situations but it's worth venturing out of it for trickier lighting.
- Tungsten – for shooting indoors, especially under tungsten (incandescent) lighting (such as bulb lighting). It generally cools down the colors in photos.
- Fluorescent – this compensates for the 'cool' light of fluorescent light and will warm up your shots.
- Daylight – a fairly 'normal' white balance settings, to be used when photographing outside midday
- Cloudy – this setting generally warms things up a touch more than 'daylight' mode.
- Flash – the flash of a camera can be quite a cool light so in Flash WB mode you'll find it warms up your shots a touch.
- Shade – the light in shade is generally cooler (bluer) than shooting in direct sunlight so this mode will warm things up a little.

Temperature - changes the overall color to a warmer or cooler shade (yellow <—> blue)

Tint - fine-tunes the white balance to compensate for a green or magenta tint

Hue - shifts the color values in the photograph, adjusts the type of color. Incremental adjustments can effectively reduce unwanted color casts

Saturation - purity or strength of color, due to the absence of black, white, or gray

Desaturation - decreases the amount of color in the photograph

Vibrance - increases or decreases the amount of color in the image while protecting skin tones

Brightness - the amount of light (white or black) added to a color

HSL - Hue, Saturation, Lightness / Luminance (brightness) - refer to the above. Experiment with HSL at: www.w3schools.com/colors/colors_hsl.asp

Split tone - the process of adding different colors to the shadows and the highlights of a photograph. For example, cooling the shadows by adding blue and warming the highlights by adding yellow.

DETAIL

Grain - digital noise that appears as a sandy texture in the photograph. Grain is the result of photographing in low lighting, adding a grain filter, and/or the over processing of a photograph.

Sharpen - increases the edges of textures in a photograph. Sharpness is a combination of two factors: 'resolution' and 'acutance'. Resolution, the size, in pixels, of the image file. All other factors equal, the higher the resolution of the image - the more pixels it has - the sharper it can be. Acutance is a subjective measure of the contrast at an edge. There's no unit for acutance - you either think an edge has contrast or think it doesn't. Edges that have more contrast appear to have a more defined edge to the human eye.

Clarity - increases details and textures or softens details and textures

Dust + Scratches - a filter that adds digital dust and scratches similar to the actually dust and scratches found on dirty photographic film

FRAMING + LENSES

Crop - the removal of edges of a photograph. Cropping reduces the size of a photograph and can change the height and width ratios of a photograph. Standard ratios: 4:3, 3:2, 1:1, 16:9, 5:7, 10:8.

Boarders + Fames - the addition of color and/or decorative edges to a photograph

Vignette - the darkening or lightening of the corners of a photograph

Lens Correction - the correction of various lens distortions including pincushion, fisheye, and barrel distortions. The corrections are in most cases subtle, but can improve the appearance of some photographs.

BLEND MODES

(used to combine two layered photographs)

NORMAL

- Normal - standard blend mode which uses the top layer alone, without mixing its colors with the layer beneath it
- Dissolve - takes random pixels from both layers. With high opacity, most pixels are taken from the top layer. With low opacity most pixels are taken from the bottom layer.

DARKEN

- Darken - creates a pixel that retains the darkest pixels of the foreground and background pixels
- Multiply **-** multiplies the numbers for each pixel of the top layer with the corresponding pixel for the bottom layer. The result is a darker photograph.
- Color Burn - divides the inverted bottom layer by the top layer, and then inverts the result. This darkens the top layer increasing the contrast to reflect the color of the bottom layer. The darker the bottom layer, the more its color is used.
- Linear Burn - sums the value in the two layers and subtracts. This is the same as inverting each layer, adding them together (as in Linear Dodge), and then inverting the result. Blending with white leaves the image unchanged.
- Darker Color - compares the total of all channel values for the blend and base color and displays the lower value color. Darker Color does not produce a third color, which can result from the Darken blend mode.

LIGHTEN

- Lighten - looks at the color information in each channel (RGB) and selects the base or blend color - whichever is lighter - as the result color. Pixels darker than the blend color are replaced, and pixels lighter than the blend color do not change.
- Screen - values of the pixels in the two layers are inverted, multiplied, and then inverted again. This yields the opposite effect to multiply. The result is a brighter photograph.
- Color Dodge - divides the bottom layer by the inverted top layer. This lightens the bottom layer depending on the value of the top layer: the brighter the top layer, the more its color affects the bottom layer. Blending any color with white gives white. Blending with black does not change the image.
- Linear Dodge - sums the values in the two layers (also known as additive blending). Blending with white gives white. Blending with black does not change the image. When top layer contains a homogeneous color, this effect is equivalent to changing the output black point to this color, and (input) white point to the inverted color.

CONTRAST

- Overlay - combines Multiply and Screen blend modes, at half strength. The parts of the top layer where the base layer is light become lighter, the parts where the base layer is dark become darker. Areas where the top layer are mid grey are unaffected.
- Soft Light - darkens or lightens the colors, depending on the blend color. The effect is similar to shining a diffused spotlight on the image. If the blend color (light source) is lighter than 50% gray, the image is lightened as if it were dodged. If the blend color is darker than 50% gray, the image is darkened as if it were burned in. Painting with pure black or white produces a distinctly darker or lighter area, but does not result in pure black or white.
- Hard Light - also a combination of Multiply and Screen, each at half strength. Hard Light effects the blend layer's relationship to the base layer in the same way Overlay effects the base layer's relationship to the blend layer.

- Vivid Light - burns or dodges the colors by increasing or decreasing the contrast, depending on the blend color. If the blend color (light source) is lighter than 50% gray, the image is lightened by decreasing the contrast. If the blend color is darker than 50% gray, the image is darkened by increasing the contrast.
- Linear Light - burns or dodges the colors by decreasing or increasing the brightness, depending on the blend color. If the blend color (light source) is lighter than 50% gray, the image is lightened by increasing the brightness. If the blend color is darker than 50% gray, the image is darkened by decreasing the brightness.
- Pin Light - replaces the colors, depending on the blend color. If the blend color (light source) is lighter than 50% gray, pixels darker than the blend color are replaced, and pixels lighter than the blend color do not change. If the blend color is darker than 50% gray, pixels lighter than the blend color are replaced, and pixels darker than the blend color do not change. This is useful for adding special effects to an image.
- Hard Mix - adds the red, green and blue channel values of the blend color to the RGB values of the base color. If the resulting sum for a channel is 255 or greater, it receives a value of 255; if less than 255, a value of 0. Therefore, all blended pixels have red, green, and blue channel values of either 0 or 255. This changes all pixels to primary additive colors (red, green, or blue), white, or black.

INVERSTION

- Difference - looks at the color information in each channel and subtracts either the blend color from the base color or the base color from the blend color, depending on which has the greater brightness value. Blending with white inverts the base color values; blending with black produces no change.
- Exclusion - creates an effect similar to but lower in contrast than the Difference mode. Blending with white inverts the base color values. Blending with black produces no change.

CANCELATION

- Subtract - looks at the color information in each channel and subtracts the blend color from the base color
- Divide **-** same as Color Dodge, but blending with white does not change the photograph

COMPONENT

- Hue - creates a result color with the luminance and saturation of the base color and the hue of the blend color
- Saturation - creates a result color with the luminance and hue of the base color and the saturation of the blend color
- Color - creates a result color with the luminance of the base color and the hue and saturation of the blend color. This preserves the gray levels in the image and is useful for coloring monochrome images and for tinting color images.
- Luminosity - creates a result color with the hue and saturation of the base color and the luminance of the blend color. This mode creates the inverse effect of Color mode.