RETOUCHING PHOTOS: GUIDELINES

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GENERAL OBSERVATIONS:

- Refer to original photograph when retouching (just as with photographic toning).
- Work at 100% view size. On most monitors, lower magnification is unrealiable; higher magnification will tempt you to fix stuff that won't be visible when printed.
- Most useful retouching functions are located in the IMAGE/ADJUST and FILTER/ SHARPEN submenus.
- Most useful tools:

  Stamp: with low opacity and assorted hard brushes in order to keep the grain sharp within a photographic image.
  Airbrush: with low pressure
  Smudge: with low pressure
  Sharpen: along edges and on anything that glints.
  Blur: useful for hiding unwanted detail.
  Dodge, Burn: IMAGE/ADJUST/LEVELS in a wand.
  Sponge: ADJUST/HUE & SATURATION in a wand. Use in both the "Saturate" and "Desaturate" modes with low opacity and small brushes.
- Use Adjustment Layers and normal Layers to keep adjustments *separate* from the image. In other words, all clonings should be on a separate cloning layer (check the "Use all layers" box, then sample from the layer you wish to work on).
- Analyize the area you wish to Paint/Clone *before* working. Choose similarly textured areas.
- Always make a History Snapshot before beginning to retouch (so you can easily return to the state prior to your retouching interventions if you mess up).
- Change brush shapes *frequently* to keep them random.
- In general: choose hard brushes for sharp things, soft brushes for soft things. Make sure, however, that softer brushes do not destroy photographic grain structures.
- Clone using clicks and *short* strokes
- Use *non-aligned* Stamp tool (at full or less than full opacity) and *re-sample* the texture you wish to clone from after every 2-3 brushstrokes.
- Protect parts of the image from your retouching by selecting and feathering those parts first, then retouching around it.

OVERVIEW: 6-STEP DIGITAL RETOUCING PROCESS:

1. Decide on scan quality and resolution based on your output device.
2. Crop and adjust perspective, if needed.
3. Adjust contrast and tonal range.
4. Remove color cast, if any.
5. Adjust color, tone, objects and sharpness in specific parts, if needed
6. Save As, then flatten, and sharpen.

SPECIFIC OBSERVATIONS (FOLLOWING THE 6-STEP PROCESS ABOVE):

1. DECIDE ON SCAN QUALITY AND RESOLUTION BASED ON YOUR OUTPUT DEVICE

SCANNING OLD OR DAMAGED B&W PHOTOS:

- Scan black & white photos in RGB color.
- Then go to the CHANNELS PALETTE and click on each of the channels and compare each resulting variation to the original. Often, one of the channels will appear to "clean up" a damaged photo.
- Discard the other two channels.

SCANNING PRINTED PHOTOS:

An image printed with inks is made up of tiny dots of varying sizes of black. The varying sizes give the feel of varying intensities of black (in actuality, ink is either all there, or not-there). When scanned, this gridlike appearance can be intensified and make the image look like subtle waves are cris-crossing the surface. This lousy-looking wave pattern is called a "moiré".

- Evaluate a moire pattern at a 1:1 viewing ratio because higher ratios can produce an artificial moiré pattern when the pattern of the original screen meets the dot size of the monitor.
- Moire patterns can be reduced in the scan. Our high end scanners have a "de-screening" option built in. Choose the "Descreening" option depending on where the original image appeared: in a newspaper, magazine or art book.
- Another way to diminish a moiré pattern:
  1. Scan your original with a resolution four times higher than the final resolution needed to print on a particular printer.
  2. Apply the DESPECKLE, MEDIAN or BLUR filters to soften the moiré.
  3. Resample down to the resolution you actually need.
- Within Photoshop, the DESPECKLE filter and the MEDIAN filter (at a low setting) can remove some of the moiré patterns. Follow either by using the UNSHARP MASK to refocus the image (see Unsharp Mask, below).

GAMMA:

Gamma measures contrast. A gamma of "1" means all the input values equal all the output values. A gamma setting below 1 darkens the image and a gamma setting above 1 lightens the image.

Changing gamma with scanner software:

The gamma of your image can be changed. Our high end scanners allow you to set gamma and black and white points with the scanning software before the scan is made. Note: to capture the widest dynamic range possible, the Photoshop manual recommends that black and white points be set by the *scanner*.

- Scan with a gamma of 2.2 if your image will be seen on PC monitors because they have a gamma of 2.2, or above. The new sRGB standard also uses 2.2 and a gamma of 2.2 works well with most inkjet printers.

- Scan with a gamma of 1.8 if the image will be seen on Mac monitors because they have a gamma of 1.8.
- It is hard to lower contrast; you can always increase it; therefore, as a general rule, you might go for 1.8 as a general rule when scanning.

2. (I have nothing to recommend for this stage of the retouching process)

3. ADJUSTING CONTRAST AND TONAL RANGE:

Changing gamma within Photoshop:
- For most precise adjustments to the tonal range, use the CURVES command in Photoshop to edit the gamma curve of the image. This will allow you to increase or decrease the amount of color in each of the three channels independently.
- REPLACE COLOR is useful for a single color that needs to be changed.
- SELECTIVE COLOR allows changes to the CMYK components of each of nine color groups independent of each other.

TO CORRECT OVEREXPOSED PHOTOS:
- Make a copy of the original overexposed background layer with the Blending Mode set to “Multiply”. Lower the opacity on the copy to suit your taste.

4. (I have nothing to recommend for this stage in the retouching process).

5. ADJUST COLOR, TONE, OBJECTS AND SHARPNESS IN SPECIFIC PARTS OF THE IMAGE

DUST AND SCRATCHES:
The “Dust & Scratches” filter looks for color breaks (such as those caused by dust or scratches) and then blurs the surrounding color into the breaks to hide them. In general, *don’t* use this filter on the *entire* image because the filter diminishes detail by averaging neighboring pixels and will therefore diminish all detail in the image. Use it only on *small* areas. Here are two main ways to work with this filter:

First way:
- Start by making a feathered selection around the break.
- Choose FILTER/ NOISE/ DUST & SCRATHES.
- Set THRESHOLD high and RADIUS low. Lower the Threshold until the break begins to go away, then raise the Radius until it’s gone.

Second way:
- Choose FILTER/NOISE/DUST&SCRATCHES. Set THRESHOLD and RADIUS just high enough to remove the offending spots.
- Go to the History Palette and make a Snapshot of this state. Choose the History Brush and place it next to the eye ikon for this state. Now select the previous History state. Choose the History Brush with a small brush set to the “Lighten”

mode if the scratch is dark or to the “Darken” mode if the scratch is light. Paint out the offending dust/scratches with short, offense-specific strokes. Works like a charm.

REMOVING LARGE BLEMISHES:
Use the Stamp, Smudge and Sharpen/Blur tools on a layer above the background image:

- Select the tool
- Select the “Sample Merged” in the options palette
- Open a new layer and work.

TO SMOOTH SPOTTED AREAS:

- Make feathered selection
- Copy it into a separate layer
- Blur.

TO SMOOTH THE GRAIN:

- FILTER/NOISE/ADD NOISE with small amount values (4-8). Re-apply as needed.

TO GET RID OF BACKGROUND DETAIL:
Two ways:

- Paint out the bad object with the Stamp tool, or
- Select the background (or select the Foreground and Invert the selection) and blur it, or reduce its contrast, or reduce its color saturation to make it seem to recede (as if the depth of field was reduced).

TO GET RID OF BACKGROUND:

- Select the background (or select the Foreground and Invert the selection)
- Fill with color.

TO “ENLIVEN” A PORTRAIT:

- Copy it to a new layer with the Blending Mode set to “Color Dodge” with the opacity reduced.

6. SAVE AS, THEN FLATTEN AND SHARPEN

SHARPENING:
Sharpening filters work by analyzing the image to find neighboring light and dark pixels (edges) and then increasing the contrast (lightening the lights and darkening the darks) between them.

The “Unsharp Mask” filter mimics this process. Its anti-intuitive digital name comes from an old analog darkroom process where a low contrast out-of-focus negative copy (called an “unsharp mask”) was placed over the original color transparency as four-color separation negatives are made. The unsharp mask limited the amount of light reaching each of the negatives and accentuated the edges. The “Unsharp Mask” filter exaggerates transitions by putting a hint of a black border around objects followed by a light

halo around the black border. This process mimics the “lateral inhibition” filter within the human eye that emphasizes the edges of things when we look at them.

- Most images need sharpening.
- The larger the image, the more you need the USM.
- Do immediately before flattening because it exaggerates any flaws in the image.
- Four possible problems with using the filter too liberally:
    1. Color shifts
    2. Halos too wide
    3. Unwanted details (like dust and scratches) intensified
    4. Grain and noise intensified (bad for faces….)

The three USM options in order of importance:

Radius: the width of the sharpening halos. A large number equals a wide halo. Too high means loss of subtle detail. So, for hair, skin and eyes, etc., keep the radius low.

Threshold: as it increases it ignores variations between areas of similar darkness and goes for the gusto. For example, to safeguard faces where you may not want exaggerated detail) increase the threshold to over 20.

Amount: how intense the effect is, not its width.

SHARPENING TOOL:
Use on anything that glints.