

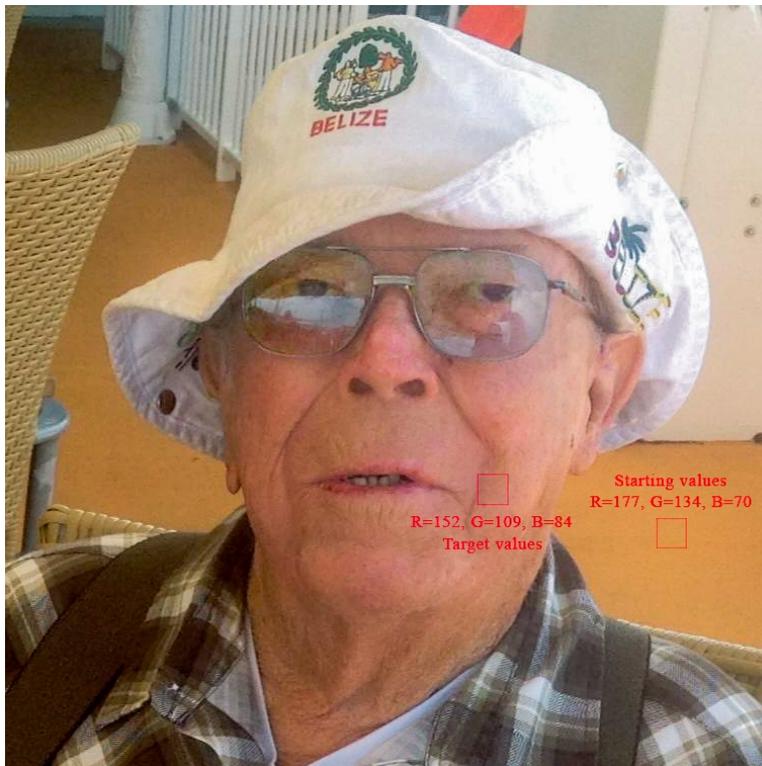
Color Matching - Part 1

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There are times when it might be useful to make the color in one area match the color in another. The pretext for this exercise is that we want to make the carpet over my dad's left shoulder (to your right) match the hue of his face, for whatever reason.

The Procedure

1. Select the area to be changed (the carpet) with any of a number of tools (like the Quick Select tool or the Lasso tool). Create a Curve adjustment layer. The selected area will turn into a mask. Although you need a crude mask early so that you can continue to see the target area untouched as you make changes to the area of interest, you may need to adjust the edges of that mask after Step 6.



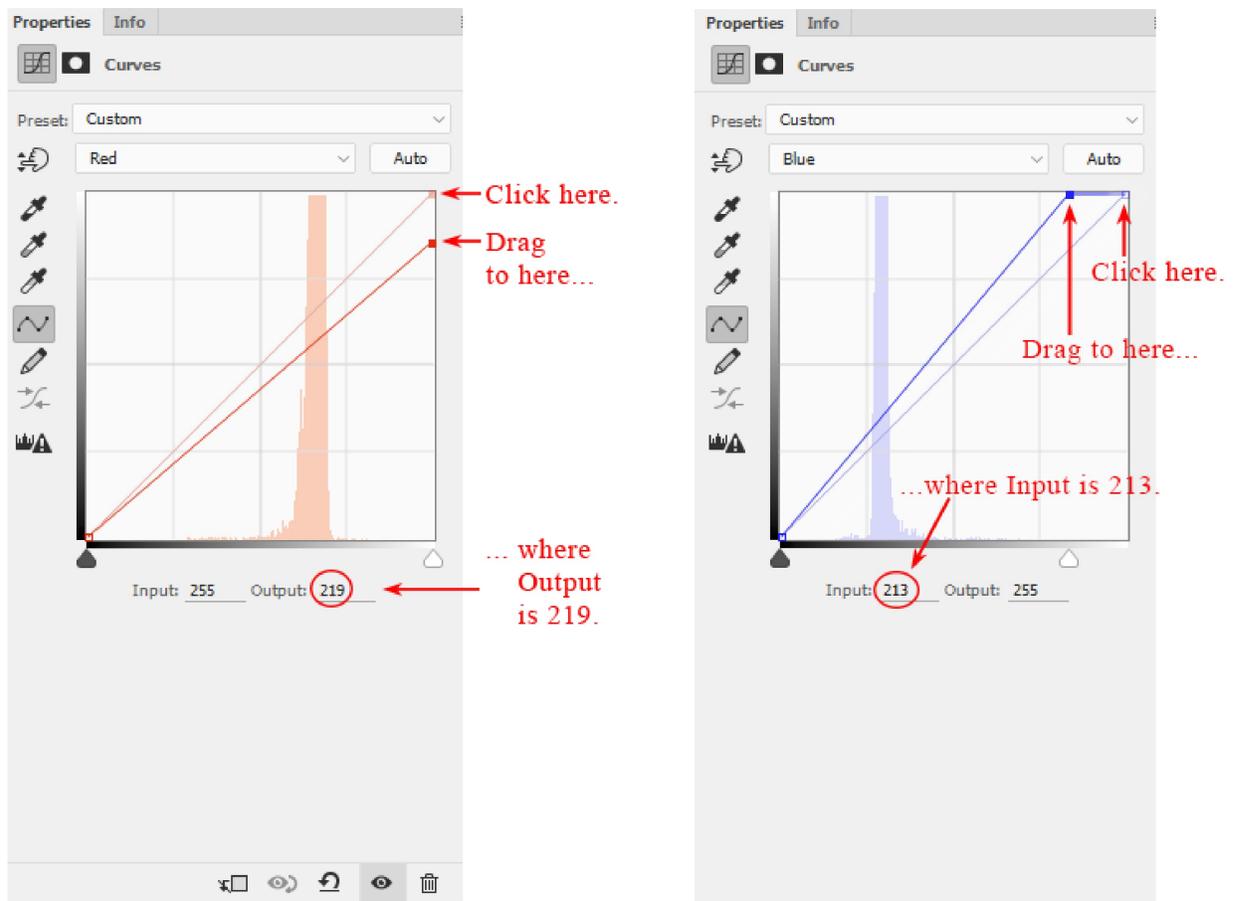
2. Using the Eyedropper tool or the Color Sampler tool, find the RGB values for the target color (on dad's left cheek). You may want to use as large an eyedropper sample size as will fit in the target area to average out the color variations within that area (In this case I used a 31by 31 sample size, outlined in red). Write down the red (152), green (109), and blue (84) values.

3. Do the same for area to be changed. Write down those three numbers (177, 134, and 70).

4. Now comes the math (we are working with simple ratios here - multiplication & division - no trigonometry and no calculus). Start with the red values. Compare the starting (177) and the target (152) numbers. Divide the smaller value by the larger one

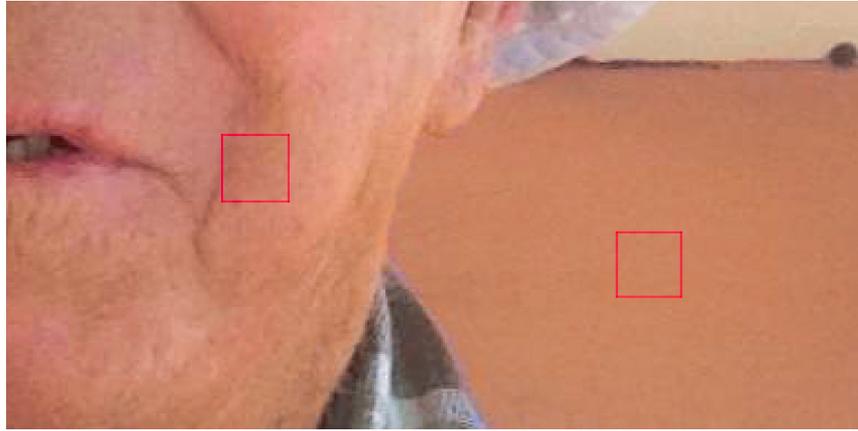
(152 / 177 = 0.8587...)
and then multiply by 255
(0.8587... x 255 ≈ 219).

Go to the red histogram of the Curves layer (by using the drop down menu that initially says “RGB” just above the histogram). Click on the little square in the upper right corner of the histogram. If the target number was smaller, either drag that little square down so that the Output (below the histogram) is the number you just calculated or just enter that number in the Output field (the Input should remain 255). If your starting value were smaller, as it is for the blue, drag that little square left until the Input matches that number (and the Output remains 255).



5. Repeat Step 4 with both the green and blue histograms.
6. Depending on how well you chose the starting and target points, you may have to adjust

the RGB histogram to get the correct intensity. Click in the middle of the histogram box to make a new little adjustment square, and either drag that square up (to make the area lighter) or down (to make in darker) to taste. If you picked good representative samples to begin with, this may not be necessary.



The “After” close-up

7. As I mentioned in Step 1, you may have to adjust the edges of the mask you made earlier. You can do that by either:
 - a. Using the brush tool on the mask to change the area covered or to just feather the edge. I generally set the Hardness of the brush to zero and depending on how critical the mask is, I might set the Opacity of the brush as low as 5%. Then after making sure the mask is selected in the Layers panel, I paint (dragging the brush over the image itself) the edge of the starting area with white (to increase the effect) or black (if I went too far). Obviously it takes several passes. If the mask is not that critical or your patience is running thin, increase the Opacity accordingly.
 - b. Or you can use the Refine Mask window (found under the Select menu or as the Mask Edge button in the refine section of the Masks tab to the Properties window). With it you can feather the edge and increase or decrease the size of the selected area slightly (among other things), which may do the trick but doesn't give you the control of the first option.

That’s all there is to it. Congratulations!