

# The Art and Science of Digital Imaging

CS 197, spring 2005

## Project one: "Time of Day"

The goal of this project is to use basic color editing tools to change the apparent time of day of an image. As the sun rises and sets, as outdoor and indoor lights are turned on and off, the only visual changes that take place in a particular scene result from these changes in lighting. Therefore, you should arguably be able to adjust the time of day of a photo by selectively changing the localized lighting, right?

You will need to find and scan both a **starting image** and a **reference image**. Please use a spatial resolution between 600 and 1000 pixels for each dimension of the starting image. It's ok for reference images to be found online and for them to be less than 600x600 in spatial resolution - just make sure the colors are visible.

NOTE: When scanning an image that is NOT a photograph, use the **descreen** option on your scanner software. It should be located somewhere in the scanner settings window. If activated, the descreen process should remove aliasing artifacts that commonly occur when scanning printed material.

You are free to use color modification tools such as brightness, contrast, HSV, and soft light to make the changes. **Do NOT** use any retouching, cut and paste, layers, etc., even if you know these tools. This exercise is intended to get you familiar with color, both in terms of training your eye and in using a number of the color-correcting tools. The approved tools, by default, make changes to the **entire** image! This won't be very useful to you. Instead, you will have to make **localized** changes to the color which will require you to use Photoshop's **selections**. These will be introduced in class on Thursday but feel free to learn about them in advance.

TIP: it is very hard to do this assignment with images of people or leafy trees! See if you can find a source image that has relatively **simple visible edges** present within it.

For the purposes of this assignment, we'll use the following three "times of day": **night**, **dusk/dawn**, and **midday**. You are free to choose a starting image from any of these times of day. The reference image should be taken from one of the other times of day, specifically, the time of day you are going to change your image to.

TIP: going from night to any other time of day is hard. Start with dusk/dawn or midday for an easier project.

## PART ONE due Thursday, February 10<sup>th</sup> at the beginning of class

Copy digital versions of both of your images to the **Hand-In** folder on the Course Storage disk. They should be in a lossless format that can be read by Photoshop on the Mac. I recommend the "Photoshop" format (suffix .psd) but TIFF should work, too. Name them unambiguously (e.g., "ChrisPerryStart.psd, ChrisPerryReference.psd").

## PART TWO due Tuesday, February 15<sup>th</sup> at the beginning of class

Copy your altered image to the **Hand-In** folder. Again, use a lossless file format that can be read by Photoshop on the Mac, and name the image so I can identify who put it there ("ChrisPerryFinal.psd"). Your final image should be exactly the same spatial resolution as your starting image.

If you are **not** working on the machines in the classroom, **make sure** your image looks the way you think it should when viewed on a classroom computer!

It is your responsibility throughout the semester to make sure all of your images are handed in properly and on time. I won't consider this project handed-in unless the files are in the right places, are properly named, and can be read by Photoshop on the Mac. Please ask your classmates, the TA, or me for assistance if you need it.