GRA 2201 Electronic Imaging

Assignment 1- Scanning, Resizing, Resampling, File Formats and Color Modes

The objective of this project is to familiarize you with how to prepare digital images for various types of reproduction. It is important you apply what is covered in this project in the rest of your work in this class. Correct resolution, color mode and file format problems will be a grading criteria in later projects.

If you are scanning an image and it will only be used in one application/purpose and you know the exact requirement it's pretty easy to scan. For instance, you know it is for the web. That's easy – RGB, 72 dpi. But what if you might have to use it for print also. In this case it's best to "scan once, save many times". Therefore, you would need to scan at the highest resolution necessary. Generally, for commercial offset that will be an lpi of no higher than 150 and you scan at twice the lpi, thus 300 dpi, unless scaling was required. Then you would have to utilize the formula in your Graphics Workbook to factor this in. It best to scan in RGB, make corrections, then convert to CMYK just before saving for last time. (there are printing instances of higher than 150 lpi though not very common)

For this in class assignment you will need to provide a continuous tone color photograph of your choosing, 3" x 5" or 4" x 6" which you will scan in RGB, 300 PPI/DPI. You will need to save four more copies and these will be used for No. 2 - 5 of the assignment. When creating the copies, use the names of the bolded word for each type of job below. For example, in scenario 1, (Commercial (silk) Screen printing...your file name should be Screen. 6 will be an image provided for you.

In Photoshop, you will open each of these copies and resize, resample down, change color modes and file formats to prep the image for the output scenarios listed below. Demonstrations of each scenarios will be done in class.

Save all of the files (6 total, including your original) in a folder with your Last name and First initial, underscore and Project Number (StudentA_P1) and upload your folder your instructor's drop box. Remember to always backup your work onto your zip disk for future use.

1. Original image saved with a name of your choice
2. Commercial (silk) **Screen** printing with a 55 LPI.
3. Our **CLC (color Laser copier)** with an 65 LPI.
4. Commercial **Offset** printing with a 150 LPI.
5. **Multimedia** using the Local Perceptual, (adaptive) indexed pallette.
6. **Web** optimized image provided. (NOT you own scan, 'Extremo' image)

Electronic Imaging (via Photoshop)

Image Prep Strategies for Multiple Output Situations

I. Planning strategies for scanning and prepping bitmaps depends on several variables:

1. What types of jobs do you foresee needing the bitmap for? Are you going to use the image in a web page, trifold design and on a printed poster, for example?
2. What type of correction(s) and manipulation(s) the image needs. Is there going to be a lot of rubberstamping and masking, for example?
3. Your computer and computer related resources. For example, do you have a killer G4 Mac with mega amounts of RAM and Harddrive space?

II. In general, computer permitting:

OPTION 1

Scan at a high resolution, at the largest image size in RGB mode. Save in Photoshop format.

• If you know you will need the image for web/multimedia and print jobs, depending on the nature of the image processing, you may want to use numbers that are easily divisible.(72, 144, 288 etc.)

• Choose PPI/DPI numbers carefully if there are distinct patterns that may become distorted.(Talk to your printer regarding your concerns.)

• Make global, general corrections to the high resolution, RGB image

- Typical corrections: rubberstamping, RGB tonal/color correcting, filtering s/a sharpening

• Use layers (channels, higher history settings & paths too when appropriate) for flexibility

• Use File/Save a Copy to save a copy that you can prep for various types of output. File/Save a • Copy creates a new file that you can further prep for a specific type of output.

- Typical things you would do/modify/change in the copy:

- resolution (resample down)—color mode—bit depth—color correction—file format

OPTION 2

Scan at the resolutions needed, and do not resample down. (Similar to stock CDs). I will discuss this with you later in the class, for our projects, we are going to utilize **OPTION 1.**