This assignment is intended to give you experience with:

- running Lightwave and loading an existing scene file,
- setting the camera's position, orientation, and focal length,
- rendering the camera view using ray tracing, and
- handing in homework.

You may find reading certain parts of the Lightwave 6.5 pdf manual helpful. It is located in the course storage "hand-outs" folder, which you will be able to find after completing step 1, below. The potentially useful parts of the manual are chapter 2, some of chapter 3, chapter 6 on the content directory and changing the point of view, chapter 7 on moving and rotating an item, chapter 13 on camera lenses, chapter 16 on rendering.

Step 0: quit all running applications and insert your zip disk.

- make sure you're sitting at one of the tower Macs that run Lightwave!

Step 1: get the networked course storage disk onto your desktop, and copy the homework files to your zip disk

- Click on the apple menu in the upper left, drag down to Course Storage and release (don't follow the popup menu to the right).
- use cs174 as both the name and password.
- After a few moments the "course storage" disk should appear on the desktop.
- Follow the **cperry** folder to **cs174**. This is our course folder.
- In the "hand-outs" folder you should see both the Lightwave 6.5 pdf manual and a folder named "assignment 01 content".
- Copy both files onto your zip disk.

Step 2: run Lightwave and set the content directory

- Under the "application aliases" folder you should find "Lightwave". Double click on it to run it. Be patient – it make take a moment to start.
- Hit "o" to pop-up the **general options** menu. The first button on the general options menu should allow you to set the content directory. Set it to **your copy** of the assignment 01 content directory. For this, you select the **folder** itself.

Step 3: load the assignment scene file

- under File->Load select Load Scene. This will pop up a dialog box. Select the file named **assignment01.lws** from the **Scenes** folder within **your copy** of the assignment 01 content folder.
- If it loads correctly, you should see a mug, an urn, and a candlestick.

Step 4: select and move the camera to where you want it

- On the bottom of the interface you can click on the **Cameras** button, or hit **capital** "C" to make cameras the current object type. If you don't do this, you might move the light and/or the objects in the scene. For this assignment, **only move the camera**.
- Since there is only one perspective camera in the scene, that will be the currently selected camera. This means that when you move or rotate the current object, the object you will be moving will be this camera.

- Select the **move** (t) or **rotate** (y) tool (under the **Items** tab if they're not visible down the left side of the interface), and experiment with clicking and dragging in the viewport. Clicking and dragging up and down will change two of the available parameters (x, y but not z, etc.), clicking and command-dragging will change the third parameter. Please read the LW manual on moving objects (chapter 7) if this is confusing!
- You may get lost. Looking through the camera while you are moving it can be difficult. It may help to switch to a perspective or top view (see the pulldown menu at the upper left of the view window), find your camera icon, then move or rotate it. Be sure to **switch back** to the camera view to see what your rendered image will look like.
- When you have a view of the scene that you like, make sure you hit return (enter) **two times** with the camera as the current object. We'll come back to this, but for now think of it as locking the camera into that position and orientation.
- When you have the camera selected, you can change its focal length in one of two ways. The first is to select the **Camera** tab at the top of the interface and look for **camera zoom** on the left side. Select this tool, and drag around in the interface.
- The other way is to press p to pop-up the **camera properties** panel. If you don't have the camera selected, a different panel will pop-up (so make sure you have the camera selected). In this panel is a box where you can type in the **lens focal length**. In this scene, it is currently set to 50mm.

Step 5: render your image(s)

- When you have a view you like through the camera, press F9 to **ray trace** an image of that view. You will see the render taking place.
- After a few seconds, an **image viewer** window should pop up. Close the render status window by hitting **continue**.
- If you still like the view you see in the image viewer, go to the **File** menu on the image viewer and **save** the image to your zip disk. Use the format **LW_TIFF24**. Name the file using your name, like: **ChrisPerryImage01.tif**.
- Select a total of 3 different camera views and render three different images, naming them accordingly.

Step 6: hand in your images

- Copy your three images to the folder **Assignment 01**, found in the hand-in folder on the course storage disk. If you are in danger of writing over someone else's images then you haven't named your images uniquely. Rename them and try again.

PLEASE NOTE: I recognize that this could be difficult for a number of you. Use Dan's open hours if you would like a little extra help and read through sections of the Lightwave manual if you're having problems getting used to the Lightwave interface. Dan and I can also be reached by email.