600.161 Exploring Vision in the Real World
Intersession 2008

Laboratory 2 – Projecting My Face onto a 3D Scene

Preparation

1. Create a lab2 folder on your local computer.
2. Download and unzip the following file into the lab2 folder:
   http://www.cs.jhu.edu/CIRL/class/600.161/lab2/backgrounds.zip
3. Download the .m files in the following directory:
   http://www.cs.jhu.edu/CIRL/class/600.161/lab2/
4. Go into the 'faces' directory in the above directory and download your face bmp.

Files

1. **rotate_image.m**
   This function rotates an image about the x-axis, y-axis, and z-axis and scales the image.
2. **add_to_image.m**
   This function adds a source image to a target image. The location is specified by the user.
3. **runme.m**
   This script calls rotate_image, saves the resulting image, and calls add_to_image. Edit this file so the paths, and degrees are to your liking.
4. **runall.m**
   This script is same as runme, except it is interactive.

To Do

1. Select a background image you would like to project your face onto.
2. Call rotate_image with the 3 degrees you estimate will align your face to the 3D surface in the background.
3. Call add_to_image to add your rotated face to the background. The function will ask you to click on the area in the background you want to add your face.
4. **Make sure to save your rotated face and final image!!**
5. **Make sure the paths you specify are correct!!**
6. Repeat the above 5 steps for as many background images as you like. The minimum for this lab is 3. You will get extra credit if you do more than 3.
7. Tomorrow in your presentation,show at least one of each member's projected image and the degrees and scale used to accomplish it.

Any questions, feel free to ask Henry. The lab will be opened past 4:30pm today, so feel free to work on Lab2 or Lab1 past this time.