

Lab 10 –csc 471

Enable a pitch and yaw camera with zoom and translate (using the gluLookAt command).

Write your own pitch and yaw camera controls, which include a zoom and translate mode. Use the left mouse button to control camera rotations, the middle mouse to control zoom and the right mouse button to control translation. Make sure that these controls work in conjunction with one another. You may also hook these commands up to keys from the keyboard, but must make the mouse keys work as specified.



Given a pitch and yaw angle, you can compute the eye location by:

$$x = \text{radius} * \cos(\text{phi}) * \cos(\text{theta})$$

$$y = \text{radius} * \sin(\text{phi})$$

$$z = \text{radius} * \cos(\text{phi}) * \cos(90.0 - \text{theta})$$

You can control zoom by modifying radius.

You can compute phi and theta as some portion of the mouse's movement in the window in the vertical (phi) and horizontal (theta).