MAT 494 — SpTp: Computer Graphics, Spring 2005

Homework #5, Due on Friday, February 18th

In this homework you will be drawing a robot with some movable joints. You may follow the example on pages 151–154 for ideas on how to get this to work. This project will test your understanding of using transformations inside OpenGL.

Project Requirements:

1. Draw a robot using only glutWireCube and glutSolidSphere. The robot should have a sphere for a head, a cube for a body and a total of 8 cubes representing the arms and legs (as shown in the demo in class).

2. Your robot should have at least four independent rotations available by using the keyboard. These rotations should include the elbow (using the 'e' key), the shoulder (using the 's' key), the knee (using the 'k' key) and the hip (using the 'h' key).

3. Lastly, produce a method for rotation about the robot by using the 't' key.

Grading Information:

1. User Interface/Implementation: 100