CMSI 671
COMPUTER GRAPHICS (GRADUATE LEVEL)
Spring 2007

Assignment 0417

With two weeks before the research project is due, we will focus on that for the remainder of the semester.

Not For Submission

1. Hidden surface removal is discussed in Angel Chapter 7, Section 7.11.

2. For more details on lighting and shading, read Angel Chapter 6.

3. Read Angel Chapter 7, Sections 7.8–7.10 for more on rasterization, including the rasterization of line segments.

4. Programmable shading is covered in Angel Chapter 9 as well as red book Chapter 15 and Appendix I; to get really into it, the recommended-but-not-required "orange book" by Randi Rost is a must.

For Submission

Commit the latest versions of your research paper, presentation, and project by Tuesday, April 17. These should all reside in */projects/cmsi671*, within the directories specified in previous assignments. This will give me a chance to do some final reviews and provide overall feedback before you officially submit them on April 24.

If desired, we can spend some class time on April 17 to discuss any questions/issues/concerns that you may have about your work.

Extra Credit

You'll get an extra assignment credit if you try your hand at implementing the general polygon scan conversion algorithm that was walked through in class. As with the projection assignment, you may use either Java Swing, "2D-only" OpenGL, or JavaScript using the canvas tag.

The main idea here is to implement a function *drawPolygon(vertexList)*, which will then display the polygon specified by *vertexList* in the 2D graphics area. Accompany your main algorithm with a driver/demonstration that displays a number of polygons using your implementation.

If you do this, commit it to */homework/cmsi671/mypolygon* and tag it as *hw-0417*.