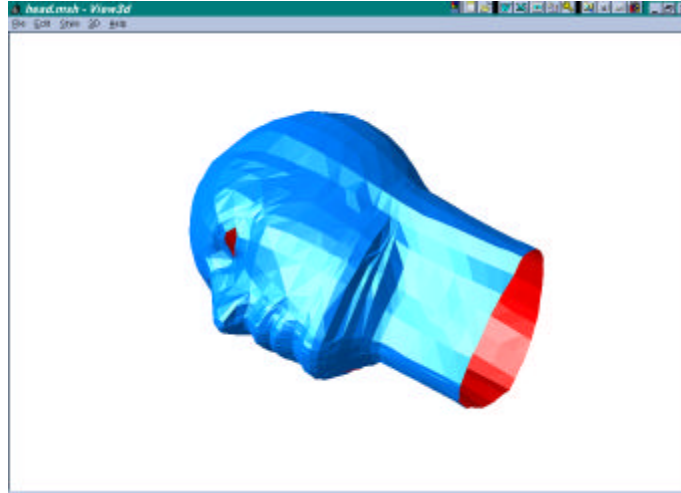


CSE 470

Project 2: Illumination (Phong model) of polygon mesh surface

Due: November 28, 2000



The goal of this project is to produce a color rendering of a polygon mesh surface. The data will be specified the same as in the previous project, namely an *.off file. The same functionality as in the previous project should be available regarding the interactive manipulation of the surface. The color rendering should be based up a collection of triangles obtained from the polyhedra of the polygon mesh surface. The constant shading technique should be used and the color of the outside of the surface should be blue and the inside should be red. Use the "painters algorithm" to determine the order of rendering the triangles. Use a directional light source where the user can interactively set the direction to the light source in eye coordinates. The use should be able to set all of the illumination and object parameters, but reasonable default values should be assigned initially.

Extra Credit:

(10pts) 3D clipping of triangles.

(15pts) Interactive editing of mesh surface by direct manipulation with mouse.

(10pts) Gouraud shading of triangles.