

Due: Wednesday April 28 at 6:00am

A10—Hardware rendering, the programmable pipeline

In a nutshell

Implement shadows and projective texture mapping with GPU programs.

Details

1. Write vertex/pixel shader programs for:
 - Shadow mapping (1 point light source, vertex color interpolation)
 - Projective texture mapping
 - Use Cg / OpenGL
2. Example
 - Define a camera path, save to file; have GUI button that animates camera along path.
 - Make a 20s 30fps video of your scene hardware rendered along the camera path (10s shadow mapping, 10s projective texture mapping).
3. Extra credit, all through GPU programs:
 - Environment mapped reflections (3%)
 - Billboard reflections + environment mapped reflections (5%)
 - Depth image impostor reflections + environment mapped reflections (7%)

Turn in

- Code including GPU programs.
- Camera path file.
- Movie file.
- A README.txt description of your GUI.