

## Assignment 7—Reflected Impostors

In a nutshell, improve environment mapped reflections by modeling objects close to reflectors with billboards.

1. Scene
  - a. Make a scene with the Uffizi environment map
  - b. Have a black and white checkered table top  $T$ , a diffuse object  $D$ , and two reflective objects  $R_0$  and  $R_1$ .  $R_0$ ,  $R_1$ , and  $D$  are on  $T$ , and are close to each other.
2. Rendering
  - a. Model the reflected  $R_0$ ,  $R_1$ ,  $T$ , and  $D$  with billboard (two reflective, two diffuse).
  - b. Support second order reflections.
  - c. Extra credit 2% for additional scene with ground and ray morph to environment mapping.
  - d. Extra credit 5% for depth image impostors.
  - e. Make a 10 second movie illustrating your scene and reflection rendering.
3. Turn in: use WebCT to upload zip archive with:
  - a. Source code, including project/workspace/makefiles
  - b. Code should compile, use relative paths
  - c. Include all non-standard libraries (archive size should be <50MB)
  - d. A short REPORT.{pdf|doc} file that describes your user interface, and the extra credit completed, and that includes 3 of your best images.
  - e. The movie file.