CMSI 671

COMPUTER GRAPHICS

Spring 2005

Assignment 0419

This assignment is more of a "wrap-up" assignment that lists source readings for our last remaining topics, and also puts in a milestone deadline for the presentation that you'll be making on the 26th.

Not for Submission

The following textbook readings provide additional or deeper information on the last official topics in the course — clipping, hidden surface removal, and polygons & shading. The bulk of the material is in Chapter 8, with an in-depth discussion of shading in Chapter 6:

1. Clipping: Sections 8.4–8.7 of Chapter 8 in Angel.
2. Hidden surface removal: Section 8.8 of Chapter 8 in Angel.
3. Polygon scan conversion: Sections 8.9–8.11 of Chapter 8 in Angel.
4. Shading and lighting: Chapter 6 in Angel.
5. OpenGL-specific details on shading (with or without lighting): Chapter 4 in the red book.
6. OpenGL's approach to lighting: Chapter 5 in the red book.
7. Because clipping and hidden surface removal are really implementation topics, the OpenGL perspective on these functions is an "outsider's view" — they don't deal with *how* these are done, only *what* can be seen in the API:
   a. Clipping is mentioned in "Viewing Volume Clipping" and "Additional Clipping Planes," both in Chapter 3 of the red book
   b. Hidden surface removal is touched on very briefly in "A Hidden-Surface Removal Survival Kit" in Chapter 5 of the red book, with some advanced discussions of the depth buffer and other HSR techniques in Chapters 10 and 14 of the red book.

For Submission

Submit a draft of your presentation material by April 19 and I will endeavor a quick-turnaround feedback cycle to fix any glaring issues prior to the April 26 presentation. While presentation styles and approaches can vary, a good presentation typically consists of:

1. An outline of the presentation — not necessarily identical to the outline of your paper, but not so far either. This can just be a brief text-only write-up.
2. Presentation slides — typically distilled content from your paper, with any key points or diagrams
3. Demonstration programs — a presentation of this type typically ends with a live demonstration of some sort, to show or validate how your model works.

The emphasis at this phase is to start thinking about how you will communicate your landmark findings to me and to the class. Note that this is a distinct phase in your work that should be approached differently from the research, modeling, and experimentation component of the project.

I'll e-mail feedback through the week from April 19–26 in case anything of sufficient import comes up. Otherwise, I understand that you'll continue tweaking away probably through the day of the 26th itself. This assignment designates a little deadline so that you don't do *all* of your presentation work on just that day — at work or in further scholarly circles, that is never a good thing!