CMSI 371
COMPUTER GRAPHICS
Spring 2008

Final Exam Review Sheet

The final exam will take place on May 6, at 11:00am. It will be open everything: book, notes, handouts, and computer (which means that either we must have the test in the Keck lab, or everyone has a laptop that they can use). This guide should help you to prepare for the final properly.

Covered Material

The final exam covers the following areas, including all handouts and sample code that have been distributed in support of this content:

- In detail — Angel Chapters 1–7, Angel Appendices B and C, and red book Chapters 1–5
- In general — Angel Chapters 10–11, red book Chapter 9, and red book Appendices A, B, D, E, and F
- Working knowledge of C and OpenGL

Sample Tasks and Questions

In addition to the types of questions that were fair game for the midterm, the following represent questions or tasks that you may be asked to accomplish for the final:

- "Expose" some OpenGL function by explaining how it works or by providing its implementation
- Provide a UML diagram for some aspect of a computer graphics application (conceptual model, use case model)
- Given some application domain, select a 3D object modeling approach (constructive solid geometry, curves/surfaces, polygon mesh, etc.) and explain the rationale behind your choice
- Derive an algorithm or prove a theorem relating to transformations and projections
- Compare different approaches to some computer graphics operation (transforms, clipping, hidden surface removal, lighting, polygon scan conversion, etc.), particularly their relative advantages and disadvantages in terms of performance, resource use, and accuracy
- Discuss or explain a particular computer graphics algorithm (some type of transformation, clipping, hidden surface removal, lighting, polygon scan conversion, etc.)
- Modify a computer graphics algorithm (transforms, clipping, hidden surface removal, lighting, polygon scan conversion, etc.) according to some specification, or explain why the requested modification cannot be made
- Answer a "big picture" question regarding the overall area of computer graphics, spanning the entire journey from modeling to world space to the screen or viewport