Problem Set 6  
CMSC 427, Spring 2015  
Assigned, Thursday, April 16, 2015  
Due, Tuesday, May 5, 2015

This problem is rather open-ended. Figuring out what to do is part of the assignment. The main requirement is that I want you to do a problem set that will teach you something about computer graphics. This might deepen your knowledge of a topic we have covered already, such as Ray Tracing, OpenGL, or Image Processing, or it might connect to something we haven’t talked about yet (eg., animation, virtual reality). Other than that, I would like you to try to do something that you are interested in, preferably something that will help you create interesting or compelling images or video.

Work products

1. Email me by April 23rd. One email per team. List all team members, and provide a brief (one-two sentence) description of what you plan to do. Also, indicate whether you would prefer to present on Tuesday May 5 or Thursday May 7. I obviously may not be able to satisfy all requests. If you don’t know what you are doing or what your team will be by the 23rd, email me and tell me you don’t know yet.

2. Write-up – To be turned in by Tuesday, May 5. Turn in a hardcopy in class. You may also want to email me an electronic copy, including images or videos.
   a. Problem statement. Describe what you planned to achieve.
   b. Include a brief description of what you did.
   c. Explain what new things you had to learn to do this project.
   d. Illustrate your results. Use as many pictures as possible. Feel free to include a video.
   e. You can use as much space as you want, but I imagine one page of text per team member will be plenty. Less than that is fine.
   f. For team projects, provide a brief description of the aspect of the project you each worked on. If you all worked together on everything, you can just say that.

3. Presentation:
   a. < 3 minutes per person. I will have to strictly enforce a time limit.
   b. Include components (a), (b), (c) and (d) from above.
   c. Practice it a bit so that you know you can do it without going over on time.
   d. Presentations can be emailed to me a day ahead of time if you want me to show them on my mac. If you plan to use your own laptop, make sure it will work with
the system in the classroom. We can’t afford to spend much time resolving laptop issues during class.

Grading Criteria

1. How much did you learn about graphics?  **30 points**
   a. Did your problem set require you to learn something new beyond the work you did in previous problem sets?

2. Quality of results  **30 points**
   a. How well did you achieve the goals of your problem set? I am really concerned here about how much you accomplished. If you accomplished a lot, but your goals were ridiculously ambitious and you didn’t achieve them all, that’s ok.
   b. Was your project sufficiently challenging? It should be at least similar in scope to the implementations required in previous problem sets. For team projects, the scope of the project should be proportional to the number of team members.

3. Did you produce interesting/visually arresting results?  **20 points**

4. Presentation  **20 points**
   a. Did you clearly explain the problem you were addressing?  **5 points**
   b. Did you clearly explain what you achieved?  **5 points**
   c. Did you use appropriate images to illustrate your project?  **5 points**
   d. Did you speak in a clear and understandable way?  **2 points**
   e. Did you manage your allotted time effectively?  **3 points**

5. Extra credit
   a. Extra credit will be available for projects that are especially creative or ambitious. This is going to have to be completely subjective on my part. To obtain extra credit for a particularly difficult or large-scale project, you must clearly explain why your project was difficult and what you were able to accomplish.