

Some Nova-like public television program has given you the task of creating - in the next two weeks - a 100-frame (minimum), video resolution shot of a moon orbiting an Earth-like planet. Your producer demands photorealism, but as is typical for non-commercial productions of this nature, your resources are limited: you can only use a text editor, whatever programming language you choose, and the free RenderMan renderer BMRT (<http://www.bmrt.org>) to create the images.

The only creative consultation you've been given is that they're looking for an aesthetically pleasing composition that shows the moon moving enough over the course of the sequence to appear to be orbiting around the planet. Don't move it fast! These are huge, massive objects after all. The other thing they mentioned was that they wanted the camera to slowly track in towards the planet/moon combo over the course of the sequence.

**Due Tuesday April 30**

An image from your sequence-in-progress showing the composition you came up with and whatever shader work you can get going by then. Also, complete the assigned reading (sections 10.1-10.4 from *Advanced RenderMan*).

**Due Thursday May 2**

A half-res or smaller render of the whole sequence showing the camera move and object motion, and a full-res single image from the sequence showing your shaders-in-progress.

**Due Thursday May 9**

A burned CD with your final video (frames are ok), and any code, RIB, or other supporting files you used to create the video. These must be in my mailbox in the CS office by **NOON**.

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**HINTS**

- photorealistic = use photos as your visual reference.
- BMRT is available at <http://www.bmrt.org>.
- all code from *Advanced RenderMan* is available online at <http://www.bmrt.org/arman>.
- apply the "divide and conquer" strategy to the whole production problem. List out all the small pieces that you think will make the final shot look terrific, but be sure to prioritize them appropriately so that you know what to work on first. For instance, the polar ice caps are a nice touch, but if you don't get the two spheres in the right place in front of the camera the ice caps won't make a difference.
- did I mention that it helps to look at photographic reference when trying to make something look like a photo?
- the final two classes can and should be fully dedicated to answering your questions about this project. Try sending them to the class email list first, and those which go unanswered can be answered in class.
- example code and other helpful information can be found at the RenderMan Repository: <http://www.renderman.org>.
- go watch Apollo 13 or Star Wars or 2001 or Contact or any old space movie again for ideas.
- try not to forget how much more fun this is than taking a test.