

Live Lecture Chat Window March 10, 2023

15:30:03 Can you elaborate on the graphics trick? Why is it more efficient to bounce off the air outside the sphere than the surface?

You don't go through the quadratic equation to solve for when the particle hits the sphere. Instead you bounce the particle from where it last was –in the air. Check it out at:

<https://cs.oregonstate.edu/~mjb/cs557/particles.mp4>

15:32:49 And that only happens when the DT elapses which would result in `IsInsideSphere == true` for that particle?

Yes.

15:55:16 For (surface local coordinates), is to “orthogonalize” to setup three coordinate vectors (or a coordinate system) that are all perpendicular to each other?

Correct. To form a 3D axis system, all three vectors must be mutually perpendicular.

15:58:43 How are those normal map textures created?

Typically created by the same program that you did the modeling in.

**16:06:36 it's so weird how something that looks so different is so little extra math [parallax mapping]
16:06:39 that seems so simple for how good the effect is**

Yes, I agree. I thought it was breath-taking the first time I saw it.

16:13:22 Are the lecture videos about GPU 101 on the quizzes or exams? They were on the resource page, from 475.

Yes, those topics are eligible to be on the quizzes and/or exams.

16:48:19 [A good place to get OBJ files] https://www.turbosquid.com/Search/3D-Models/free/obj?page_num=2

Thanks for the pointer!

17:27:13 just to clarify do we have to use model coordinates and include that as a checkbox on glman or is that optional?

No. I was just playing around with my version.

17:37:35 Where can you find the triceratops?

It's in the list of OBJ files from the Class Resources page. It's called *dino.obj*