

## Live Lecture Chat Window January 27, 2023

**15:31:25** So it is in essence trading texture data size for computation power? [the terrain demo – using height data stored in a big texture to do bump-mapping]

That is a good way to think of it, although, with the size of memory on today's graphics cards, consuming memory for textures is not as concerning as it once was.

**15:44:54** When doing bump mapping on a sphere, such as the globe, does noise data get hidden in a texture3D, or is it still a texture2D, but then wrapped around a 3-D object after the lighting is determined?

The example shown didn't use noise terrain, it used real heights from around the Earth.

**15:46:27** But is the [Earth] height data hidden in texture2D or texture3D?

A 2D texture. The earth might be 3D, but the outer skin that we all live on is 2D – latitude and longitude.

**16:06:30** What's the difference between using Noise3 vs Noise2 for the bump mapping in project 3?

In this case, you won't see much difference.

**17:10:01** I have an off question whenever, in texture mapping, when you blend the colors beneath with the top texture, is that what you use for vision accessibility settings in games?

<https://www.gamersexperience.com/colorblind-accessibility-in-video-games-is-the-industry-heading-in-the-right-direction/>

<https://dl.acm.org/doi/abs/10.1145/3335595.3335612>

Gosh, I don't know.

**17:38:18** I wonder if there was a way to apply a separate shader for water features. Add ripples, animation, specular etc. Separate from land. That'd be awesome!

We have a noteset on wave motion coming up.