11:58:02 From Goodlake, Garett Cullen: Have u heard of the new vr headset that came out yesterday the quest 2?. I think we talk about vr somewhere in the course

Rats! I have a Quest 1. I hate it when I have to make a decision like this to get the new one or keep using the old one. Yes, we will talk about VR later in the quarter.

11:58:38 From Jacob Eckroth(He/him/his): wait how much does 3080 cost?
11:59:08 From Medinger, Evan R: I think its around 700$ let me check..
11:59:09 From Halaapiapi, Leni Tualau: 3080 $699
11:59:12 From Adams, Daniel: $700
11:59:19 From Jacob Eckroth(He/him/his): oh ok yeah that sounds about right
11:59:21 From Halaapiapi, Leni Tualau: 3070 $499
11:59:46 From Halaapiapi, Leni Tualau: 3090 $1499

Fascinating price-points. Very well planned, I think.

12:01:20 From Morello, Zachary D: 2GB on graphics card happens 10 years ago???
12:01:26 From Morello, Zachary D: Happened*
12:01:57 From Adams, Daniel: mostly heatsink weight

Are you curious what the inside of a graphics card looks like. In one of my Parallel Programming videos, I dismantled a dead Nvidia 1080ti card. Find it here: https://media.oregonstate.edu/media/1_nuymfnjn. The graphics card dismantling starts around 30:25.

12:10:25 From Nguyen, Quan M: can you share the link? [of the Covid CG animation]
12:15:10 From Nguyen, Quan M: direct mp4 link: https://int.nyt.com/data/videotape/finished/2020/09/1600886110/amaro-cov-atoms-900w.mp4

Nicely done! I should have known that you would all find the links faster than I would. 😊

Check this out. It is really interesting from a scientific point of view. But, watch the videos with an eye towards how you would write such a graphics program.

12:35:56 From Jacob Eckroth(He/him/his): how would you even make a bitmap out a gif
12:36:08 From Mahmoud, Ibrahim: good question lol
12:36:26 From Mahmoud, Ibrahim: probably convert to a folder of images
12:36:32 From Jacob Eckroth(He/him/his): there are three things checked on the assignment: Object without texture, Object with texture, Object with texture warped
12:36:35 From Mahmoud, Ibrahim: and then cycle through the images
12:36:52 From Adams, Daniel: You have to make the GIF into a sequence of PNGs or something
12:37:02 From Adams, Daniel: then create a script that cycles through them

I’ve never tried this, but I know it would work. Extract the animated GIF into separate images. Convert each image into a 24-bit, uncompressed BMP. (You can write an ImageMagick script to do this.) Read each one in using BmpToTexture( ) and put each into its own BindTexture. Then, every time you call Display( ), use the next texture binding index in the sequence.
12:42:45  From  Seale, Jett : man graphics really is just all smoke and mirrors

We prefer to think of it as “clever trickery”. 😊

12:43:42  From  Zhao, Liang : So, if we set a texture coordinate in the range from 0.0f to 2.0f, or larger (instead of the original 0.0f to 1.0f), what will happen?

If you have set the wrapping mode to GL_REPEAT, you will see a 2x2 grid of the texture images.

13:00:02  From  Adams, Daniel : Gloss vs Matte paint

Yes, the shininess can create these two surface effects.

13:13:46  From  Markwell, Cameron Douglas : shininess?
13:13:51  From  Markwell, Cameron Douglas : what is that there?
13:14:43  From  Mike S. : shininess is the s parameter in the specular term

That’s right. And, the larger the s value, the shinier the surface looks.

13:27:12  From  Mitchell-Nelson, Luke Andrew : is GL_LIGHT0 a user defined variable or are there some set number of lights possible in a scene?

GL_LIGHT0 is #define’d in the file gl.h. The OpenGL spec says that there must be at least 8 light sources available to be set. I think most graphics systems these days allow more.

13:29:02  From  Haines, Grant A : A point light is like a lightbulb - it is in one position and shines in all directions

Correct.

13:29:26  From  Haines, Grant A : Directional acts like a point light that is extremely far away

Yes. Technically our sun is a point light source, but by the time the rays travel 93M miles, they are essentially parallel to each other.

13:32:50  From  Vaughn, Justin : so would the glLight be in init Graphics or in a display list?

If the light information is never going to change, you can put it in InitGraphics( ). If it is going to change, i.e., some of the parameters are global variables, then the glLight* calls should go in Display( ).

13:36:18  From  Markwell, Cameron Douglas : do we have the Array3 function in sample?

No, if you want it, just copy and paste it out of the notes.

13:42:05  From  Mahmoud, Ibrahim : Just to confirm, Project #3 doesn’t need us to use menu options right?

Correct. Your video just needs to show us the required features. How you turn these on and off is up to you.

13:45:54  From  Jacob Eckroth(He/him/his) : can you turn off the ambient light

You can't really turn it off, but you can set it to 0., 0., 0.