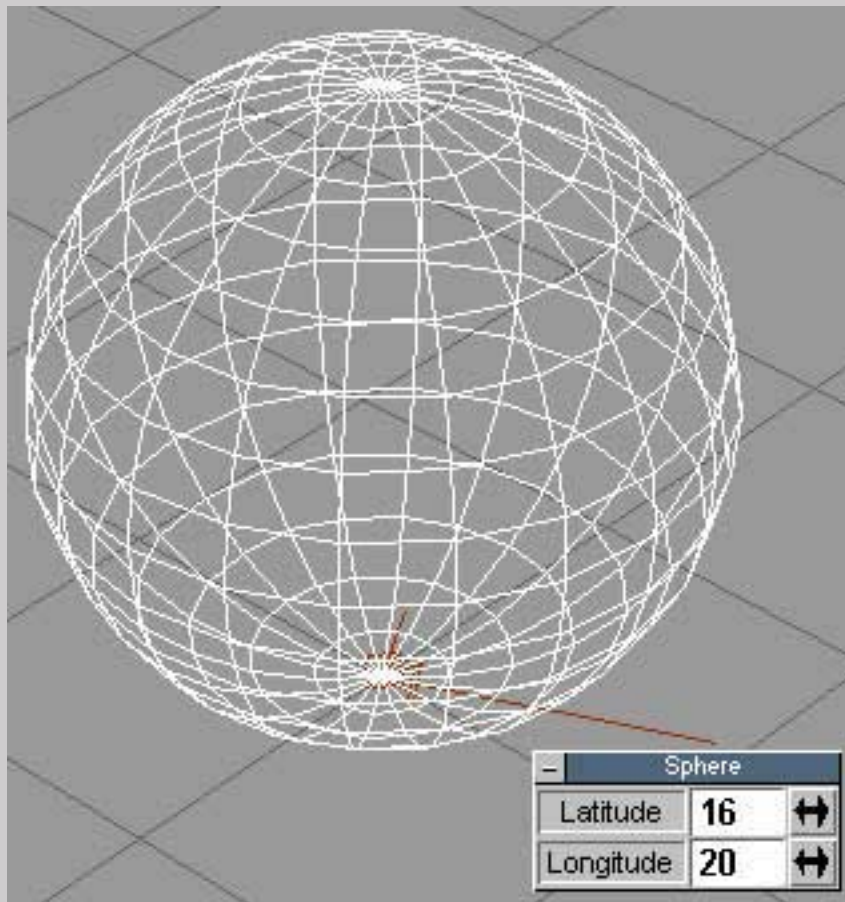


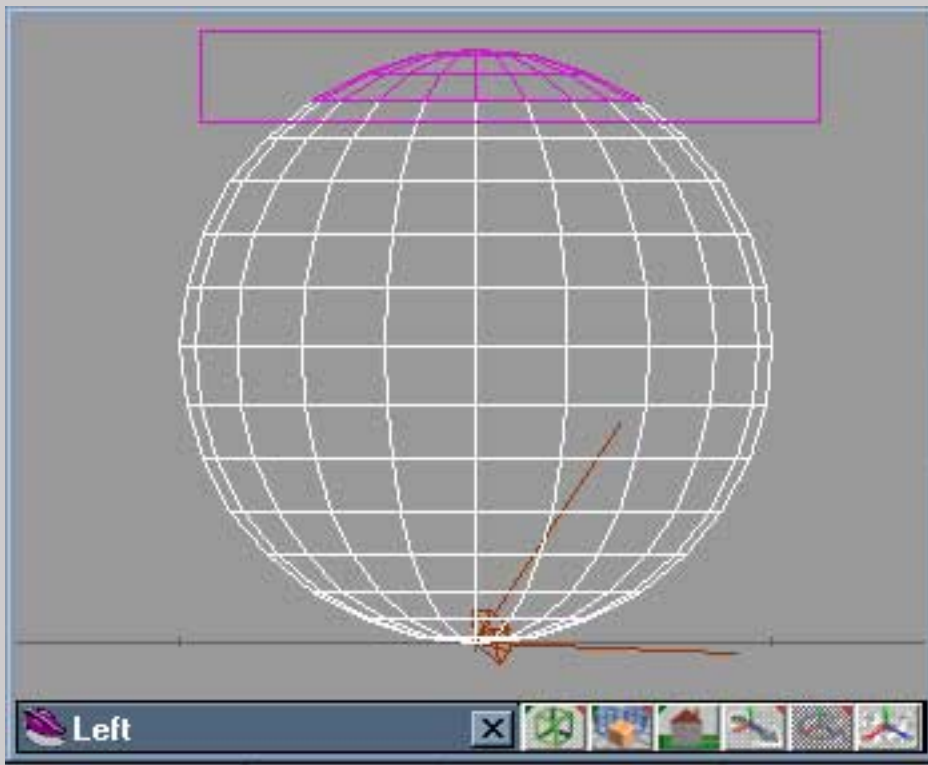
Eye tutorial © Eric Skramstad

This is a quick tutorial on modelling and texturing a basic eye. The maps we will make will be acceptable, but you'll definitely want to make more detailed maps for a finished render. These were made very quickly and are not an indication of my best work :)

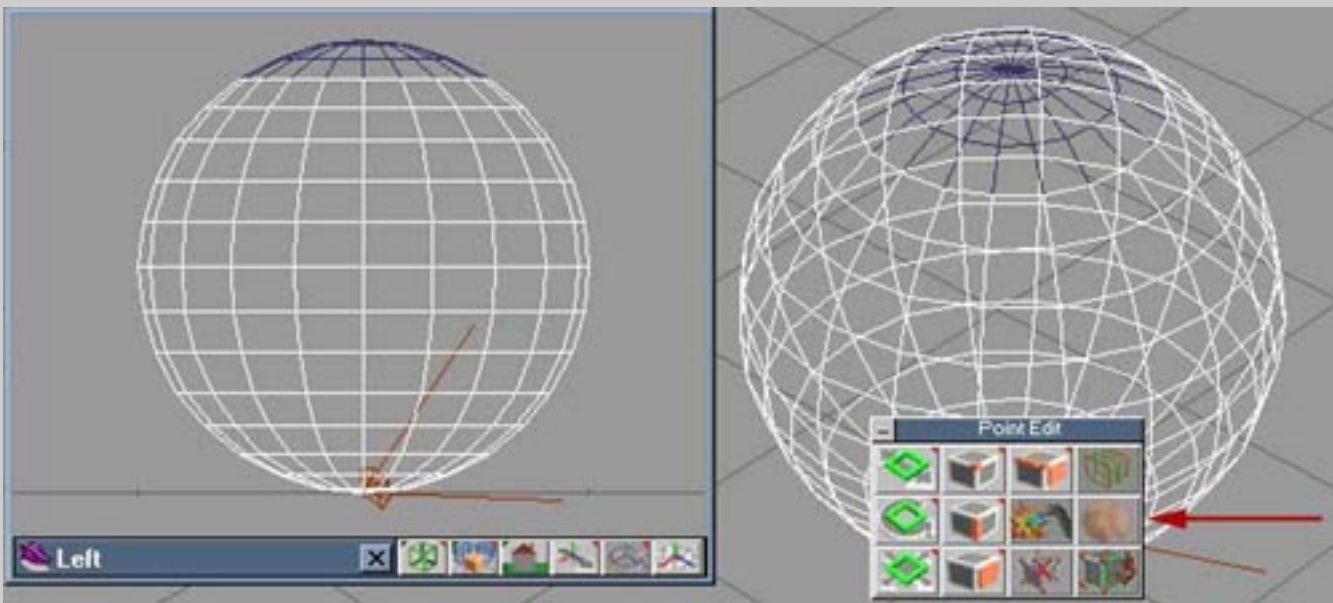
First, let's make a sphere with the parameters below.



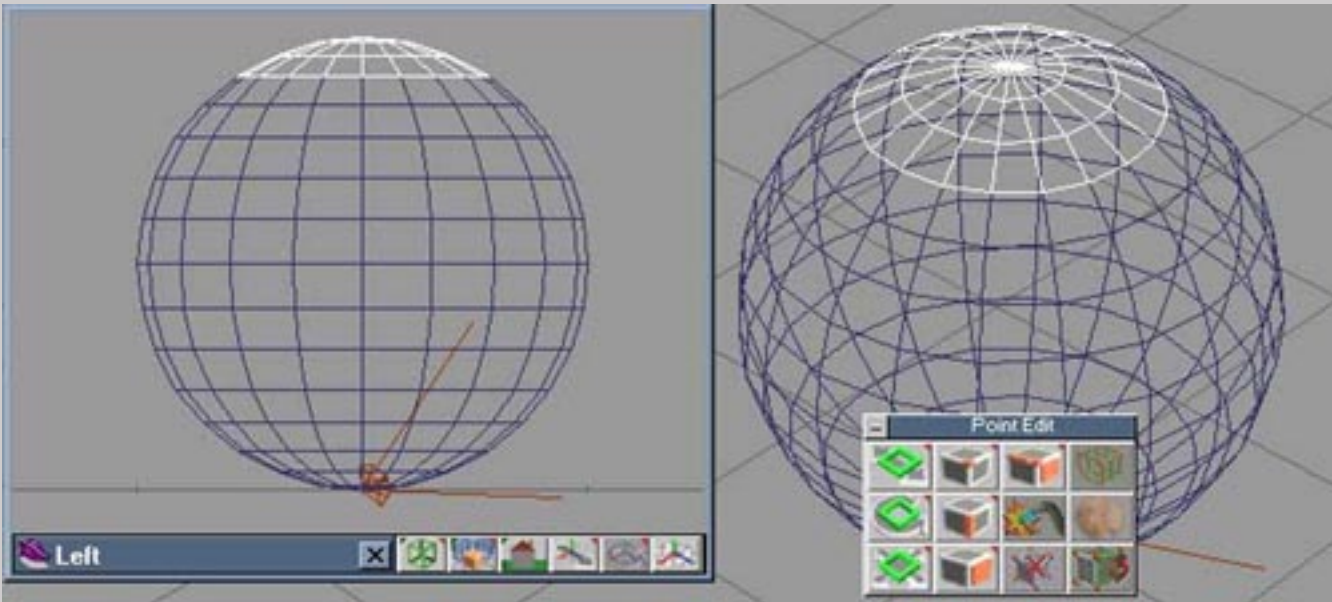
Using the 'Select Using Rectangle' tool, let's select the first two rows of polygons on the top of the sphere. This will be the cornea.



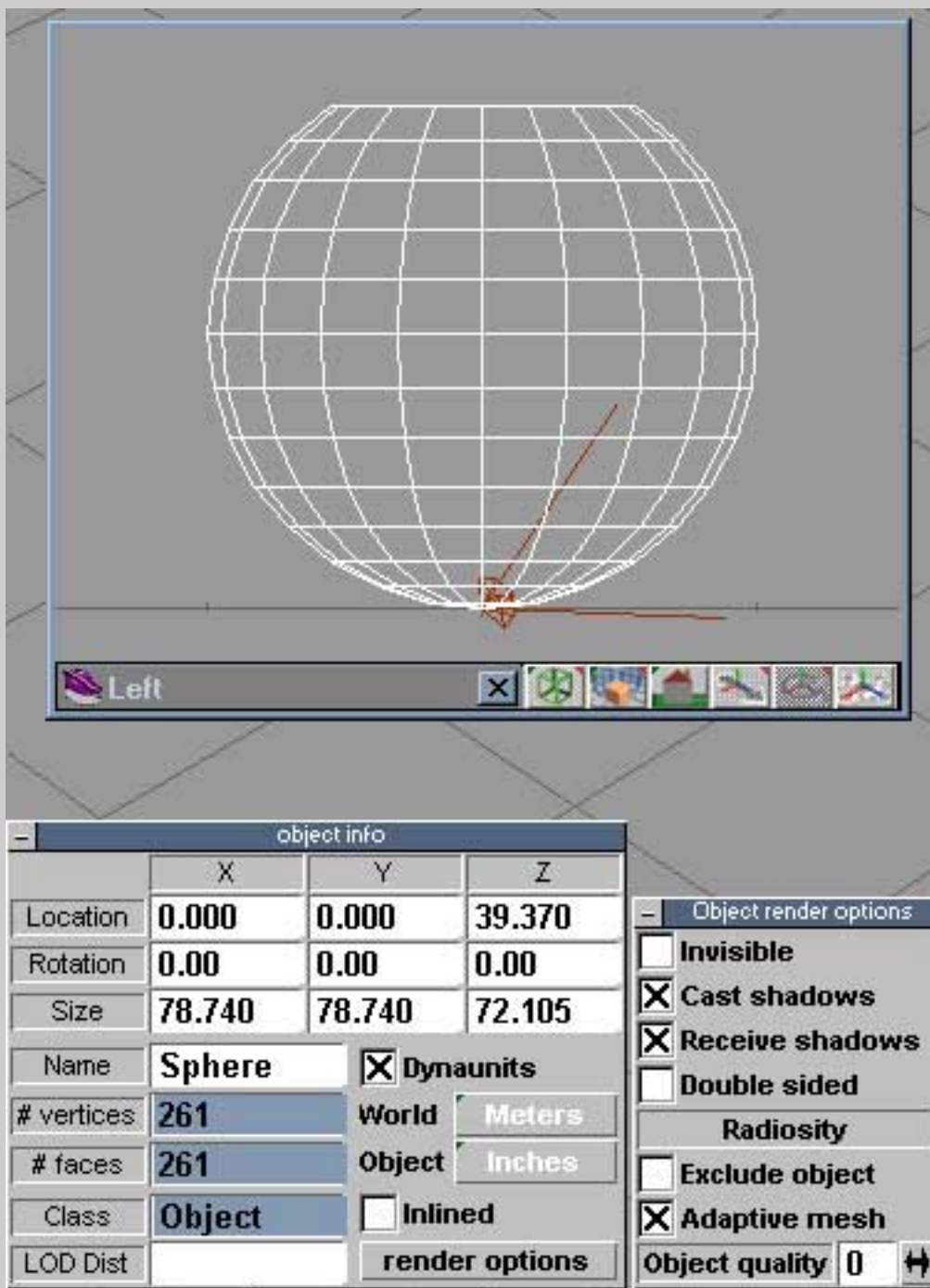
Now let's use the 'Remove Selected Part Of Object' tool to create a separate object from the selected polygons.



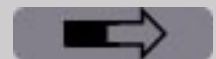
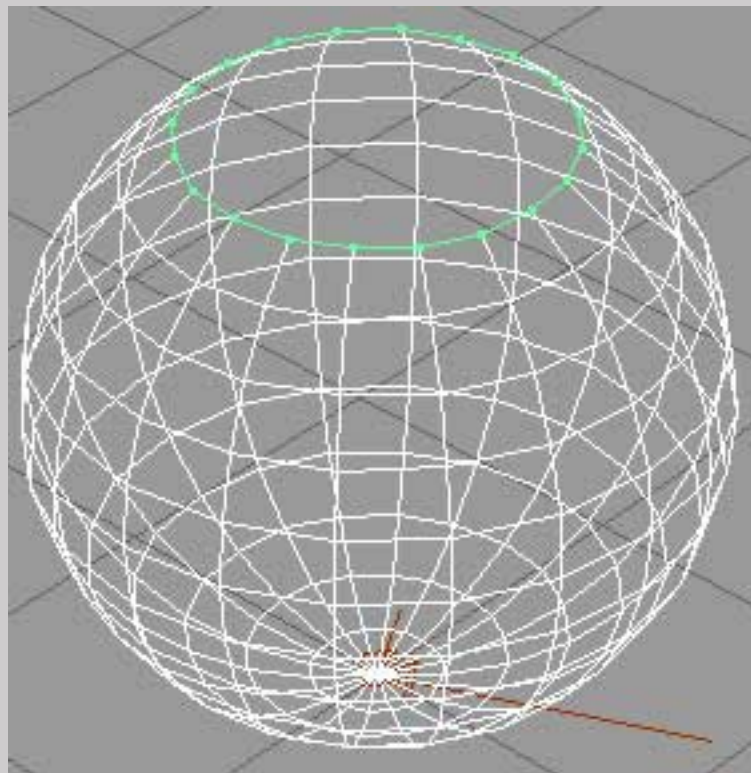
Highlight the cornea object.



Open the object info panel <Right click on the arrow button on the toolbar>. Once that is open, click on the 'render options' button at the bottom of the object info panel. With the cornea object selected, place a check mark in the 'Invisible' check box. The cornea object should now be hidden. Highlight the eye object now.

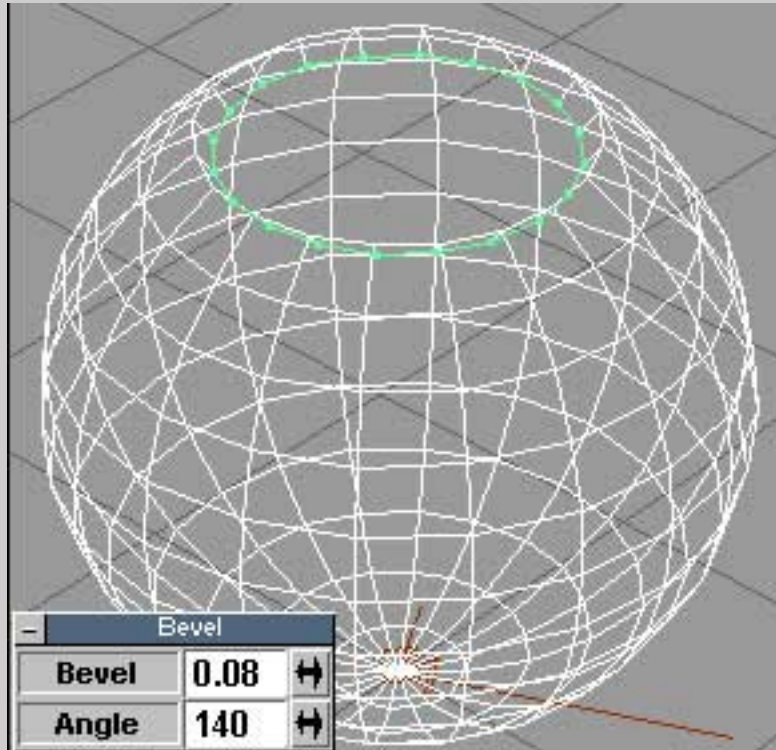


Rotate the perspective view so we are looking down on the eye object and highlight the top polygon.

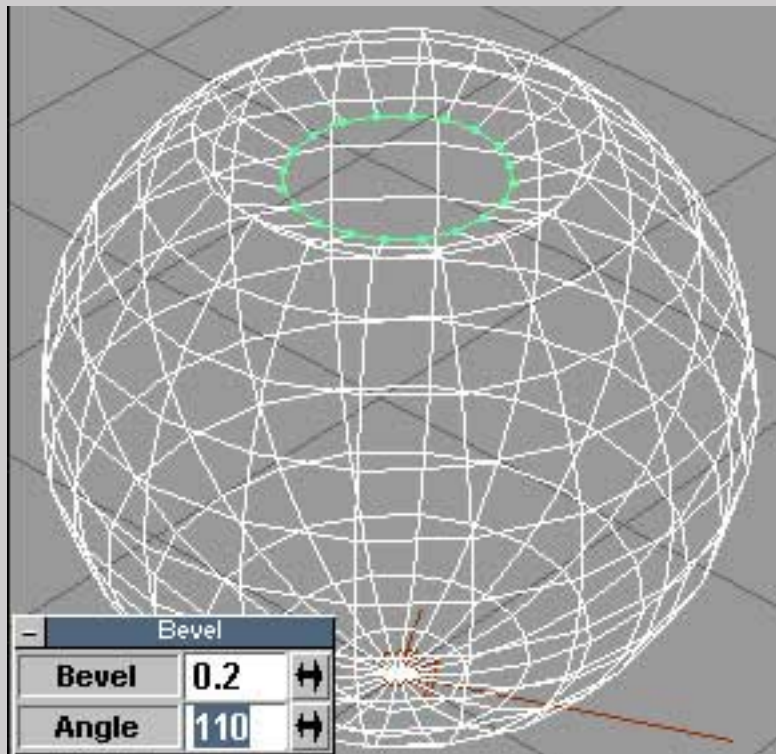


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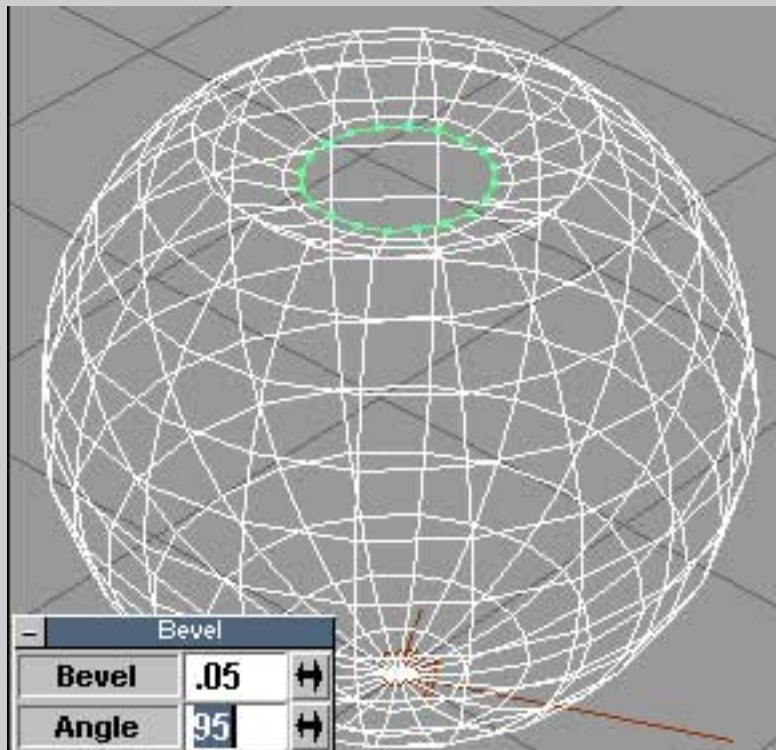
Now we are going to bevel in to create the iris part of the eye. You can use my settings or try your own. The next couple steps will be more bevelling.



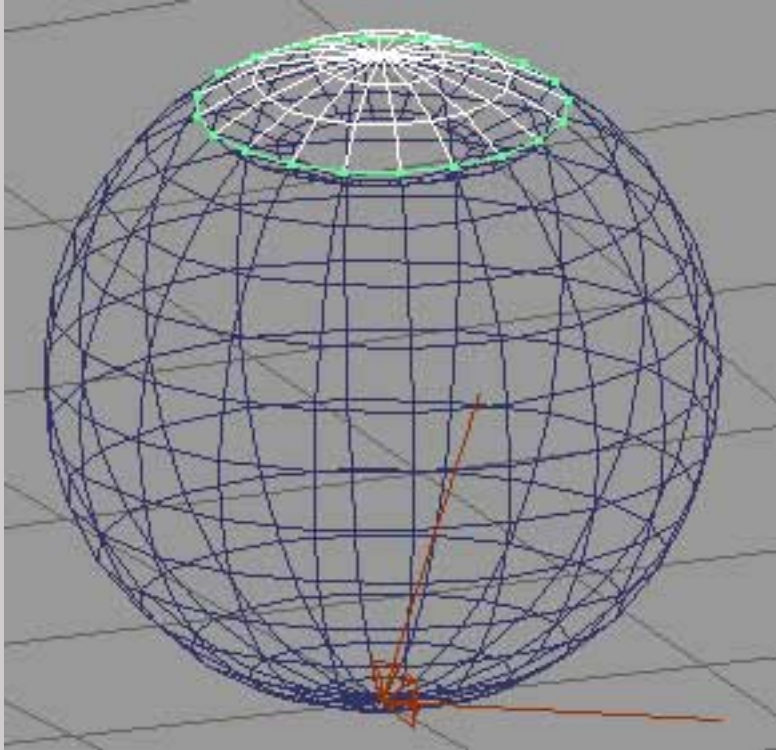
Bevel again...



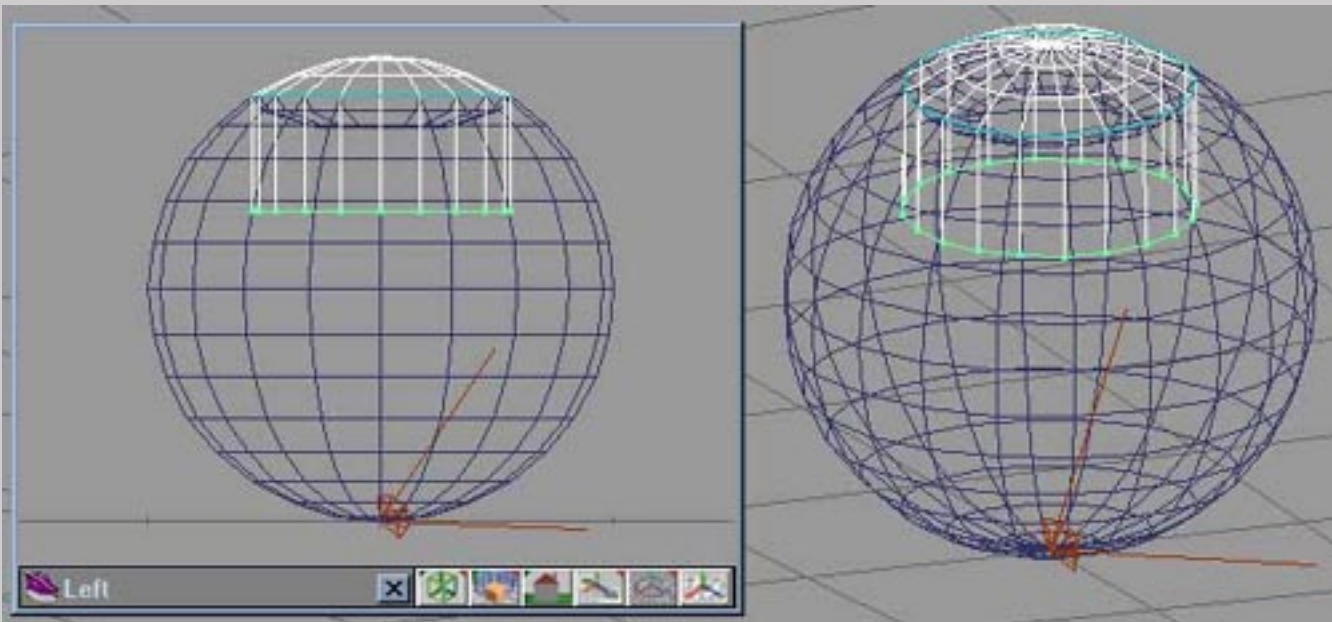
Now bevel one last time.



Now use the "Unhide All Objects" tool to unhide the cornea object then rotate the view so we are looking up from the bottom of the cornea. Select the bottom polygon on the cornea object.



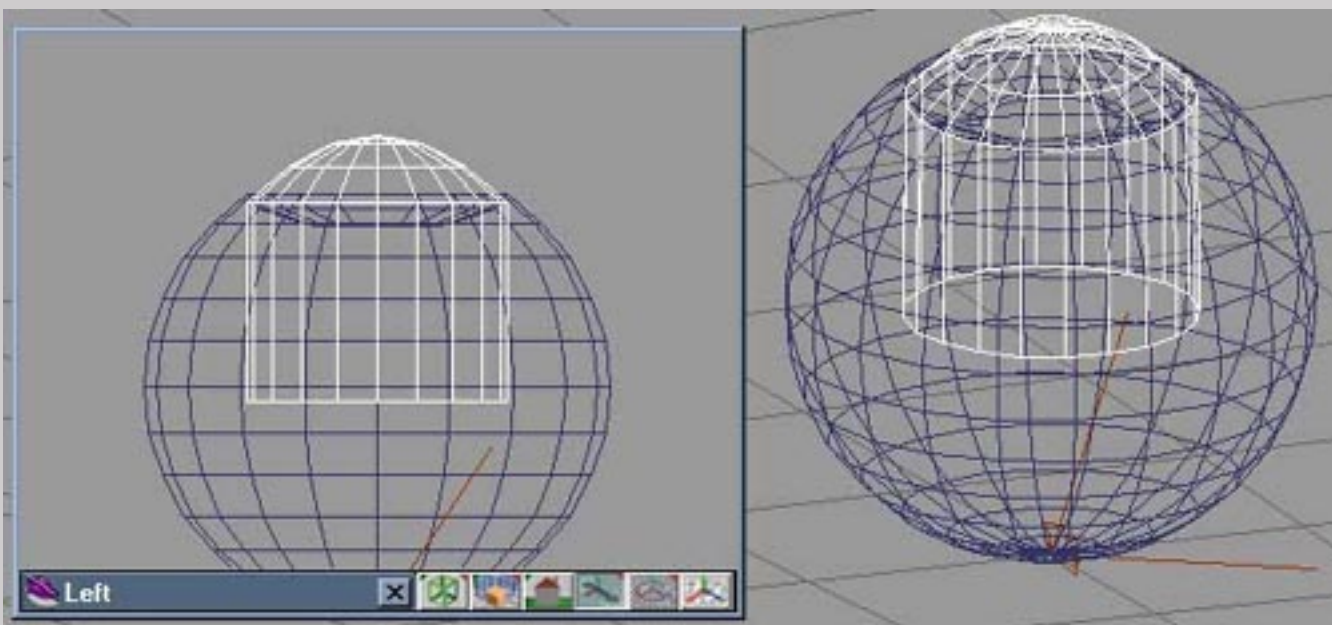
Sweep this polygon once.

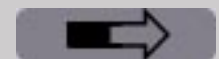
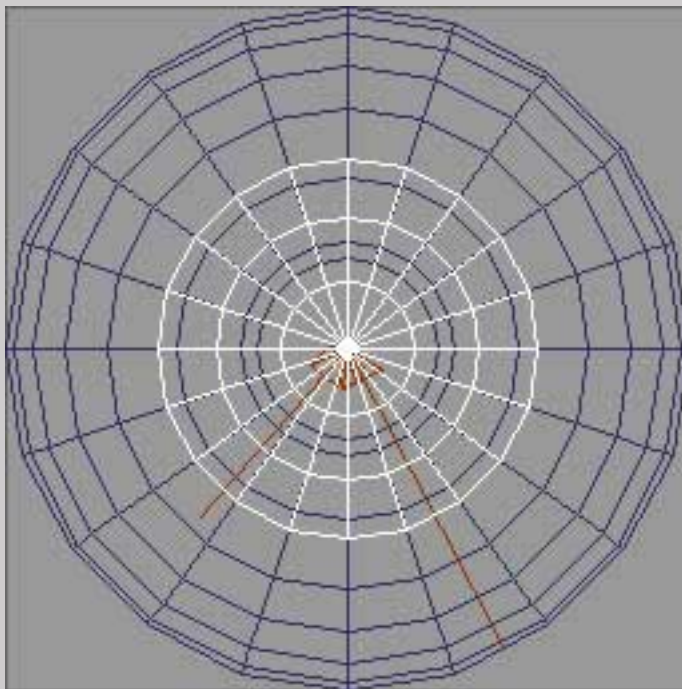


From the side, scale the cornea object up along the Z axis. This will make the round part of the cornea bubble up more. Keep the cornea object selected. This is more like an eye since the eye is not a completely perfect sphere. Then switch to the top view. From here,

we are going to make a template to start making textures. Do a screen capture <Print Screen> and open a new document in your favorite paint program...Photoshop, Paint Shop Pro, Photopaint, etc...And paste the clipboard to it. Now crop the image directly around the sphere of your eye.

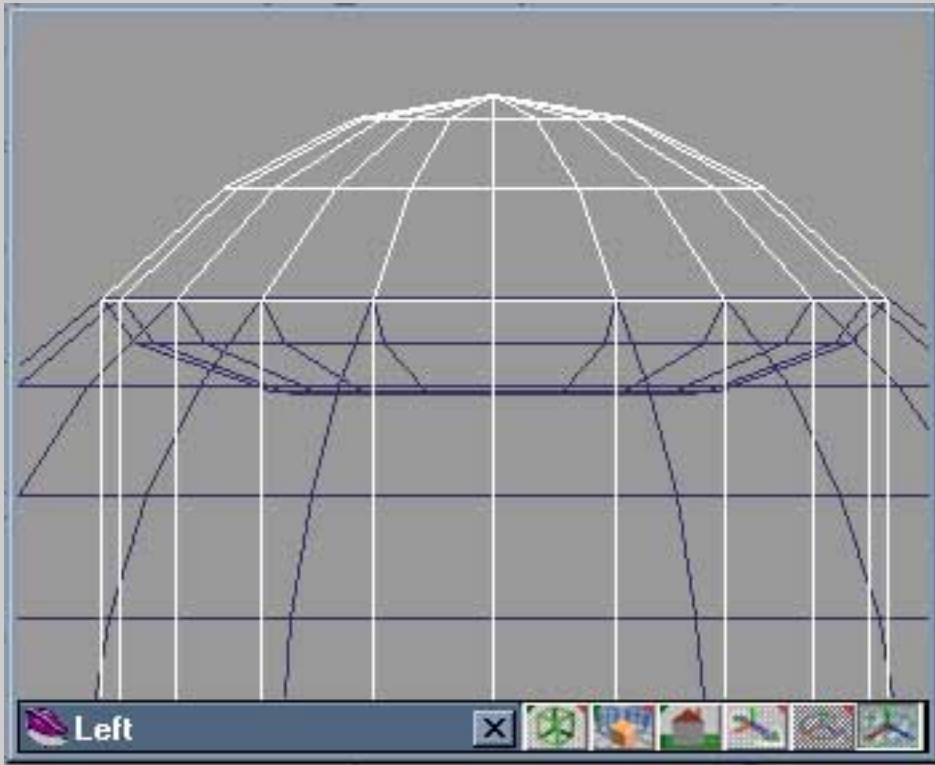
In your paint program create a new layer. and fill it with an off white with a VERY SLIGHT pink tint. We don't want a pure white, but close. Create a circle in the center the diameter of the cornea object and fill it with black, then blur it slightly to get rid of the sharp edge. Now, around the edge of the outter circle use a large airbrush to brush on a reddish color. This will be projected straight down on a plane so the red will only be on the edge of the eyeballs. You can add more details, veins, etc. later. Save the image as 'eyecolor.jpg' <Or whatever format you prefer> You can see my quick texture below .



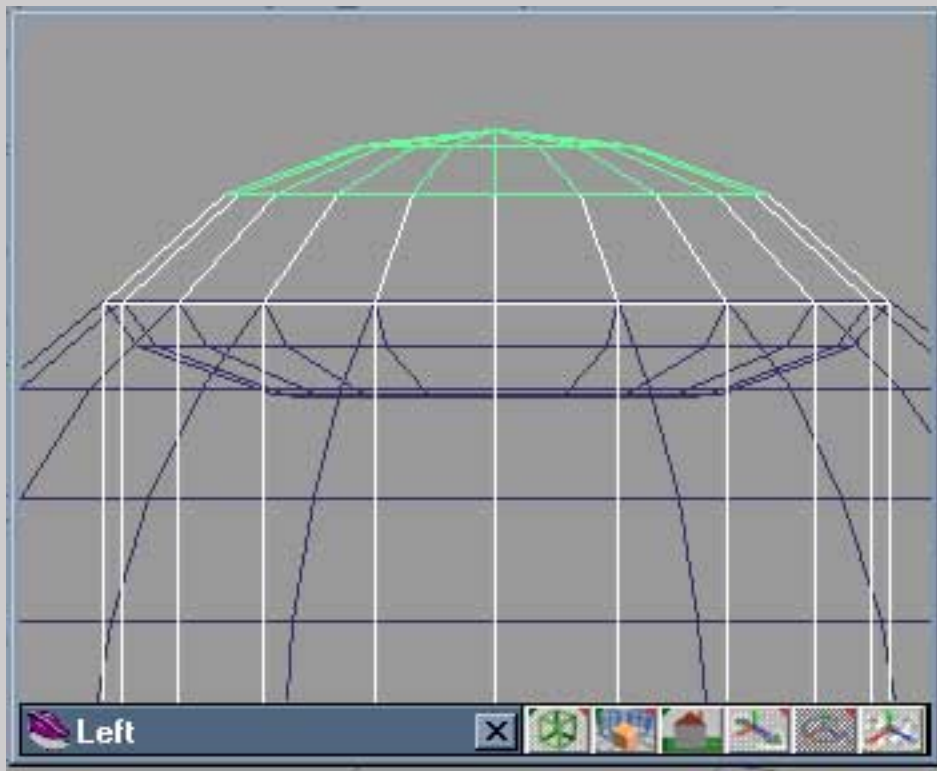


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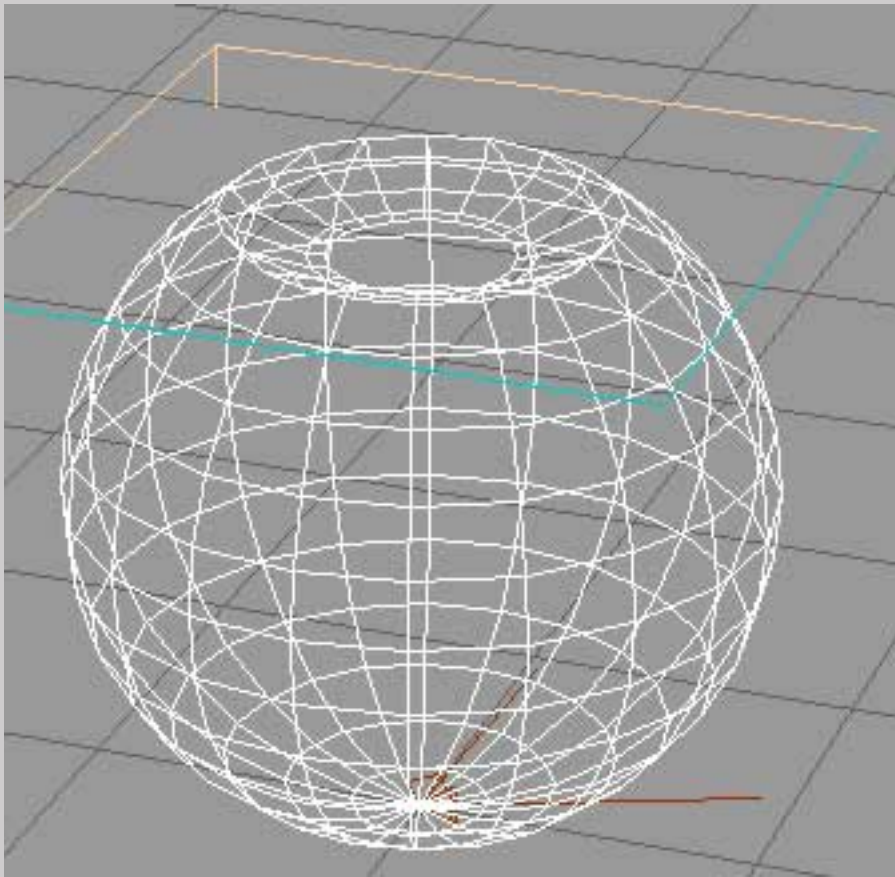
Zoom in to where the cornea object and eyeball meet and move the cornea up so that the top of the eye object is at the same level as the base of the arch on the cornea.



Now, us the 'Select Using Rectangle' tool to select the top 2 rows of the cornea and scale them a little flatter. Then hide the cornea object again.



Using the 'UV Projection' tool create a planar projection. I just used the default. This is the reason I am building the eye facing up. It just saves a couple steps. IF we build it facing forward we'd have to rotate the UV Projection. My way is just easier. Apply the planar projection.



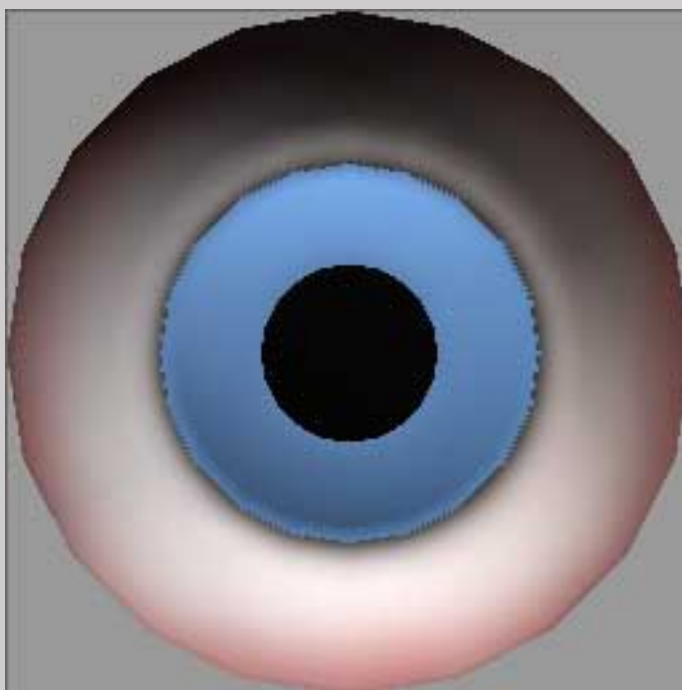
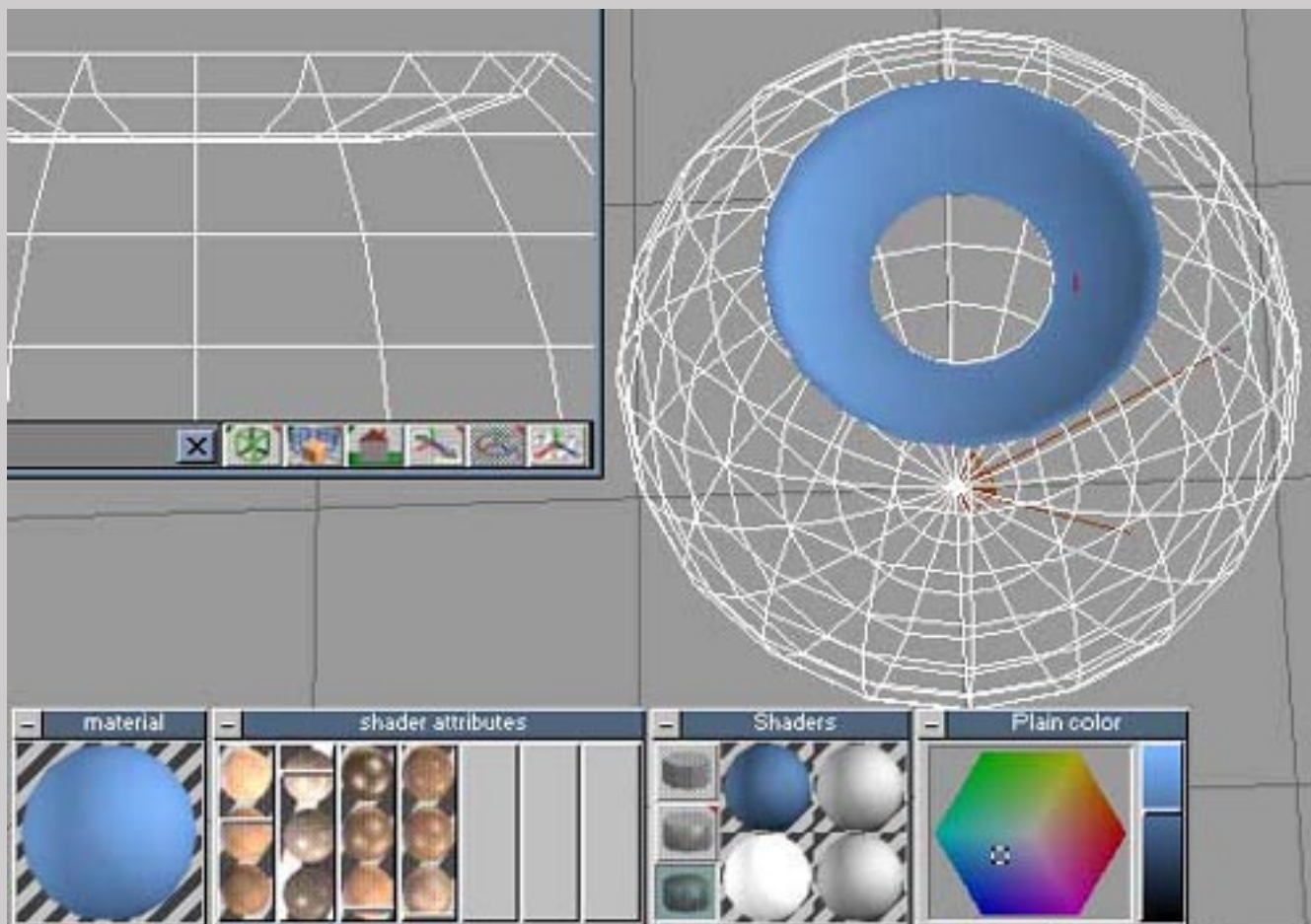
In the Color Channel, choose 'Texture Map' and find your eyecolor.jpg image and apply it. I also changed the the material to smooth and used the Phong Reflectance method. Make sure you don't forget to paint the eyeball object with this material.



Next we make a material with phong shading with a blue color. Paint all polygons inside the area we

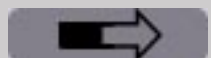
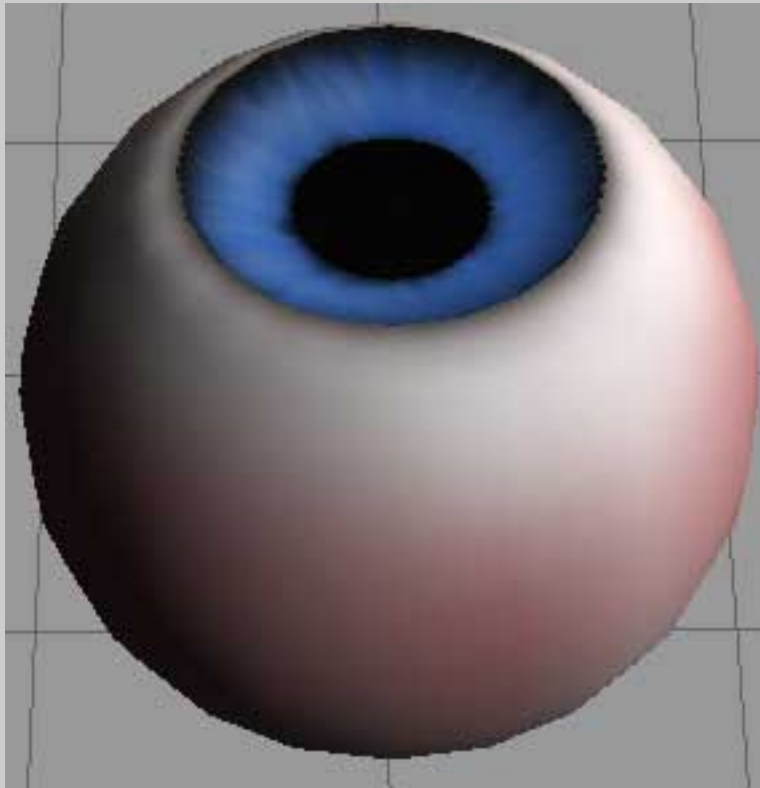
bevelled in, except the center polygon which will be our pupil. Use the 'Paint Face' tool to do this. There aren't that many to paint so it should be fairly easy. This is just a material we are using to 'hold the place' of our iris texture that we are about to create. Once we have the iris material created we can just use the 'Paint Over Existing Material' tool and click on this blank blue texture and it will be replaced with our nice iris material.

Switch to a top view and do a quick render. Screen capture this render and crop it around the eye object like we did earlier in your paint program. You can see my example of this in the lower left corner below. Create a new layer and paint all black everywhere but the blue iris area. Paint this area with whatever color you want the eye to be...Blue, brown, green, etc. Add some variations in colors and small lines expanding out from the center. Blur it a little. Smear in some of the black from the pupil area and from the outside of the iris. This is where you can have a lot of fun...Look at some close up pictures for ideas...I just did a quick one...Less than 5 minutes. Save this as iriscolor.jpg. You can see mine in the lower right hand corner below.



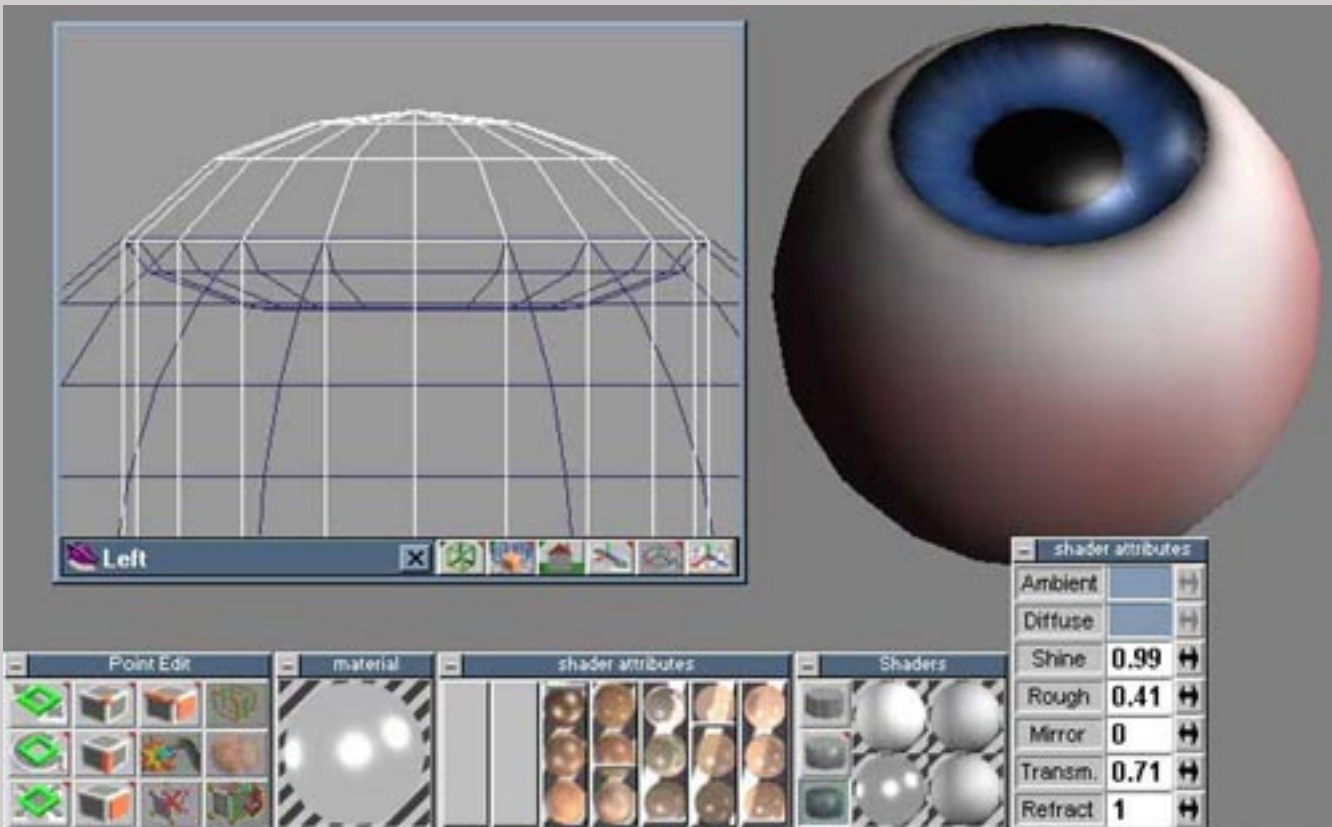


Create a new material with the `iriscolor.jpg` texture map and use the 'Paint Over Existing Material' tool to paint it onto the iris part of the eye object. A quick render should give you something similar to below.

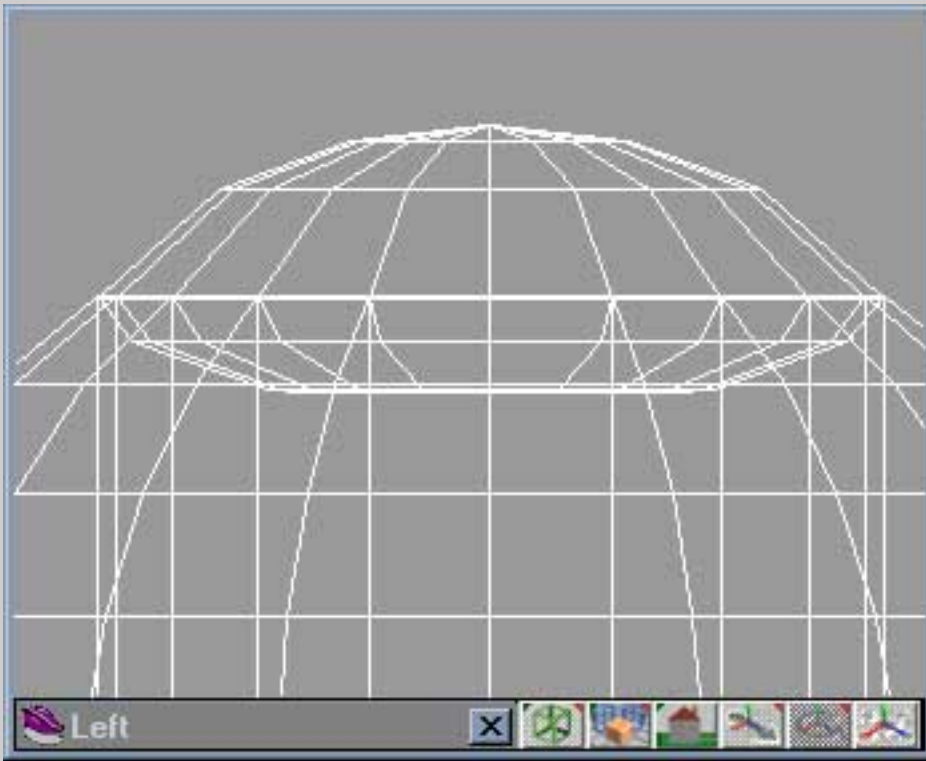


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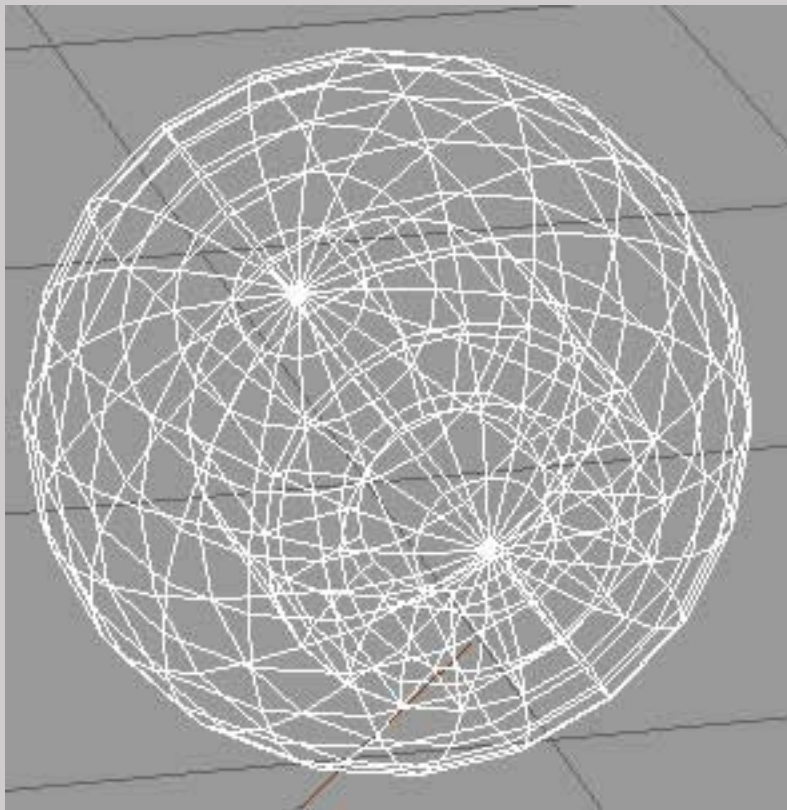
Unhide the cornea. We need to make the cornea a glassy object. I used a smooth material with the plain color of white and the 'Glass' reflectance channel. You can see the settings I used below. After you get the surface the way you want, paint it onto the cornea object.



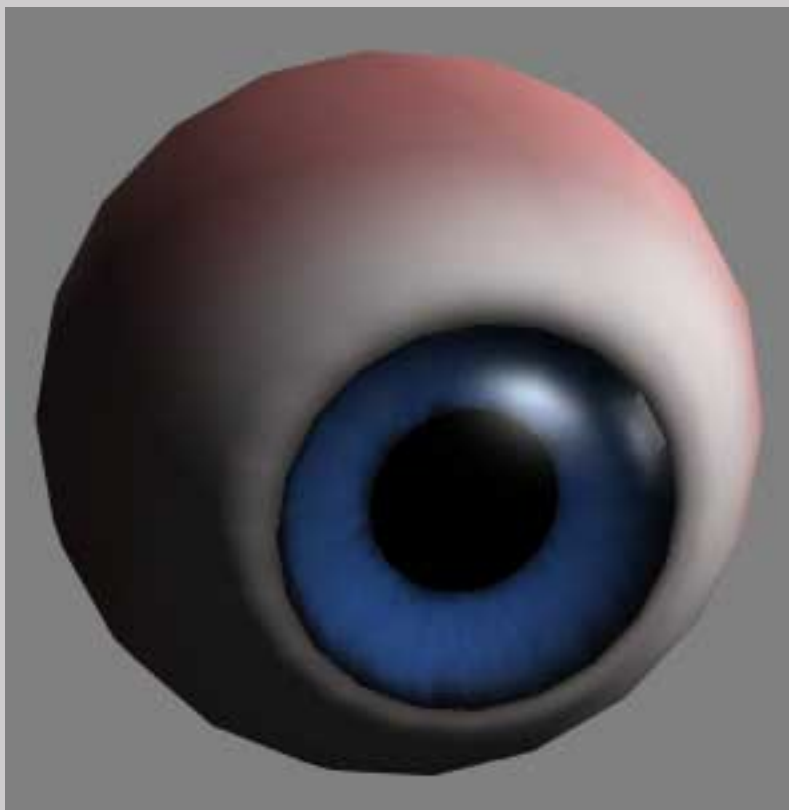
Glue the cornea to the eye object as a sibling.



Rotate the object so it sits on it's side and is facing forward.



Render the eye to see what we have. Not to shabby for a quick tutorial, eh?



Close