



ARCH1291 – Visual Studies II
Assignment 5b: Panelization of Thickened Module

INTRODUCTION

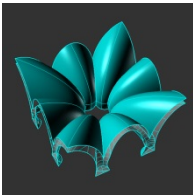
In this assignment you will panelize the thickened, or “shelled,” polysurfaces between two surfaces to finalize your 3D model of your pavilion design. You will evaluate your polysurface to make sure it is valid and closed before exporting it as an STL model.

READING

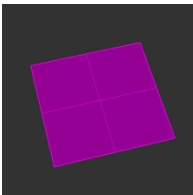
Read the Illustrator Tutorial for the coming week.

INSTRUCTIONS

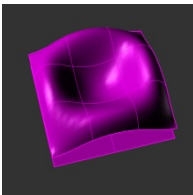
1. Download your thickened model from Dropbox. It's in the Assignment 5 folder and is titled *YourLastName_module_thickened.3dm*. **If your file is not there it is because you have not uploaded your module to Dropbox!**



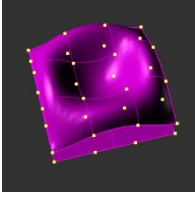
2. Create a 6 x 6" plane to act as your floor surface.



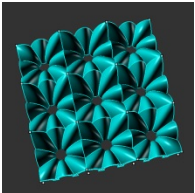
3. Using any of the surface commands learned in Assignment 4, model a freeform surface to act as your ceiling surface. The bounding box for this surface is not to exceed 6(X) x 6(Y) x 3(Z)".



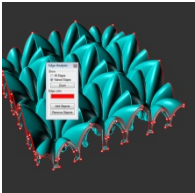
4. Select both surfaces and create paneling grids by going to **Paneling Tools > Create Paneling Grid > Surface Domain**. Set the U and V divisions to **3** and **3**.



- Panelize your polysurface by going to **Paneling Tools > Paneling from Grid > Panel Custom 3D**. Make sure that the X and Y length both appear as 2.



- Select your panelized polysurfaces (9) and join them into a single open polysurface. Locate openings in your polysurface by running the **ShowEdges** command and selecting the Naked Edges option. Naked edges should only appear around the edge of your model.



- These openings should all be planar and can be closed by using the **Cap** and **PlanarSrf** commands.
- Run the **What** command to verify that you have a valid closed polysurface.
- Use the **Mesh** command to mesh your closed polysurface – drag the slider to get the most detailed mesh possible.
- Run the CheckMesh command to verify that your mesh is watertight.
- Select your mesh and go to **File > Export Selected**. Export as an **STL file** and upload the STL file to your Assignment 5b folder on Dropbox.

GRADING

To receive a grade, your Rhino (*.3dm) file must be submitted to your Dropbox folder by the beginning of the next class.

Assignment 5b will be graded as follows:

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| 1. File named properly (“ <i>Professor’sLastName_Sp13_YourLastName_Assignment5b.3dm</i> ”). | 10% |
| 2. Plane measures 6 x 6”. | 10% |
| 3. Ceiling surface fits into specified envelope. | 10% |
| 4. Floor and ceiling surface directions match. | 10% |
| 5. Ceiling surface demonstrated understanding of freeform surface development. | 10% |
| 6. Paneling grid successfully completed with 3 divisions in U and V directions. | 10% |
| 7. Thickened polysurface successfully panelized between surfaces. | 10% |
| 8. Panelized polysurface joined into single open polysurface. | 10% |

- | | |
|-------------------------------------------------------------|-----|
| 9. Naked edges only appear around perimeter of polysurface. | 10% |
| 10. Use of proper layer management. | 10% |