

COMPONENT SYSTEMS: ADVANCED FABRICATION

Visual Studies Spring 2009 / 2nd session
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Week 03: Assignment 03

Finalize your pavilion design.
Create a detailed sketch of your connection system.
Begin thinking about assembly and fabrication processes.
Start modeling in Solidworks.

- **STRUCTURAL ANALYSIS:** have the final version of your pavilion saved as a **.dxf file** (lines only) so that we can run a global structural analysis on your model. We will be using the engineering program SAP 2000 to test the forces that are going through each structural member, whether a member is in tension or compression and resultant forces that are going through the joint we will focus on building.

- **CONNECTION SYSTEM:** create a detailed sketch in **Rhino** showing how you intend to connect the structural pieces of your pavilion. This is not a final design but a preliminary drawing so that we can begin to build your system in **Solidworks**. This drawing should have enough information in it to show how the structural members will attach, how your system will be fabricated assembled [is this folded aluminum or milled aluminum], and how your connection system will be assembled [is it one solid piece or made from numerous separate components].

- **SOLIDWORKS:** we will begin to build your connection system in Solidworks on Monday, April 6th and will continue to adjust this model once we have the structural analysis results from SAP 2000.

DUE: Thursday, April 9, 2009

1. **SAP 2000:** .dxf file (lines only) of your pavilion: **Post .dxf file and an image of pavilion**
2. **RHINO:** Detailed sketch in of your connection system: **Post 2-3 images of your system.**
3. **SOLIDWORKS:** Begin building your connection system and bring your file so we can look at it in class.