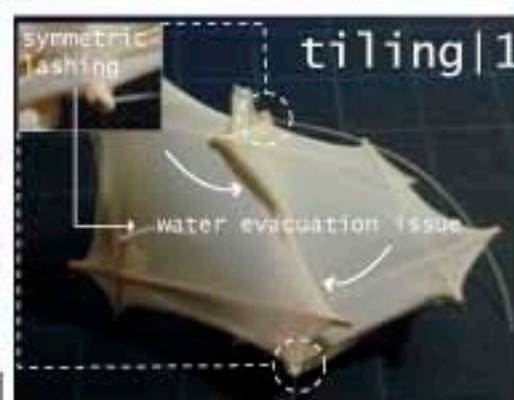
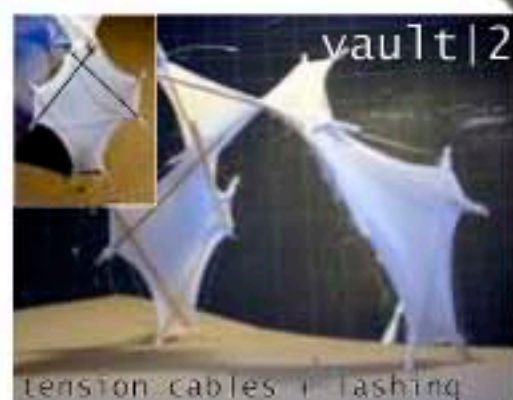
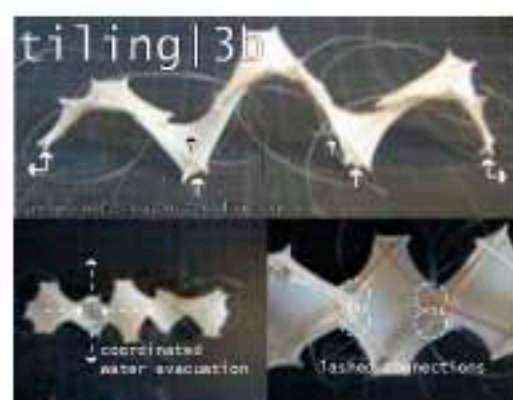
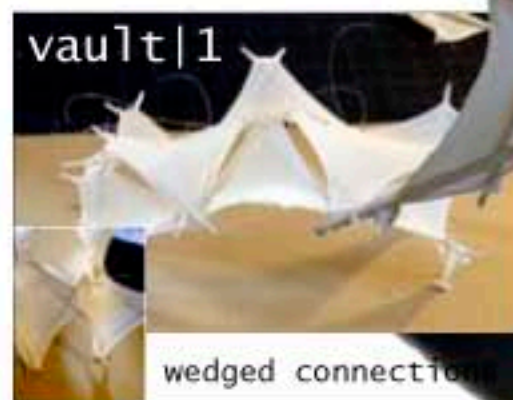


EXPERIMENTS IN STRUCTURE Tensegrity and Tensile Fabric Fall 2003

These models explore the possibilities of using a tensegrity system to bring tension to a fabric membrane. The four-part tensegrity system used here is one of the few that are non-triangulated, meaning that they can twist into multiple positions. This quality gives the system enormous variability in how it may be aggregated. Ultimately, the system must, however, be cross-braced in order to provide stability to the system

1. Slides describing the system's structural behavior
2. Arch Configuration



EXPERIMENTS IN STRUCTURE University Event Tent Prototype Fall 2003

The approach in almost every tensile fabric tent design assumes that fabric is made taut through the use of tension members. This project replaces those tension elements with structure acting in compression. While such materials as spring steel and carbon fiber were suited to this idea, the most captivating results came from pneumatic beams. These elements have been used before in tent architecture, but never before have they been bent out of the plane as a perimeter condition.

1. Soap Film and Spring Steel Study
2. Wood, Spring Steel, and Fabric Study
3. Spring Steel and Fabric Model
4. Junction Detail of Pneumatic Beam and Fabric
5. Typical Housing Unit
6. 4 Part Tent
7. 3 Part Tent

