PENN STATE UNIVERSITY DANCE COMPANY

DANCING ON AIR

Overview

The Penn State University Dance Company has been paired up with the Creative Campus initiative, with the goal of developing various props and set pieces to be used in their upcoming Spring 2012 performance entitled “The Secret Life of Public Spaces.” The initiative will bring together the Penn State Departments of Dance, Engineering, and Architecture, along with inspiration from the Diavolo Dance Company to brainstorm and develop ways to further explore the way people use public spaces. The goal of this project was to design, engineer, and develop a means of conveyance for the dancers to move through and explore a space at an elevated height of one to three feet.

Objectives

The objective for this project was to make the most creative device for the dancers to be able to explore and use the given spaces in new and exciting ways.

Approach

- Our first step was attending IdeaLabs, a Creative Campus event that would meet every Friday to help facilitate brainstorming sessions between Engineers, Architects, and Dancers.
- A patent review was conducted on existing performance equipment such as stilts and the trapeze.
- To help us further understand the dancers abilities and limitations we would attend the Dance Company classes and performances.
- Dancer input was gathered on various structures and devices they had witnessed or used in performances in their everyday lives. We also inquired as to what sort of things they would like to explore in this specific performance.
- Several concepts were generated and then brought to the dancers to see what was good and what needed improvement.
  - The first design explored was the “Dance Cage,” a dynamic, transformable box allowing the dancers to swing and move freely throughout the space.
  - The second design was a playground inspired configuration consisting of several uniquely designed elements promoting the theme of play in public space.
- Simple CAD models were created to help show the basic concept of each design.

Outcomes

A design review was held with the founders of Diavolo mid-way through the semester to critique the various projects involved in The Secret Life of Public Spaces.

- After further review of our design, the sponsors decided to pair us with a group of Architects in designing a moving dance stage.
- The Architects were assigned with building the frame of the stage, while we as Engineers were assigned the task of building the crankshaft and pistons.
- The stage is currently being pushed into its initial prototyping stage and will continue to be developed by Architects and Engineers in the Spring semester.