Robotic Flagpole

Advisor: David Thompson

Project Goal:

Create a flagpole that utilizes pneumatic systems to make a flag appear as if it were blowing in the wind in an indoor environment

Challenges:

- Location: This is a large art structure, so finding a permanent placement is important
- Sound: Using an air compressor at all times is very loud, so sound dampening is a key goal
- Funding: Components for the flagpole and the related systems can be very expensive, which limits how functional our system is without funds

Results:

- Designed two different flagpole models, one with underground air compressor for noise suppression and one with above ground that is easier to move
- Created three programs to simultaneously run on three PLCs to control air flow
- Talked to multiple different sources regarding funding and flagpole locations

Figure 1: Flagpole CAD Models

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Technologies:

Figure 2: Interface Cad Model