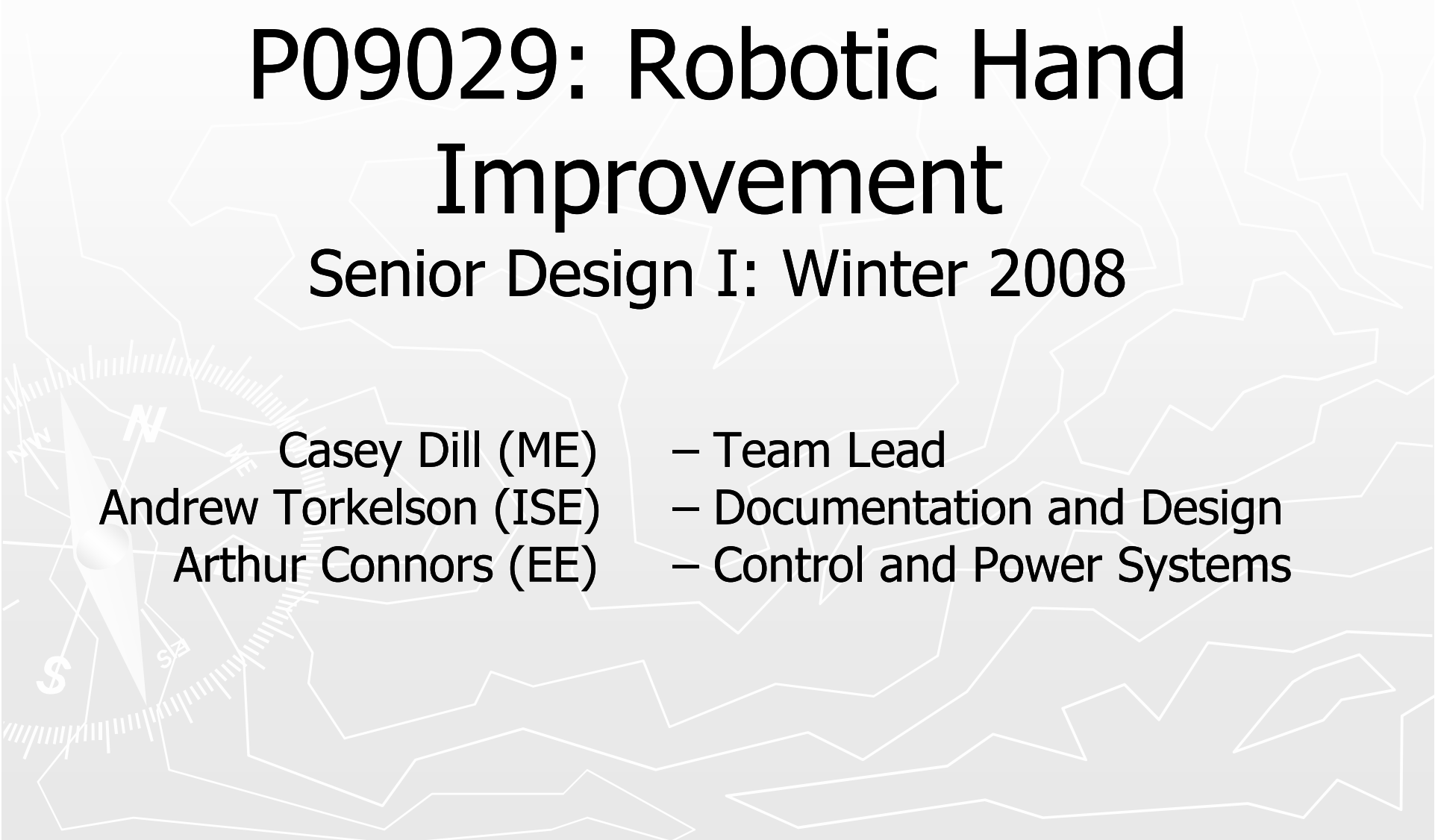


P09029: Robotic Hand Improvement

Senior Design I: Winter 2008



Casey Dill (ME)
Andrew Torkelson (ISE)
Arthur Connors (EE)

- Team Lead
- Documentation and Design
- Control and Power Systems

Mission Statement

- ▶ This project is the third generation of the artificial limb. The first generation created a 3 fingered hand and the second is creating a 5 fingered hand. The final goal of these projects is to have a robotic arm able to scale down for microvascular surgery or scale up for hazardous construction applications. The point of using a robotic arm for these applications is that by using a glove to control the robotic arm, it will be simple and intuitive to control, thus not adding to the burden of the controller. This project is to complete the next generation design with the wrist, forearm and elbow.

Deliverables

- ▶ Meeting with faculty guide and customer Dr. Lamkin-Kennard, Monday 12/08/08



Key Challenges

- ▶ Accurate motion
- ▶ Control of non-linear actions
- ▶ Integrating with past designs
- ▶ Robust enough for future integration
- ▶ Further funding might not be found, limiting the scope of the prototype
- ▶ No one on the team has a strong biomedical background, increasing the amount that the team needs to learn as the project progresses