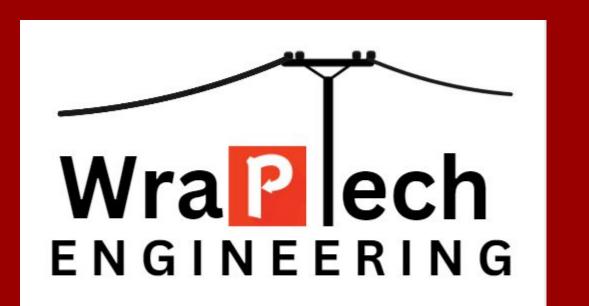


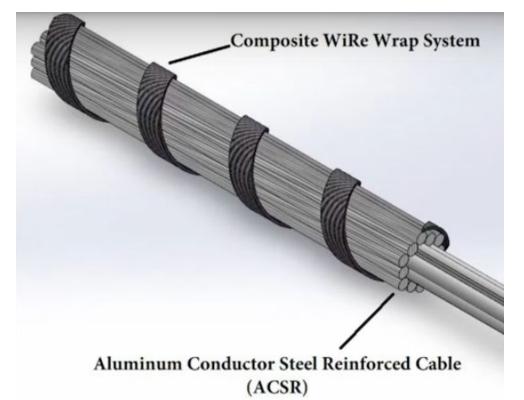
# Composite WiRE Wrap Robotic System

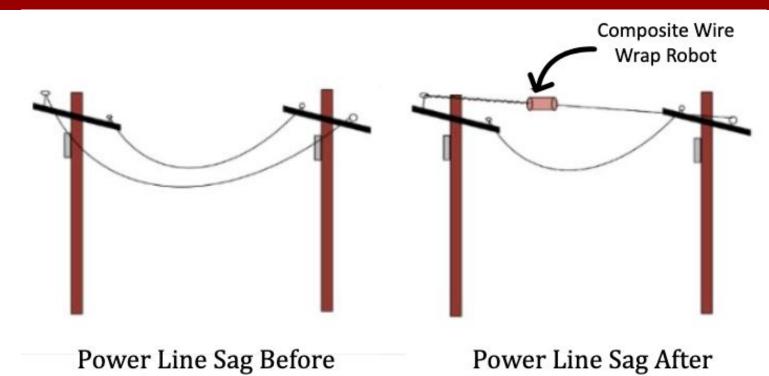
Departments of Mechanical Engineering and Electrical and Computer Engineering Team Wrap Tech



### Project Overview

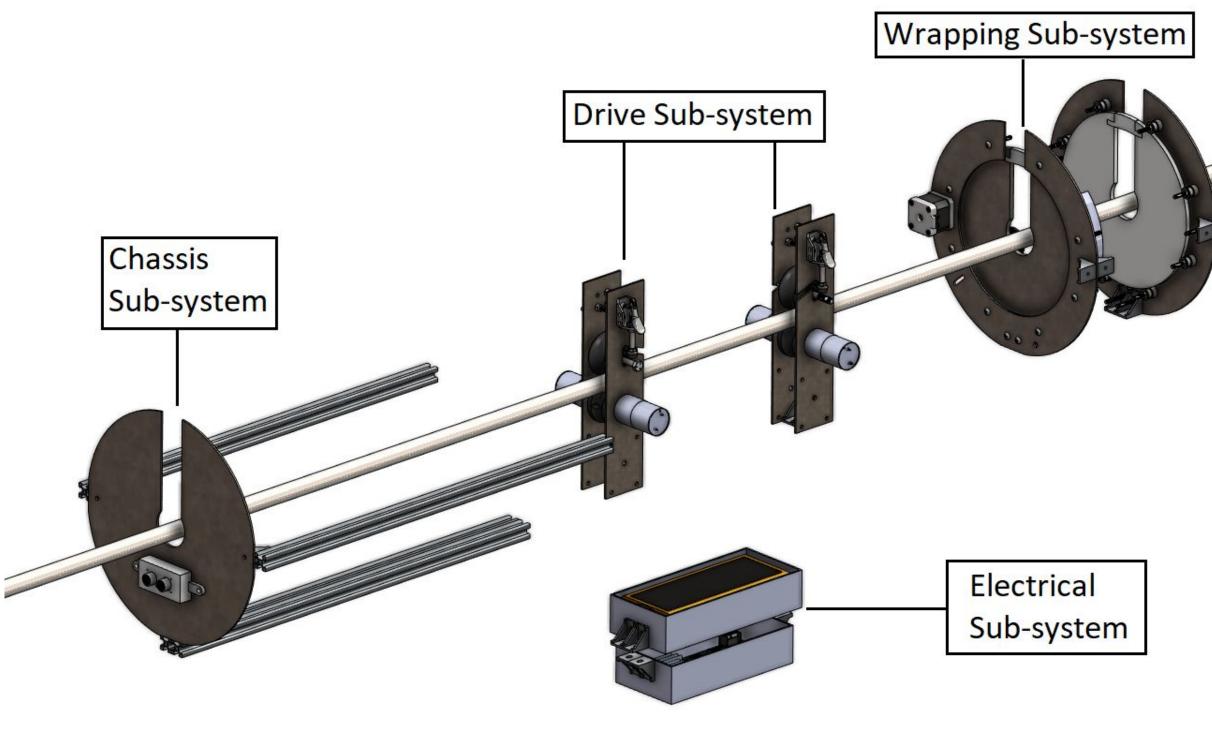
The goal of the Composite WiRE line repair.

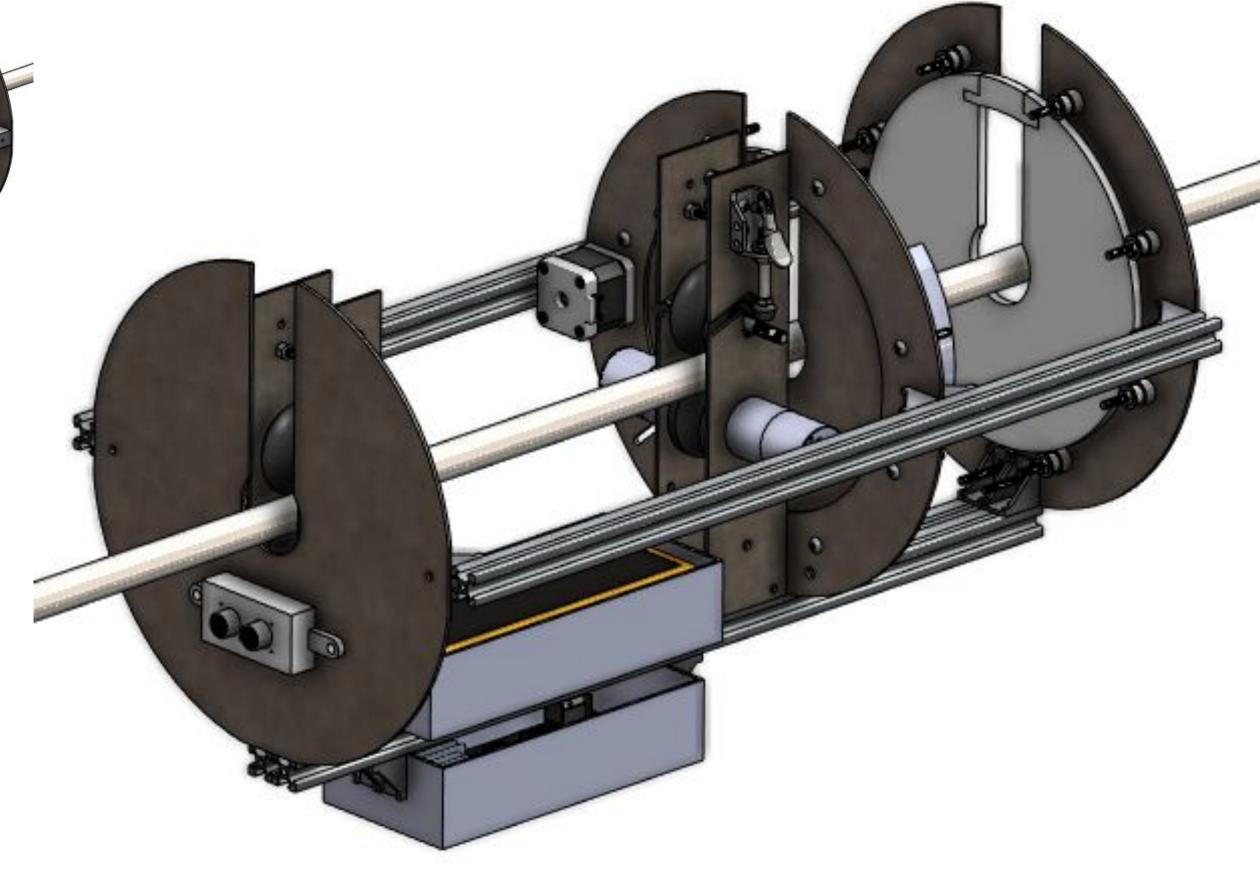




Our system applies carbon fiber fabric and resin to existing power lines for reinforcement and sag mitigation, ultimately leading to significant reduction in power losses across the entire grid.

## CAD Models

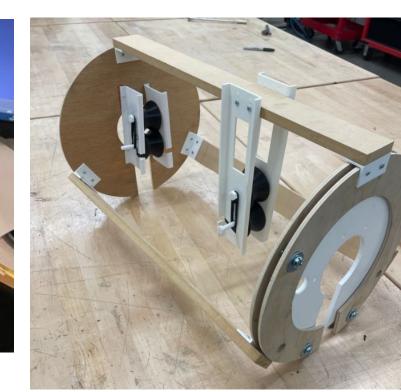




### Prototyping







Cardboard Prototype Wrap Mechanism Prototype

**Andrew Deguzman** 

**ME Team** 

**Jonathan Arabo** 

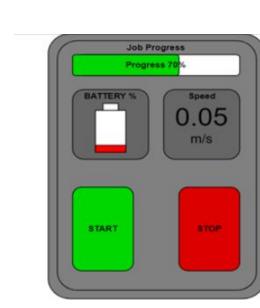
**ECE Team** 

Wood Prototype

## Testing







Resin Testing

Wrapping Functionality

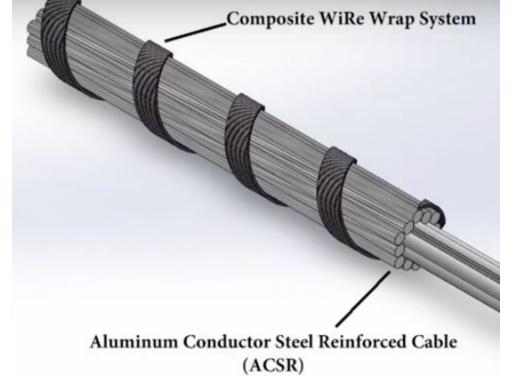
**GUI Testing** 



Forward Drive Motor Testing

Test Fixture

Wrap Robotic System is to create an automated solution to power





### Team WrapTech









**Mario Velez Brendon ME Team** 



Swierczewski **ECE Team Lead** 



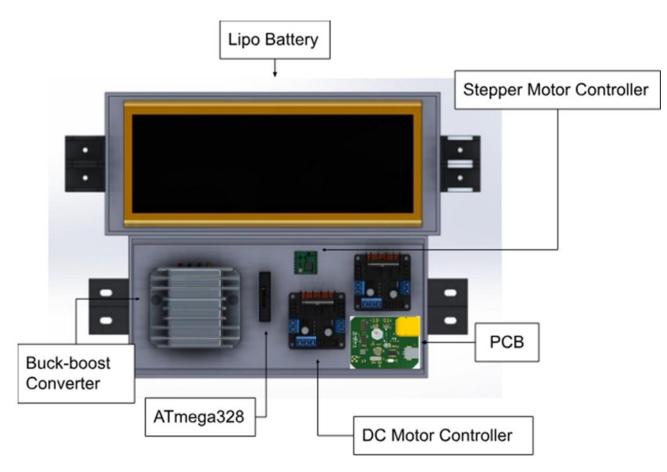
**ECE Team** 

Richard Rosengreen

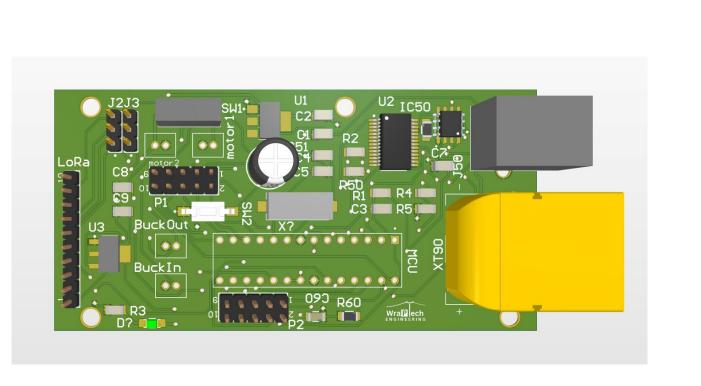
**ECE Team** 



PCB Design

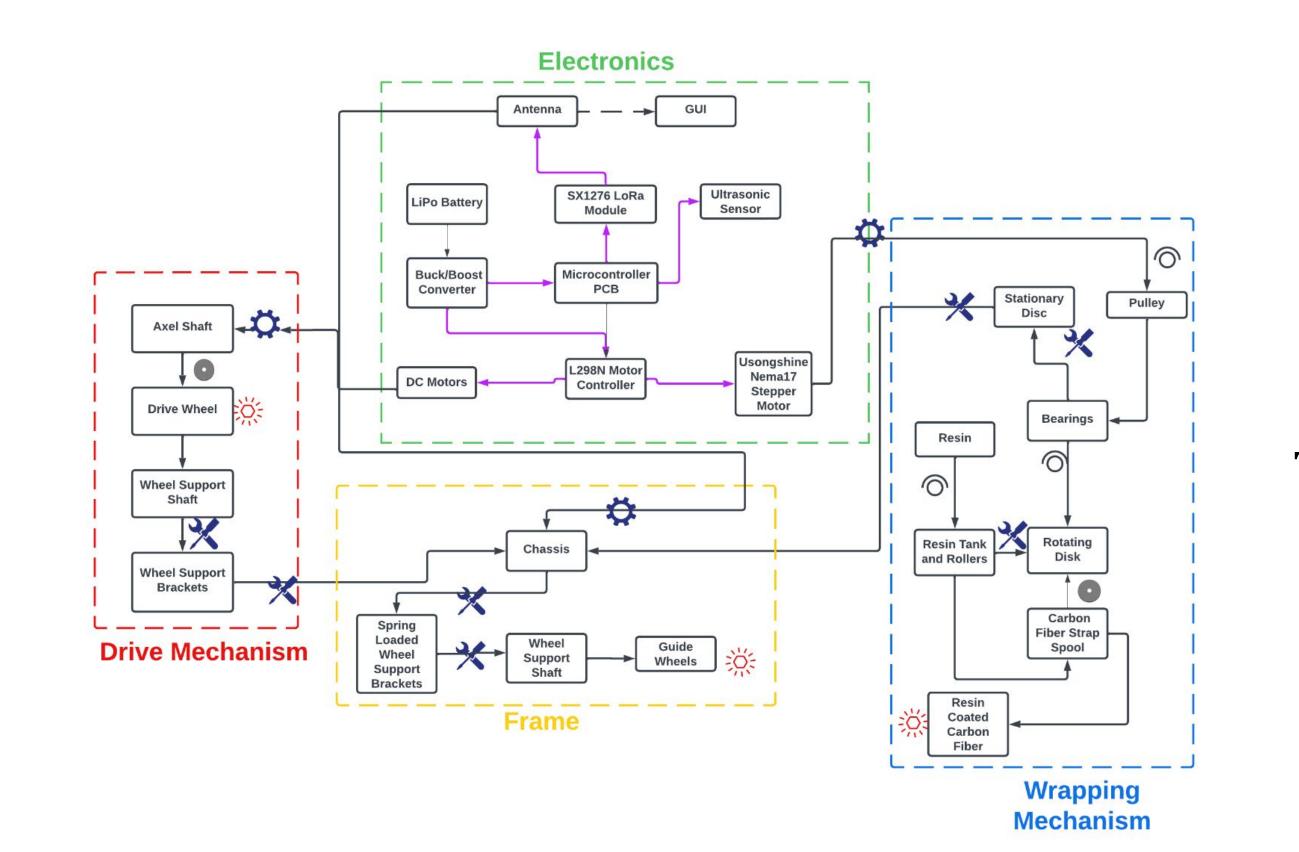


**Electrical Sub-assembly** 



Printed Circuit Board

# System Level Diagram



## Acknowledgements

Team WrapTech Engineering thanks San Diego State University for helping and facilitating the build of our system:

### San Diego State University

Dr. Scott Shaffar, Dr. Barry Dorr, Dr. Saeed Manshadi, Dr. Zahra Nili Ahmadabadi, Michael Lester, Mark Bruno

Spring 2024