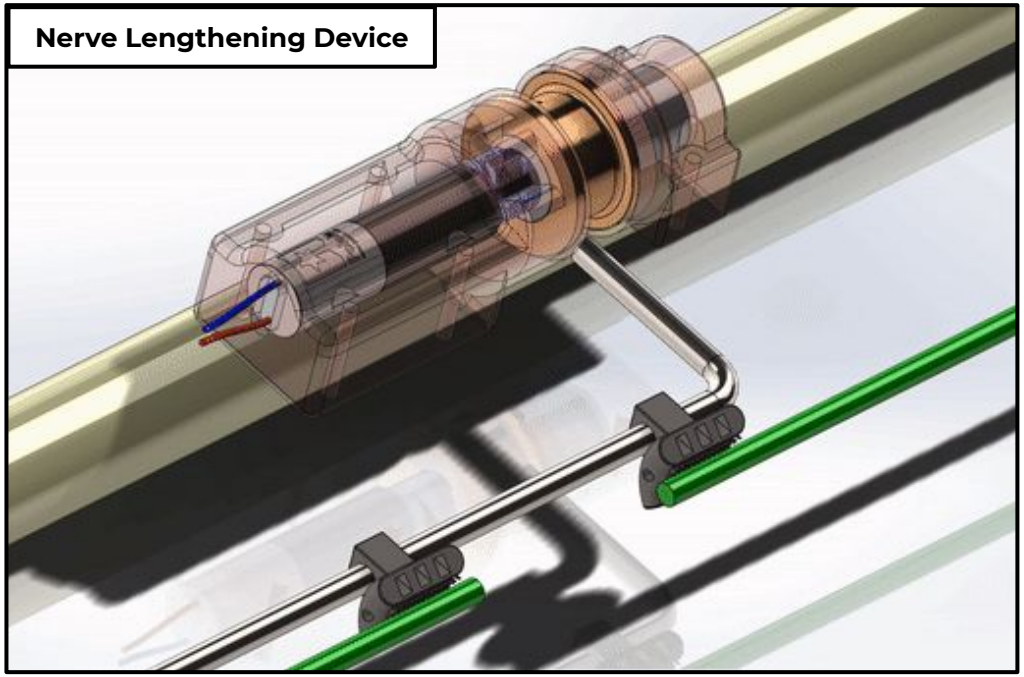
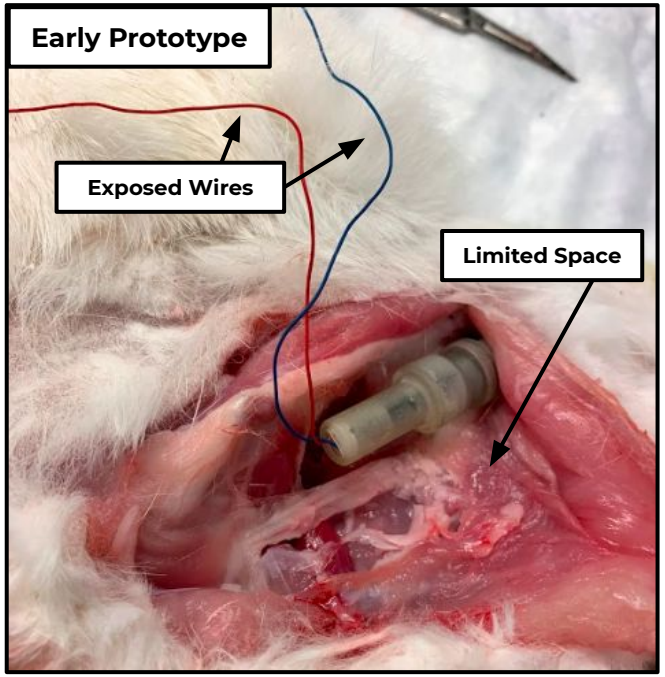
Nerve Lengthening Device
Final Design Review Presentation

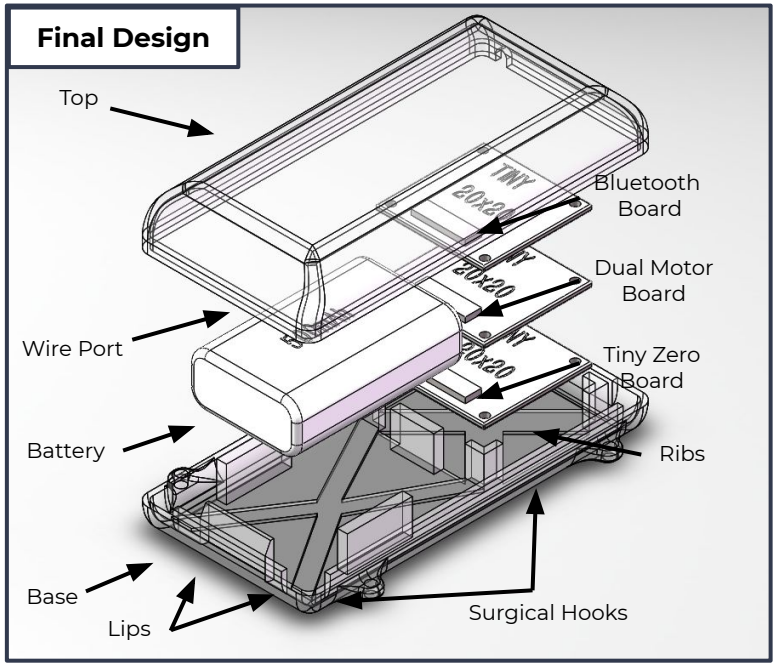
Team 17:
Chikeng Dong
Ganesha Prawiraatmadja
Juan Maldonado
Pedro Cavalcanti

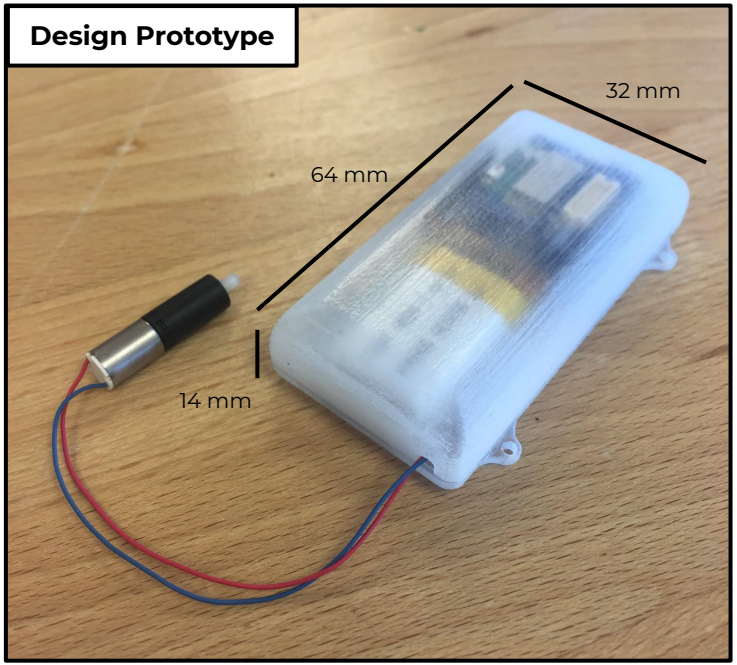
Our Problem: Internalization of a Device



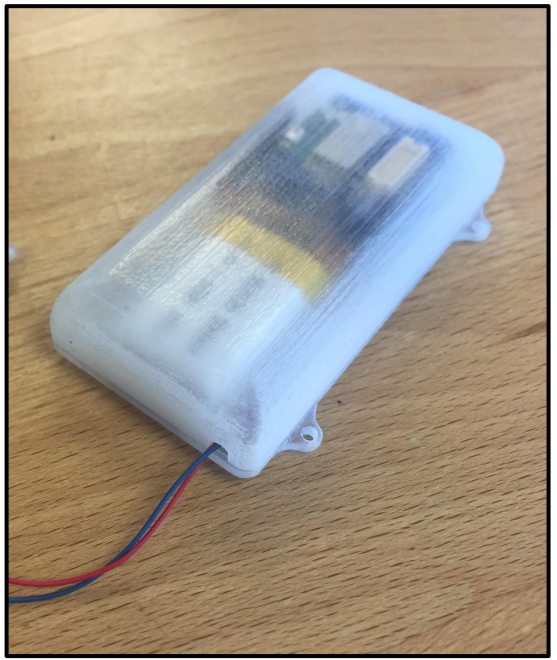


Our Solution: Implantable Electronics





Our Solution: Implantable Electronics

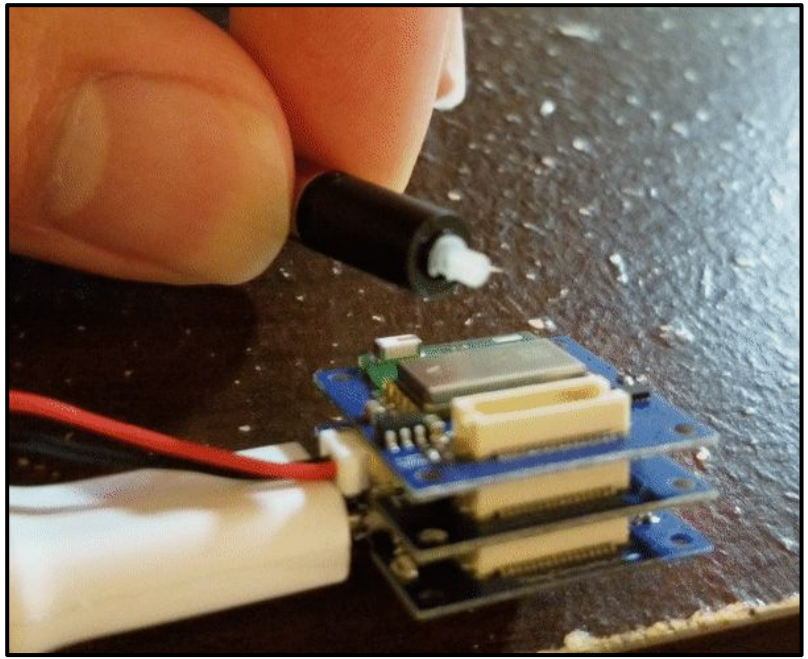


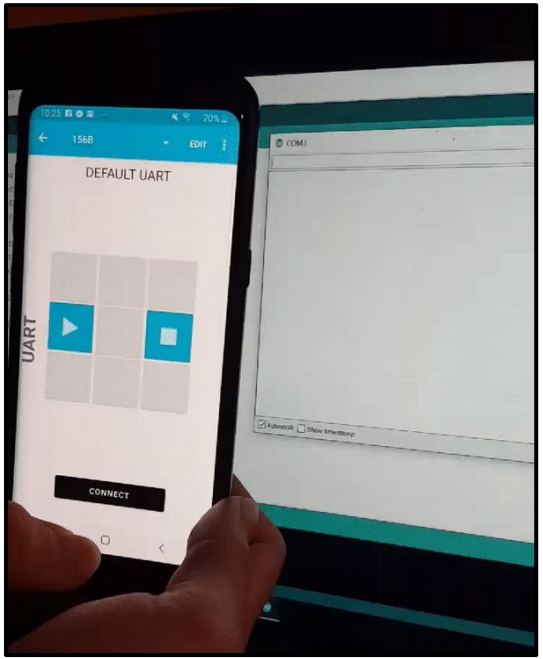
Key Design Decisions

- Subcutaneous enclosure design
- Ribs to keep electronics in place
- Lips to align top and bottom halves
- Bluetooth connection
- 500 mAh battery

Juan

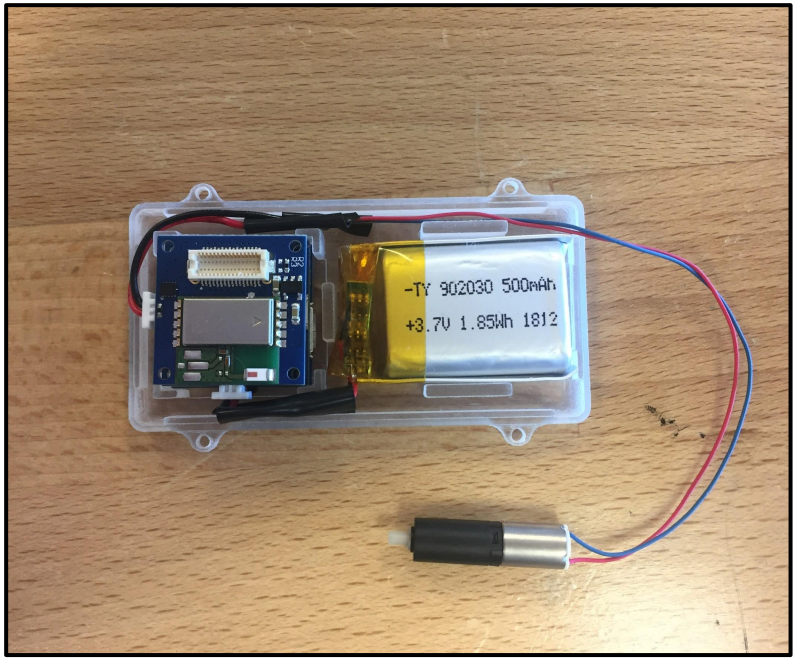
Motor Controls Results





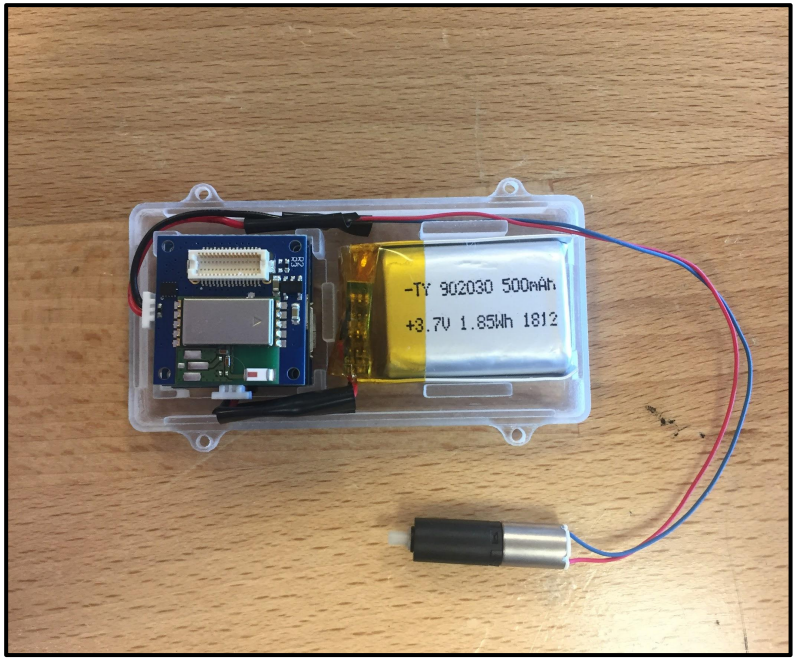
Juan

Enclosure Results



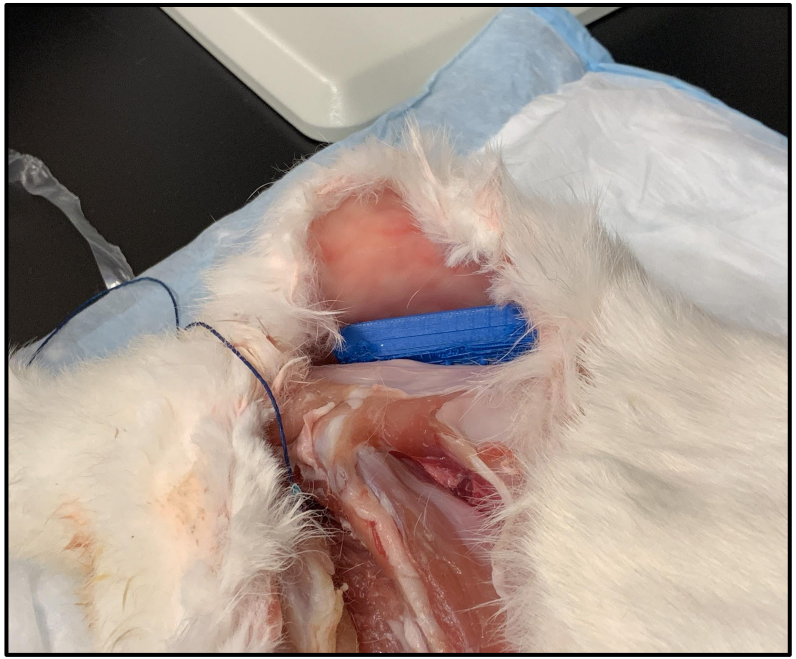
Chikeng

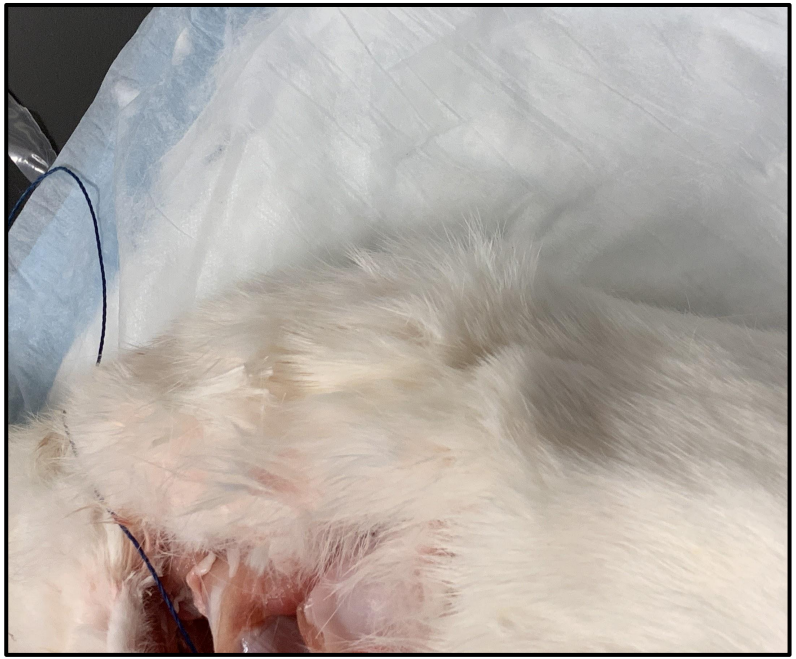
Battery Performance Results



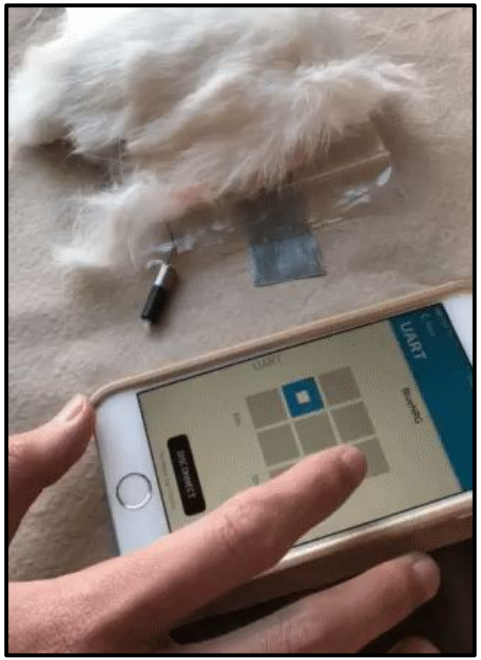
Chikeng

Subcutaneous Implantation Results





Bluetooth Connectivity Results



Pedro

Review of Solution

Pros

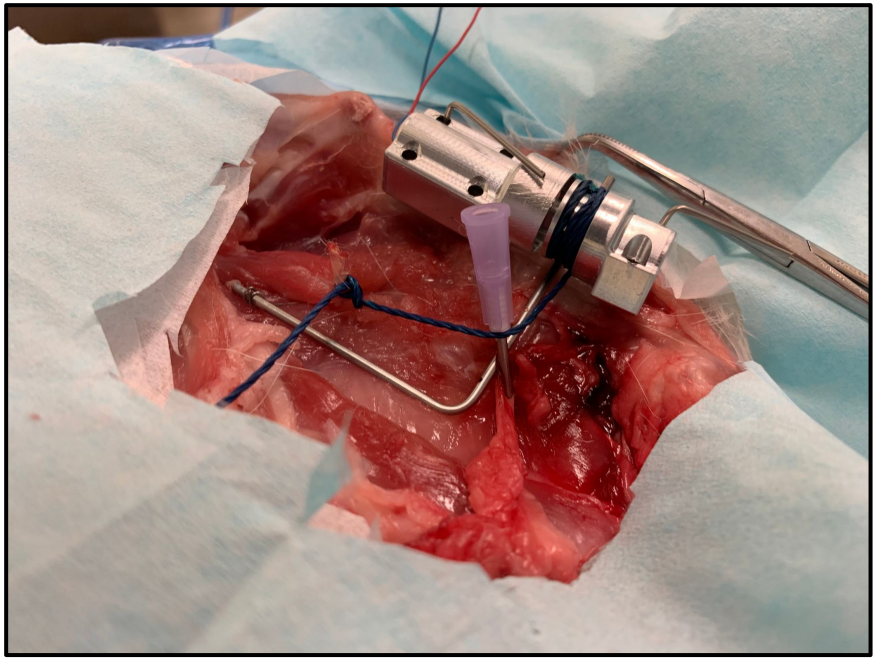
- Ribs to keep electronics in place
- Lips to align top and bottom halves
- Bluetooth connection
- 500 mAh battery

Cons

- Ribs to keep electronics in place
- Lips to align top and bottom halves
- Bluetooth connection
- 500 mAh battery

Pedro

Remaining Questions and Concerns



Pedro

Next Steps for Human Implementation

- High quality stepper motor
- New motor enclosure
- Parylene coating on all components
- External clicker

Questions?