PUCKfish
Fathom Fishing

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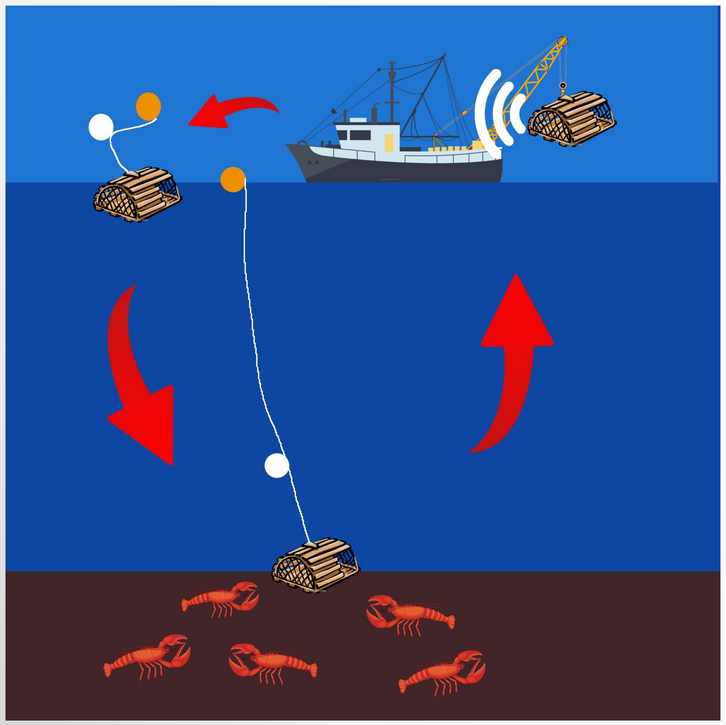
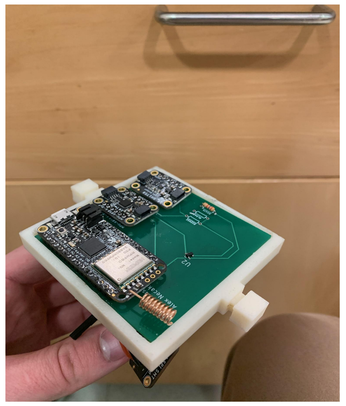
Executive Summary

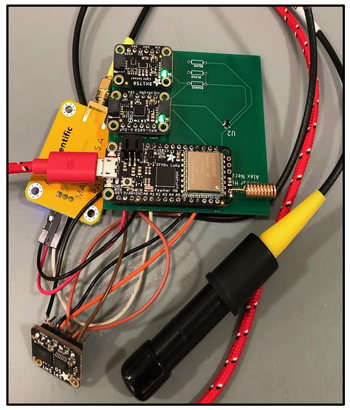
- Lobster trappers utilize almost no data and place traps on dead reckoning alone
- PUCKFish provides cheap, rugged instrumentation to fisheries
- Provides the tools to catch larger hauls with fewer traps and less time at sea
- Collects the 6 metrics most predictive of aquatic life
  - Dissolved oxygen, temperature, pressure, ambient light, salinity, and water current
- Underwater battery life of 10 days
- Charged wirelessly via Qi
- Local storage protects data in case of battery death
- Automatically detects surfacing and transmits data to base station

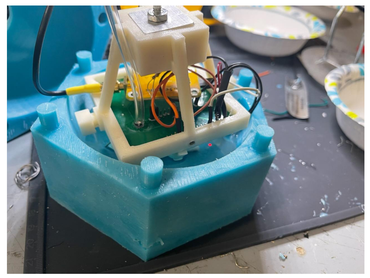
Visualization

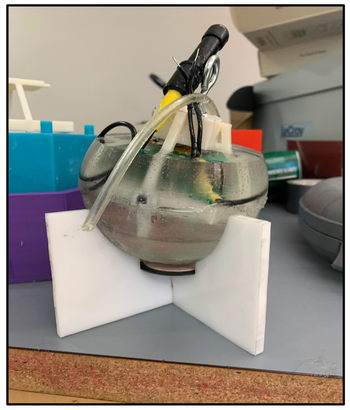


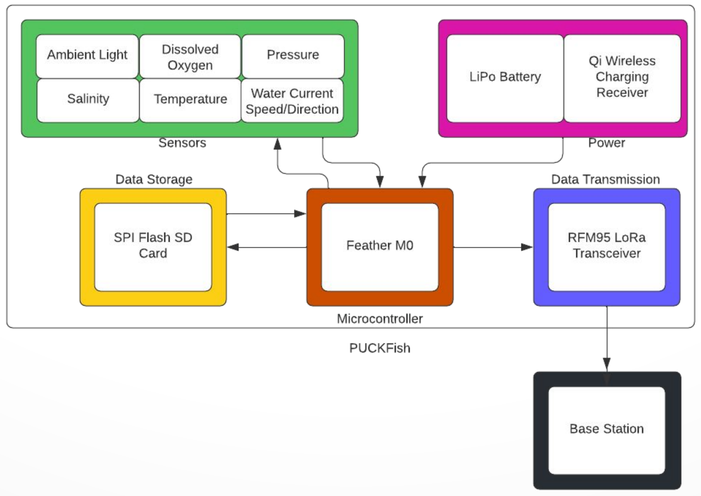
Device Design



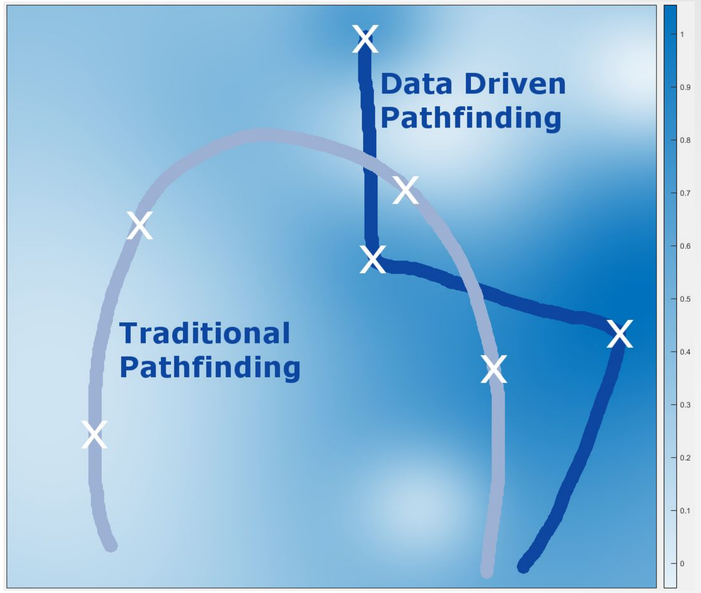








Environmental Impact



Conclusion

- PUCKFish increases trap yield while decreasing operating costs and environmental impact
- Automated data collection and transmission make the user experience completely painless, with trappers only needing to charge PUCKFish after use

Future Direction

- Future implementations of the PUCKFish will improve cost by using a cheaper radio module, as LoRa is not needed for the expected transmission distances
- The polling rate to collect data on the boards can be adjusted on later units to pull more or less frequently depending on the needs of the customer

Acknowledgments

We would like to thank our customers, Andy Whitman and Anthony Byrne at Fathom Fishing. Additionally we would like to thank our ECE advisor team, principally Professor Osama Alshaykh and Professor Pisano.