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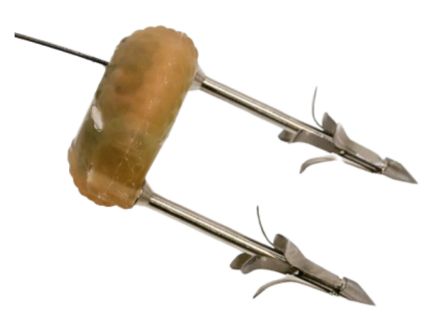


Background

Comprehensive data allows us to better protect whale migration paths and social behaviors. MOBY safely provides long-term data on temperature, depth, speed, and video.

Why? Whale... One whale sequesters 33 tons of carbon in one lifetime. Protecting whales is vital for combating climate change.

Existing Products



Barbed Tag



D-Tag

Pros	Cons
<ul style="list-style-type: none"> Provides long-term, high-quality migration tracking data 	<ul style="list-style-type: none"> Shot into a whale's blubber and can cause infection.
<ul style="list-style-type: none"> Minimally invasive Video feed 	<ul style="list-style-type: none"> No long-term video data Video is only viable if tag is oriented to whale head on deployment

Remora Suction



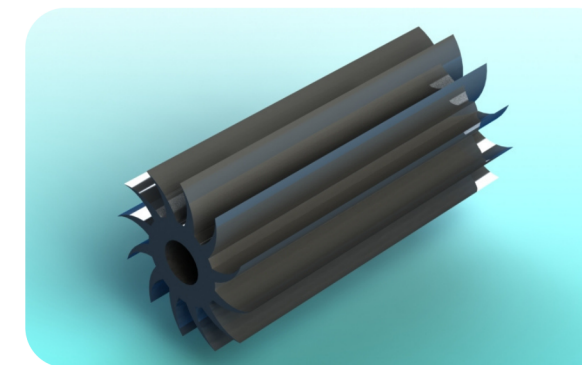
Remora Fish



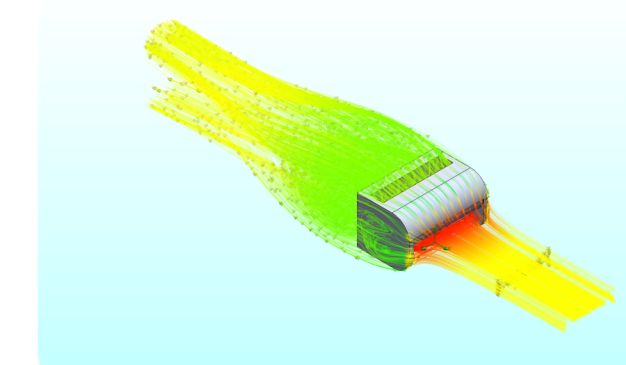
Remora Suction Cup

- Inspired by **remora fish**, which naturally stick to whales.

Energy Generation



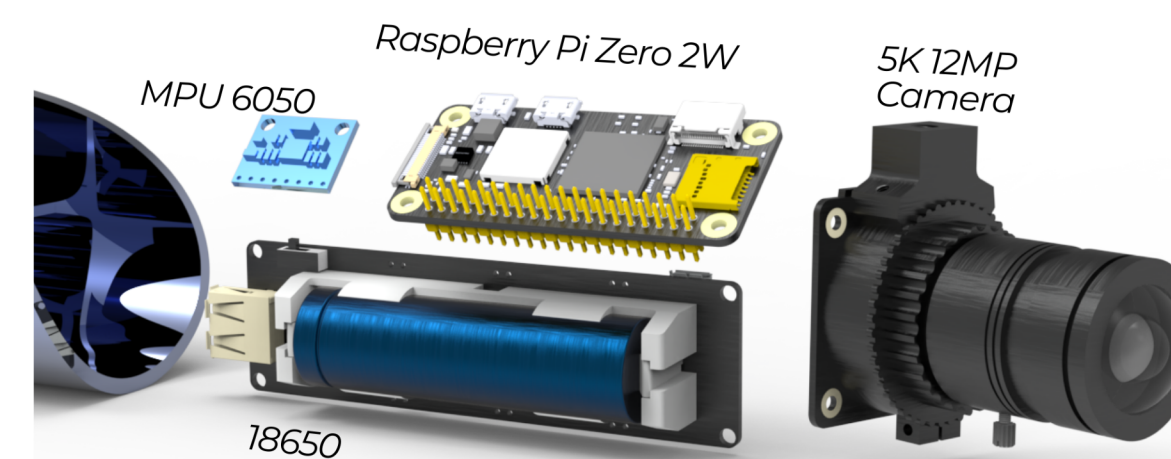
Designed Turbine



Fluid Simulation

- Uses whale-induced current to generate power (Like the "wind" produced by a car!)

Electronics System

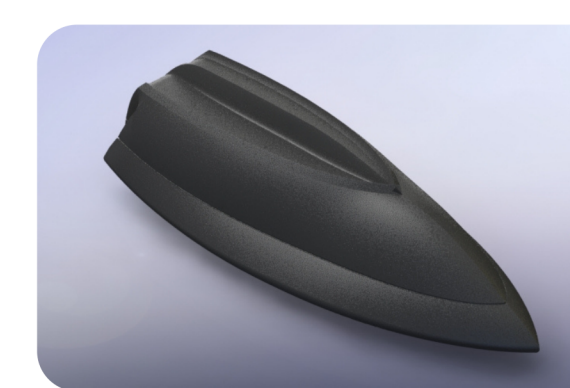


- Real-time video streaming and storage of data
- Data pack: temperature, pressure, humidity, GPS, **speed**

Self-Aligning Housing



3D Prints



Geometry Prototype

- Uses whale-induced current to align the housing and camera

Outswimming the Competition



D-Tag

MOBY Tag

Lifespan	6-24 hours	2-3 months
Sensor Payload	Inertial Data, Depth, Temperature, Light Level	Inertial Data, GPS, Depth, Temperature, Humidity, Speed
Video	1920p, 30fps, No Alignment	5120p (5K), 60fps, Fully self-aligning
Energy Generation	NONE	Continuous 5W Turbine Regeneration

User Experience

1

Order MOBY on Website

Welcome to MOBY! Tell us about your research project and we'll get back to you with data collection suggestions.
how fast do whale



2

Receive/Test MOBY



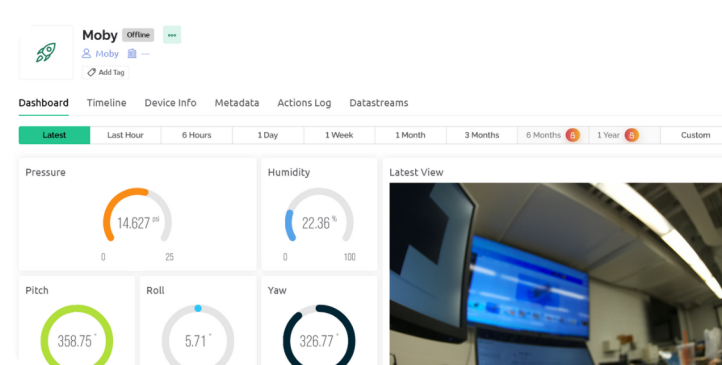
3

Deployment via Boom or Long-Range Drone



4

Data Storage & Streaming

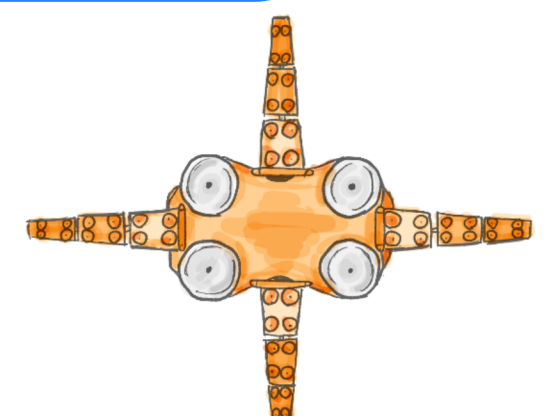
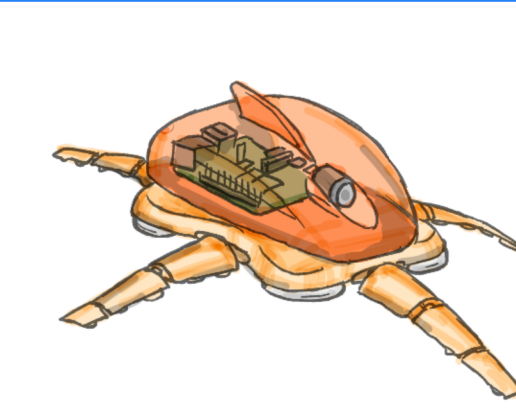
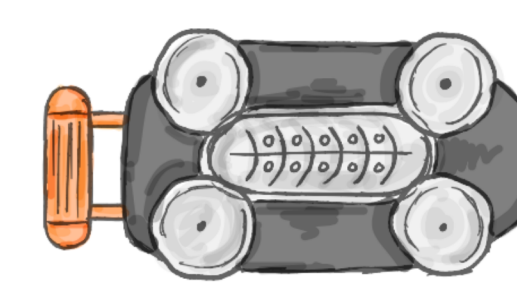
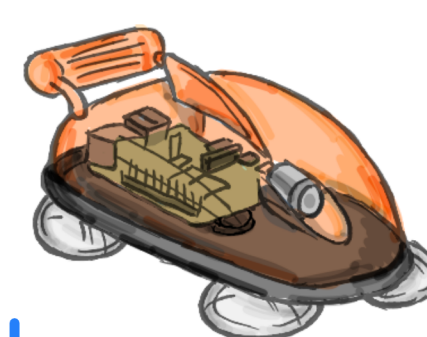


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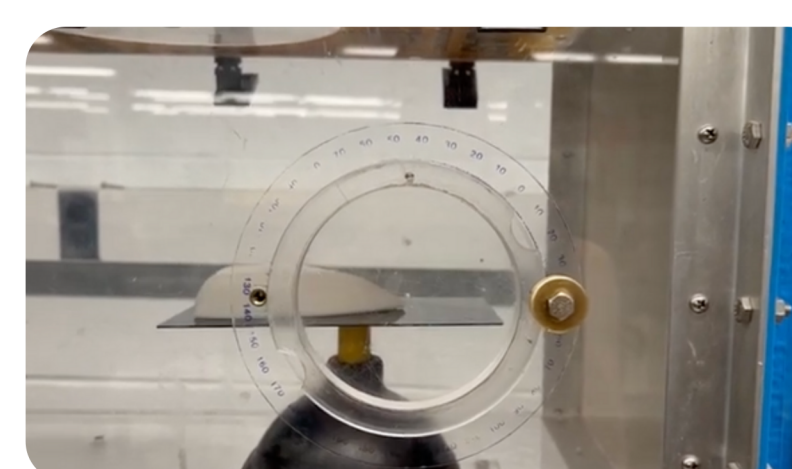
Tag Detaches and Pings GPS Location



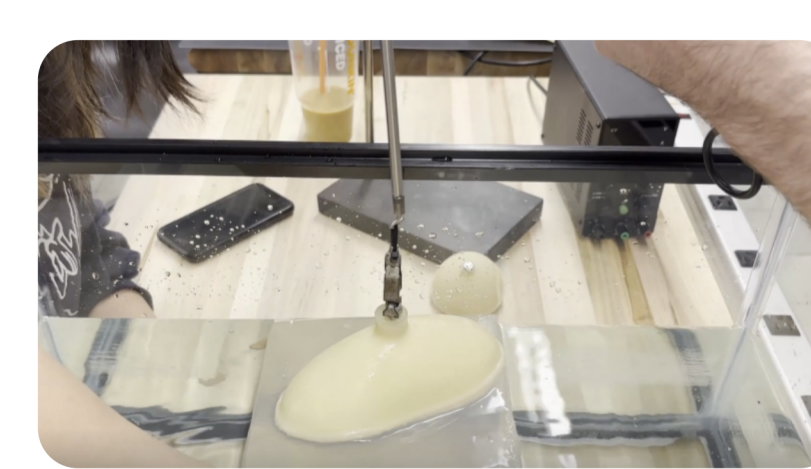
Prototyping and Testing



A survey of 13 active marine researchers led us to select this prototype design.



Wind Tunnel Alignment Testing



Tank & Ballistic Gel Adhesion Testing

Wind Tunnel Results:

- A wide body and large fin provides optimal alignment.

Adhesion Results:

- Remora suction is more durable than standard suction.