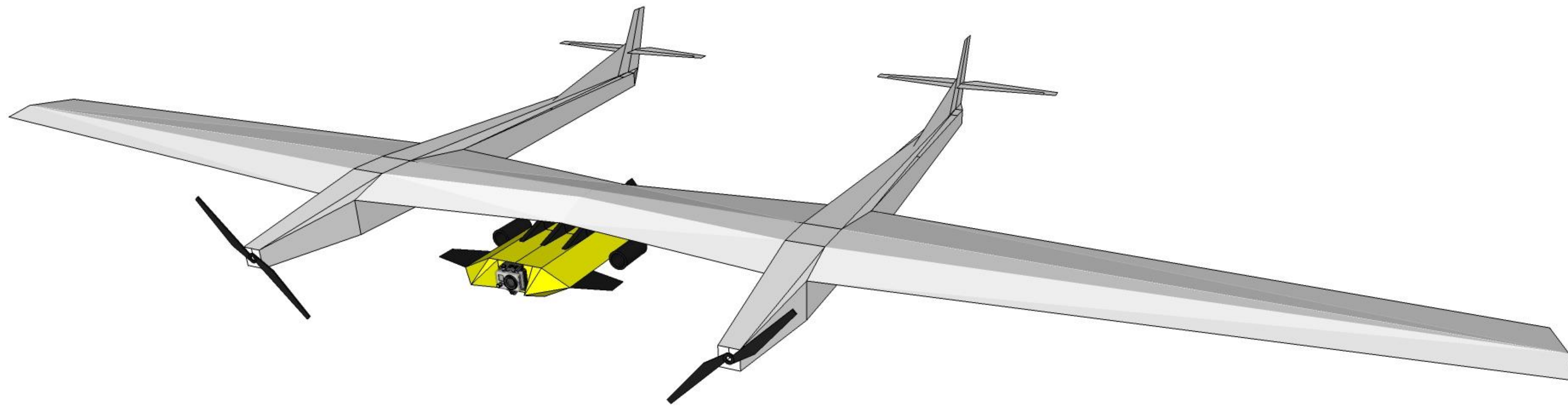


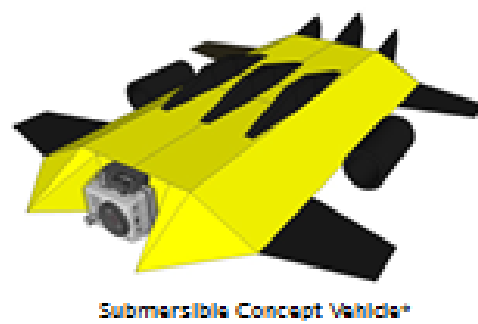
# -AERIAL AQUATICS-



*“We’re building a tool for exploration that will open up new possibilities through the combination of aeronautical mobility with the exploratory capabilities and implications of a submersible robot all in one convenient package...”*

## Air & Water: Combined

- ▶ Submersible Sub-System Utilizing Aerial Mothership
  - Submersible Robot
  - Carrier Aircraft
- ▶ Tethered Operations
  - Minimal Latency
- ▶ Extensive Range
  - Freedom of Flight
- ▶ Unprecedented Access
  - Remote Lakes
  - Inaccessible Locations



## Operations

- ▶ Land Based
  - Landing & Take Off
- ▶ Water Landing & Take Off
- ▶ Submersible Robot Deployment
  - Winch Mechanism
  - Geometric Docking System
- ▶ Control & Data
  - Wired Sub-water
  - Aircraft Data Relay Point

## Proof of Concept & Variants of the Configuration

- ▶ Fixed Wing
- ▶ Semi-Submersible
  - Submersible Camera Carriage System
- ▶ Aquatic Quad/VTOL
  - Submersible Camera Carriage
  - Independently Maneuverable Robotic Sub-System



## Project Status

- ▶ Aquatic Quad
  - Flight Testing Complete
  - Submersible Camera Carriage Complete
  - Integrated Testing to Come
- ▶ Fixed Wing Variant
  - Airframe Under Construction
  - OpenROV v2.6 Submersible
  - Flight Testing as early as May, 2014



## TEAM

- ALEX KUEHN
- CHUN-HAN LIN
- PAUL ADELGREN

