

JIFX 16-3 | 9-13 May 2016 | Camp Roberts, CA

Skylift as a Small Unit Support Vehicle/Vessel

Skylift Global, Inc.



Principal Investigator: Jesse Moore

Area of Interest: Light Aerial Combat Vehicle

Capability Description: Our sUAS prototype, currently in its second iteration, has a target takeoff weight under 55 lbs. and should be capable of lifting external loads over 200 lbs. We would like to test the viability of our platform as a multi-mission/multi-use support solution for logistics operations, able to accommodate a variety of payloads and configurations. The overall focus of our vehicle is to rapidly increase first responder capability, minimizing the cost of current capabilities, and reducing the force structure associated with those capabilities. We believe that it can further new means in service areas with infrastructure voids and support collaborative relations with partner nations and other organizations.

Experiment Objective/Hypothesis: We are looking to prove or disprove the hypothesis that our vehicle can act as a logistics support vehicle for multi-mission/multi-use operations.

Experiment Plan / Data Collection Plan: The JIFX 16-3 facilities will be used to test the key operational aspects of our hypothesis. Data will be collected in 1 hr. intervals on the vehicle's flight controller.

Measures of Performance & Effectiveness: For this experiment, we intend to use the facilities at the JIFX 16-3 Event to demonstrate the following key objectives: • Autonomous operation from digital flight plan • Manual control override • Autonomous self-landing with autorotation • Ability to transport loads over 200 lbs. • Stability in adverse weather conditions • Top speed

testing with radar • Flight endurance testing • B-VLOS navigation • Verify takeoff weight
Effectiveness of each metric will be compared to the performance requirements of small unit logistics operations.

What new capability does this represent? Our vehicle uses a proprietary configuration to achieve greater aerial vehicle safety, reliability and payload capacity. Our heavy-lifting vehicle requires no infrastructure and can operate at a lower cost per mile than current logistics transportation options.

What capability gap does this address? The primary objective of this Experiment Proposal is to address the capability gap for a Small Unit Support Vehicle/Vessel (B.2-i1). As secondary objectives, our vehicle could also address: • B.2-a9 Small Personal Reconnaissance Devices (PRDs) o Small VTOL (one man portable and launch) with potential to carry and deliver payloads (3-5lb payload) o Small quadcoptors capable of indoor mapping and flight using smart sensors and object situational awareness • B.2-a10 Larger UAS Class I/II o Expeditionary/Maritime • B.2-a11 Independent launch/recovery methods that minimize operational and logistics footprint • B.2-a11 Rapid Airfield Damage Assessment System (RADAS) o Platforms, sensors and communication infrastructure that support data collection • Platforms include may include fixed installations (towers), mobile ground units, and/or Unmanned Aerial Systems (UAS). • B.2-b19 Global Access Technologies o Air/Land/Sea technologies that provide timely capability to deliver cargo to dangerous (i.e. anti-access/austere) locations across a complex, distributed battlefield without jeopardizing warfighter safety.