

NAVY Transition Assistance Program

N05-005 - Acuity Technologies

AT-3 "Owl" Wing and Bomb Bay Launched UAS

NEED & CUSTOMER REQUIREMENT

Need: Small tactical UAS to enhance operations of limited quantity of maritime patrol aircraft and extend patrol effectiveness for diverse missions while increasing crew safety.

Value to the Warfighter: Extends range and reduces visibility for patrol and sensor deployment. Reduces manned assets required for continuous coverage. Enables coverage of multiple threats.

Operational Gap: Presently, manned aircraft are required to provide sonar, magnetic, and EO data.

Customer Specifications: WBBL UAS weighing < 750 lbs, deployed @ 175 - 275 knots and altitudes of 5 - 30K ft, air speed 70-200 knots, flight duration > 8 hrs, payload 250 lb.

Technology Description: AT-3 Owl Heavy Fuel Wing and Bay Launched UAS
140 lb empty weight, 400 lb G.W. Carries 5 full-size or 10 half-size sonobuoys for 750 nmi / 8 hours. Max of 40 hours, 3,200 nmi with E/O sensors only. Ducted fan propulsion provides operational safety, high speed ingress/egress. Receives control input and transmits video and sensor telemetry up to 150 nmi. Long distance autonomous travel between handoff and pickup. Runway recoverable at P3 base or smaller field.

SPONSORSHIP of original SBIR Topic

SYSCOM: NAVAIR

PEO/PMA/FNC: PMA 272

OPNAV Resource Sponsor: N88 - Aviation Programs

TPOC:

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TECHNOLOGY DEVELOPMENT MILESTONES (SBIR)

| Milestone | TRL | Risk | Measure of Success | TRL Date |
|---|-----|----------|---|------------|
| Design Concept | 1 | High | Selected for Phase II | Dec 2005 |
| Aerodynamic Concept Prototype | 2 | High | 13 successful flights | Feb 2007 |
| P3 Form/Fit Design Compatibility Verification | 3 | Moderate | Design size, weight, balance compitblity verified against P3 inspection, measurements | April 2007 |
| Prototype Test Flights | 4 | High | Flight Characteristics | May 2008 |
| Air Drop Demo | 6 | High | Deploy, Navigate, Land | Nov 2008 |

Open contracts: N68335-07-C-0074 Ends May 11 2008

TECHNOLOGY TRANSITION OPPORTUNITIES (PHASE III)

The company is looking for transition opportunities and program dollars for the following applications and targeted activities:

>> **P-3 Orion, P-8A Poseidon**

Program of Record:

P-3C

Prime Contractors:

Lockheed-Martin

Business Model:

Acuity plans to manufacture the AT-3 Owl and sell to PMA 272, PMA 290, or other DoD customers.

Objective:

Acuity is seeking further funding from PMA 272, PMA 290, and other interested DoD organizations to continue the testing of the AT-3 OWL after the completion of Phase II. They are also seeking prime contractor joint development support to enable maturation of the technology for other platforms.

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