

THE PROBLEM

CANA has recognized a capability gap through collaboration with Department of the Navy Operational Energy: the ability to cost-effectively defend moving and stationary high-value units against drone and missile threats.

A potential mitigation strategy involves coordinating defensive swarms of lower-cost, attritable drones. CANA's capabilities would enable the Navy to more effectively plan and direct such efforts.

THE SOLUTION

Entourage is a UxS drone solution tool leveraging a genetic algorithm to create defensive barriers of diverse unmanned systems (UxS) for protecting moving and stationary high-value units (HVUs) such as warships, land-based forces, and critical infrastructure.

It efficiently optimizes UxS positioning and coordination to counter modern threats such as drone and missile attacks.



UNIQUE IDENTIFIERS

Entourage is fast.

When UxS capabilities and quantities are known, Entourage generates recommended employment options in seconds instead of minutes. When many capabilities and quantities are uncertain, Entourage generates recommended portfolio options in hours instead of days.

Entourage accounts for environmental conditions.

Examples include: wind speed, ocean currents, sea state, etc.

Entourage is energy agnostic, supporting many energy sources.

Includes: fuel, electric, or hybrid energy use and transfer capabilities between unmanned systems, including energy transfer at range, etc.

Entourage accounts for communications capabilities via a mesh network.

Generates feasible communications laydowns allowing systems of swarms to coordinate.



Value

Entourage's algorithms enhance the effectiveness of multi-domain defensive UxS groups by ensuring feasible communications, flexible energy management, and efficient threat detection and engagement.

USERS & APPLICATIONS

1

Maritime Defense Optimization - Navy (Operational Planners)

Allows for better preservation of exquisite missiles and point-defenses by minimizing surviving attackers through a barrier of lower-cost defensive drones.

2

Moving Barrier Defense Optimization - Army, Marine Corps, Navy (Command Centers)

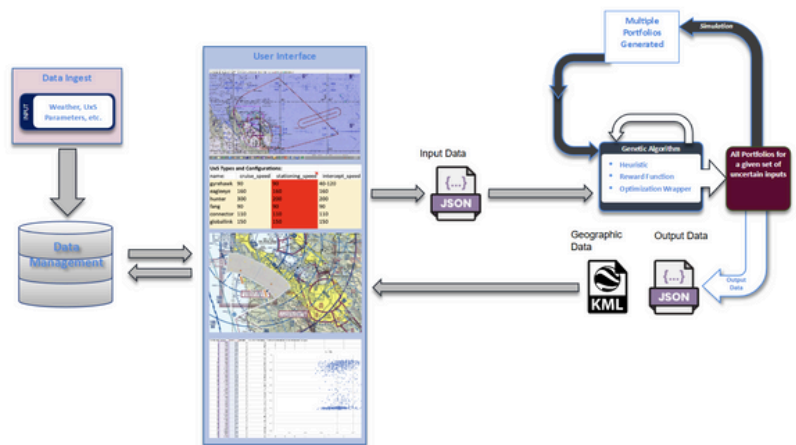
Creates best positioning, allocation, and scheduling of manned and unmanned systems to maximize defensive capabilities for moving and stationary units.

3

Service Level Organizations that want to use the tool for requirements analysis and to inform acquisition and purchase.

Identifies best portfolio combinations of unmanned systems while accounting for cost.

ARCHITECTURE DIAGRAM





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"Powered by CANA Analytics® ." Our expertise
provides logistics systems integration, applied
analytics services & software solutions. CANA LLC
strives to create an environment that allows our
Team and Clients more time to focus on the things
that matter most.*



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