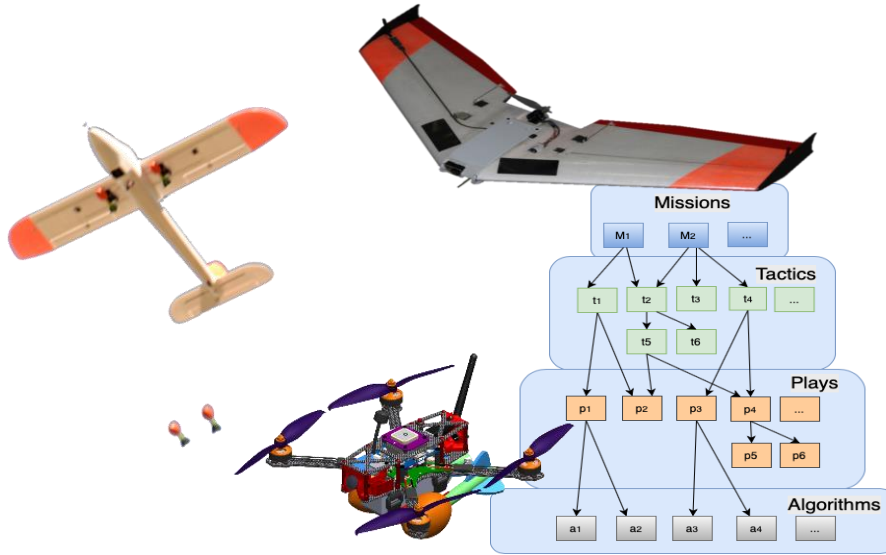


Expediting Swarm System Development with High Fidelity Live/Virtual Modeling and Simulation



Problem Statement

- Current multi-vehicle system architectures support neither meaningful operator oversight nor rapid capability development
- Proposed Solution
 - Improved fidelity of physically-based simulation models
 - Faster-than-real-time simulation supporting more exhaustive testing
 - Mission-focused, top-down capability development

Impact

- **Autonomy M & S**
 - Improved fidelity of physically-based simulation
 - Simulation results more likely to align with real world
 - Realistic mixed live/virtual experimentation
 - Faster-than-real-time simulation
 - More exhaustive testing (e.g., Monte Carlo)
- **Autonomy in Context**
 - Top-down, composable capability development
 - Allows both developers and operators to focus on mission
 - Facilitates effective operator oversight

Transition

- **Potential Follow on Sponsors**
 - Office of Naval Research
 - Marine Corps Warfighting Laboratory