About Neya Systems

Neya Systems, LLC is a Division of Applied Research Associates focusing on advanced unmanned systems capabilities, with over 50 employees.

Founded in 2009

Headquarters:
Warrendale, PA
(Pittsburgh Metro)

Satellite Offices:
Boston, MA,
Denver, CO,
Huntsville, AL.

Contact Information

724.799.8078 main

info@neyasystems.com

Neya

555 Keystone Dr
Warrendale, PA 15086

neyarobotics.com

NEYA DEVELOPS AND INTEGRATES ADVANCED, VEHICLE-AGNOSTIC, OFF-ROAD, INDOOR, AND AIRBORNE AUTONOMY

- **Full-Stack Autonomy Development and Integration**
- **Off-Road and Indoor** autonomy in GPS-denied environments.
- **Human-Machine Teaming**
- **Active and Passive Perception** sensor processing (object detection and tracking, terrain classification, image processing).
- **Perception in Challenging Environments** (bad weather, poor visibility, GPS denied, harsh off-road terrain)
- **Multi-vehicle Coordination** (behavior orchestration, convoying, manned-unmanned teaming and coordination)
- **Artificial Intelligence/ Computer Vision** for perception and decision support

OUR AUTONOMY STACK

Unmanned Off-Road Vehicles and Robots

Indoor Robots

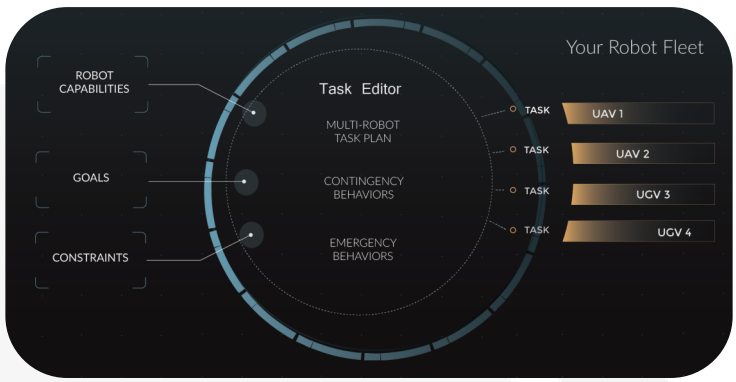
Unmanned Airborne Systems (UAS)

Unique Capabilities

TASK/MISSION PLANNING AND MANAGEMENT

Fleet Management for Unmanned Systems - suite of tools that follow the mission life-cycle from plan development to multi-asset (ground and air) monitoring during execution.

Advanced model predictive hierarchical motion planner for navigation of diverse vehicles in heterogeneous environments. The system generates optimal trajectories for the vehicle considering terrain shape, vehicle dynamics and multiple mission objectives.



FULL-STACK AUTONOMY INTEGRATION

Full software autonomy stack, developed from the ground-up to operate in GPS-denied environments, including cluttered off-road terrain and indoors.

Machine learning capabilities for improving perception and control to improve autonomous system robustness, adaptability, and speed using a variety of supervised and unsupervised learning techniques.

Autonomous capability to rapidly identify and process sensor data from objects and areas that are most relevant to vehicle objectives.

Our planner selects trajectories that the platform will actually be able to execute. This contrasts with other trajectory planning approaches as we take maximal advantage of a vehicle's maneuverability in order to navigate in tight constrained environments.

SAFEGUARDED TELEOPERATION

Long Range Teleoperation capabilities based on a latency horizon concept that allows an operator to lay out mid-term path-level goals, while relying on an underlying semi-autonomy system for reactive planning and vehicle safety.

A key benefit of our approach is the ability for a remote operator to shape and refine any part of the vehicle's future trajectory. This allows the operator to specify upcoming paths and trajectories within the constraints of real-time measured communications channel latency, while the onboard autonomy system handles safeguarding, trajectory, and maneuver planning for the upcoming path.