ODYSSEY™ MISSION

Next-Gen Command and Control Interface for Seamless UxV Management

HII's Odyssey™ Mission is an intuitive, next generation web-based cross-domain user interface solution built from the ground up to provide an all-in-one unmanned vessel management suite. Utilizing cutting-edge technology, Odyssey™ Mission provides a user-first experience with four cohesive lifecycle views to manage vehicle configuration, plan missions, monitor any number of simultaneous missions and perform critical post-mission analysis.

The Odyssey™ Mission ecosystem includes four integrated applications that enable complete control and insight across all mission phases:

- Odyssey™ Sim: Physics-based modeling with real-world bathymetry to simulate conditions before deployment or as part of operational trade studies.
- Odyssey™ Analysis: Detects anomalies and performance issues during or after missions.
- Odyssey™ Health: Dashboard for real-time fault detection and diagnostics.
- Odyssey™ HIIBatt: Energy management for REMUS and ROMULUS platforms.

Mission Application:

Odyssey™ Mission can manage, control and monitor current REMUS-class UUVs (including R300 and R620 platforms), ROMULUS USVs, and UMAA-compliant vehicles, and provides an API for external third-party user interfaces.

Odyssey™ Mission is field-proven with more than 300 on-the-water testing days (1500+ hours of live demonstrations) and continues to be fielded in large scale for both REMUS and USV customers.

Advantages

- **Scalability:** Deploy once and manage any vehicle anytime, anywhere through a common web interface.
- **Performance:** Designed for multi-vehicle experience, proven for double-digit simultaneous connections, with minimal operators.
- **Intuitive User Interface:** Streamlined and user-focused design for simplified mission planning, monitoring and analysis.
- **Cross-Domain Capability:** Unified platform for managing diverse unmanned vessel platforms across different operational environments.
- **Comprehensive UxV Management:** All-in-one suite covering vehicle configuration, mission planning, real-time multi-vehicle monitoring, communication management and post-mission analysis (PMA).
- **Enhanced Situation Awareness:** Provides operators with a clear and consolidated view of mission-critical data, user role management and higher echelon data exchange.
- **Centralized Data Management:** Facilitates efficient data storage, retrieval and rapid analysis for improved mission outcomes.
- **Field-Proven Reliability:** Backed by more than 20 years of development and rigorous testing for robust, trusted performance.

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Operators lack a unified, user friendly system to configure unmanned vessels, plan missions, monitor multiple operations and analyze results across domains—forcing them to rely on fragmented tools that slow decision making. Odyssey™ overcomes these challenges through several unique features that gives users total autonomous vehicle control and coordination.

Features

- Web-based architecture, Software-as-a-Service (SaaS) architecture, deploy once and access UxVs from anywhere through a role-based user authentication service.
- Intuitive graphical user interface (GUI) design based on Google's "material design," built with operators in-the-loop, while also providing visual theme configurations including a "night mode."
- Third-party open interface, allowing integrators and external user interfaces.
- Extensible platforms API allows operators to redefine their existing vehicle features.
- Supports REMUS UUV platforms, HII Odyssey-based USVs and UMAA-compliant vehicles and provides HII's Odyssey™ SIM configuration and management.
- Data management for secure storage and real-time or post-mission analysis.
- Plug-and-play design compatible with customer or third-party sensors, payloads, algorithms and interfaces.
- Odyssey™ Atlas Integration which provides a unified service to manage and view any number and type of nautical chart, tile or map over a single API. Able to view side-scan data, charting formats including ENC, RNC, DNC, GeoTiff, KAP, MBTILES and much more.
- Adheres to open architecture standards, including Unmanned Maritime Autonomy Architecture (UMAA), Robot Operating System (ROS) and Data Distribution Service (DDS).

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About HII

HII is a global, all-domain defense provider. HII's mission is to deliver the world's most powerful ships and all-domain solutions in service of the nation, creating the advantage for our customers to protect peace and freedom around the world. As the nation's largest military shipbuilder, and with a more than 135-year history of advancing U.S. national security, HII delivers critical capabilities extending from ships to unmanned systems, cyber, ISR, AI/ML and synthetic training. Headquartered in Virginia, HII's workforce is 44,000 strong. For more information, visit: HII.com.