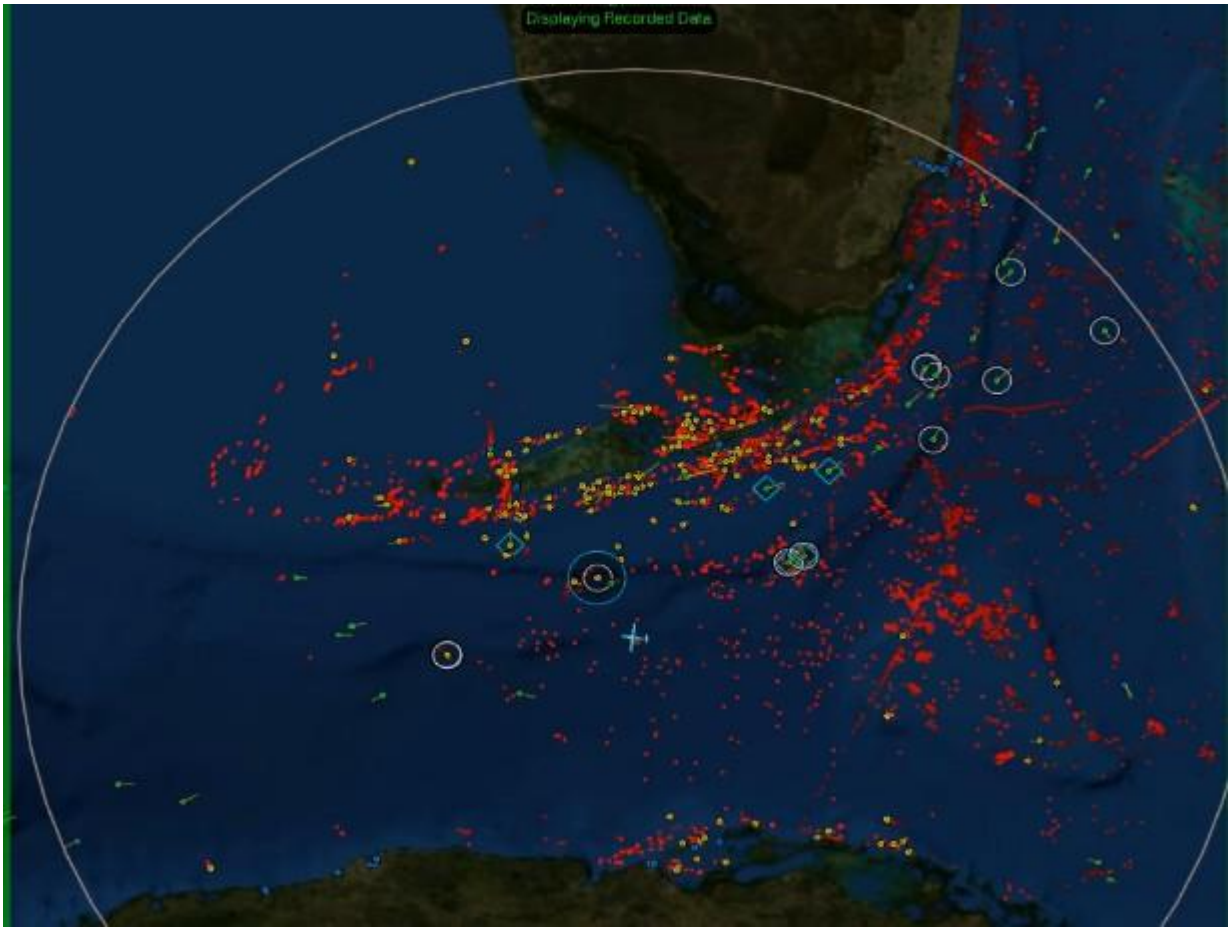
Enhancing the Maritime Patrol Operational Picture



A screen grab of the Labyrinth, a Minotaur cloud-platform, software. Labyrinth adds robust scalability in handling and correlating large volumes of data while providing external stakeholders access via a secure web-based interface.

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NAS Patuxent River, Md. – The Maritime Patrol and Reconnaissance Aircraft program office (PMA-290) achieved an airborne connectivity landmark when the P-8A Poseidon Increment 3 Block 2 (I3B2) aircraft successfully connected to the Minotaur Family of Systems (MFoS) Labyrinth hub. This pivotal connection occurred during a combined development test / operational test event this December at Naval Air Systems Command (NAVAIR).

I3B2 is a significant upgrade to the P-8A airframe and avionics systems. The upgrade includes new airframe racks, radome, antennas, sensors, and wiring. The modification incorporates a new combat systems suite with improved computer processing, higher security architecture, a wide-band satellite communication system, an anti-submarine warfare (ASW) signals intelligence capability, the Minotaur mission management system, and additional communications and acoustics systems to enhance search, detection and targeting capabilities.

The Minotaur mission management system is a government-owned, open-architecture software suite. This government-off-the-shelf product combines data from various sensors to create a coherent picture for aircrews. Minotaur offers multiple aircraft and/or assets to share networked information, enhancing intelligence, surveillance, and reconnaissance (ISR) capabilities.

Labyrinth, a Minotaur cloud-platform, adds robust scalability in handling and correlating large volumes of data while providing external stakeholders access via a secure web-based interface. The addition of Labyrinth capability into the Minotaur Enterprise enables the auto-scaling of services to allow for all Minotaur-equipped platforms to access vital shared information.

Further proving Labyrinth’s expansive capabilities, during a recent test flight Air Test and Evaluation Squadron Two Zero (VX-20) connected to Labyrinth for the duration of the mission and provided thousands of relevant tracks.

P-8A Poseidon test aircraft connecting to the Labyrinth cloud environment is a critical step forward in expanding the tactical utility for both in-flight aircrew and worldwide stakeholders. This achievement revolutionizes data sharing and enhances real-time situational awareness in the maritime domain.

“With P-8A connected to Labyrinth, our MPRA community is now able to exchange multi-domain, multi-sensor tracks between existing Minotaur-equipped platforms and the new I3B2 aircraft,” said Capt. Erik Thomas, PMA-290 program manager. “This connection allows the P-8A and the watch floor to share critical operational data, ensuring that all stakeholders are synchronized to deliver a decision-advantage.”

In response to evolving threats around the world, P-8A modifications are made via a sequence of rapid capability insertion efforts that build upon I3B2 baseline. In addition to Labyrinth, I3B2 modified Poseidon’s add top-secret architecture, Minotaur mission management system, Enhanced Multi-static Acoustics Capability (MAC-E), ASW Signals Intelligence Systems (SIGINT), wide-band satellite communication (SATCOM), and application-based architecture.

“This milestone was the result of a collaborative effort between PMA-290 and VX-20,” added Thomas. “Advancing the strategic goals outlined by the program office and demonstrating a commitment to rapid capability development we are directly supporting continuous development of a naval “family of systems” for maritime surveillance.”

The MPRA community, assisted by PMA-290, continues to prove the technical viability of integrating frontline warfighting aircraft with enterprise-level cloud services, paving the way for future fleet-wide implementation and a more connected, lethal force.

PMA-290 manages the acquisition, development, support and delivery of the U.S. Navy’s maritime patrol and reconnaissance aircraft, in addition to executing the overarching Minotaur program of record for the U.S. Navy, Marine Corps, and U.S. Coast Guard, as well as other services and agencies.