

Sensis Solutions at Work



At a Glance

Lower cost option to beacon radar

Distributed and extensible architecture

Accuracy: 30 m.

Coverage: 3,500 ft. to 50,000 ft. for 1,800 sq. mi.

Patuxent River, Maryland WAM

The Challenge:

The U.S. Naval Air Warfare Center at Patuxent River (Pax River) in Maryland is one of the nation's premier facilities for the test and evaluation of advanced weapons systems used in naval aviation applications. Its location at the mouth of the Patuxent River on a peninsula that extends into Chesapeake Bay results in high humidity, frequent fog and precipitation that is critical for producing the test conditions necessary for naval aviation technology development.

These same conditions presented challenges to typical surveillance systems. The surveillance solution required for the 1,800 square miles of airspace needed to be environmentally rugged and able to support accurate surveillance in all weather conditions, in addition to providing high-update rate surveillance to monitor and track tactical maneuvers of high-performance range aircraft.

Sensis Solutions at Work:

To ensure precision surveillance in all weather conditions and to capture the high-speed tactical maneuvers of the aircraft, the U.S. Navy deployed Sensis Wide Area Multilateration (WAM) to monitor and track aircraft at altitudes of 3,500 to 50,000 feet in the 1,800 square miles of airspace over Pax River. The precision of Sensis WAM enables Pax River to identify non-military aircraft entering the airspace, reducing the risk of incursions and allowing for potential future use of the airspace for both civil and military aviation. With the deployment, Pax River receives aircraft positional information at a rate of once per second – far exceeding the update rate of traditional rotating radar.



With WAM, the U.S. Navy receives surveillance data with an accuracy and system availability that significantly improves the cooperative radar picture, substantially impacting range safety during test maneuvers. The dynamic nature of activity at the facility is supported by an advanced surveillance system that provides concise situational awareness today and can adapt to address the Navy's needs tomorrow. Through its compatibility with developing concepts such as Automatic Dependent Surveillance – Broadcast (ADS-B), multilateration provides a bridge to future technologies.

Sensor Installed at Patuxent River

WAM

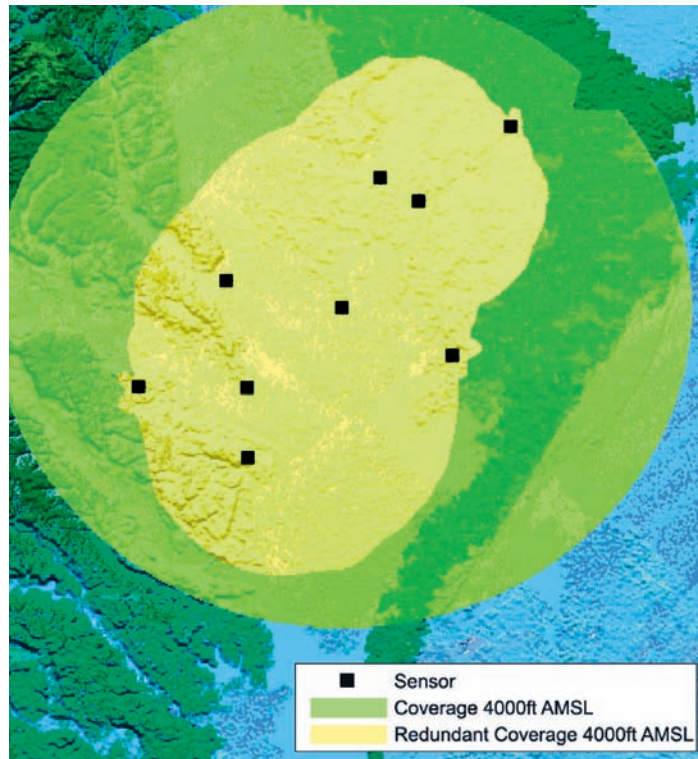


Solution Performance

Feature:	Benefit:
Better accuracy and higher update rate than existing radar systems	Enhanced safety from more precise positional information
Adaptable coverage	Surveillance in challenging environments with no coverage gaps
Low maintenance, low power consumption	Little environmental impact
Tracks all transponder types: Mode S, Mode A/C, ADS-B	Transitions technology from currently equipped aircraft to those of the future

About Sensis WAM:

Sensis WAM is a reliable and tested surveillance solution that is modernizing aviation surveillance worldwide. Sensis is a leader in WAM, fielding the industry's first commissioned multilateration system for WAM at Innsbruck, Austria in 2005. In addition to Patuxent River Naval Air Station, Maryland, Sensis WAM was selected for Tasmania, Australia; Vancouver Harbor and Fort St. John, Canada; North Sea, United Kingdom; Rifle and Hayden, Colorado; Juneau, Alaska; Yuma Proving Ground, Arizona and Twentynine Palms Marine Corps Air Ground Combat Center, California.



Pax River WAM Coverage Area

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