

Sensis Solutions at Work



At a Glance

Lower cost option to beacon radar

Distributed and extensible architecture

Accuracy: 150 m.

Coverage: Up to 10,000 ft. for up to 25,000 sq. mi.

North Sea, United Kingdom WAM

The Challenge:

NATS provides air traffic services for helicopters supporting the oil and gas operations in the North Sea, including those using Aberdeen Airport which handles more than 25,000 helicopter flights per year. They needed a surveillance and tracking system to safely support the increasing number of helicopters flying to the oil platforms in the area. A large portion of the off-shore airspace surrounding the oil platforms is beyond radar coverage, and installing traditional radar would not have been effective or economical. NATS required an innovative solution to maintain surveillance in the harsh North Sea environment.

Sensis Solutions at Work:

To address this problem, NATS deployed Sensis Multistatic Dependent Surveillance (MDS) for Wide Area Multilateration (WAM) surveillance. The system will enable surveillance and tracking of helicopter traffic to and from oil platforms from close to the helicopter deck up to 10,000 feet across 25,000 square miles of airspace. The Sensis WAM system uses sensors placed on oil platforms in deep water in the North Sea, which accurately identify all transponder equipped aircraft. Sensis WAM differentiates fixed and non-fixed positions – one of the oil platform sites is a floating production, experiencing heaves of 10m – and successfully handles the mix, accurately calculating the position of the multilateration targets. The low-maintenance, tailored design features rugged, weatherproof enclosures to withstand the challenging sea environment.

The system tracks the helicopters via the Automatic Dependent Surveillance – Broadcast (ADS-B), Mode S or Mode

A/C signals – no special equipment is required. With flexible coverage that can conform to challenging environments, consistent surveillance performance regardless of weather conditions and high update rates, Sensis WAM provides significant benefits. Sensis MDS is being used to track flights in a number of challenging air surveillance applications including terminal area surveillance and precision runway monitoring for ATC, military range surveillance, and enroute flight following.



North Sea Oil Platform

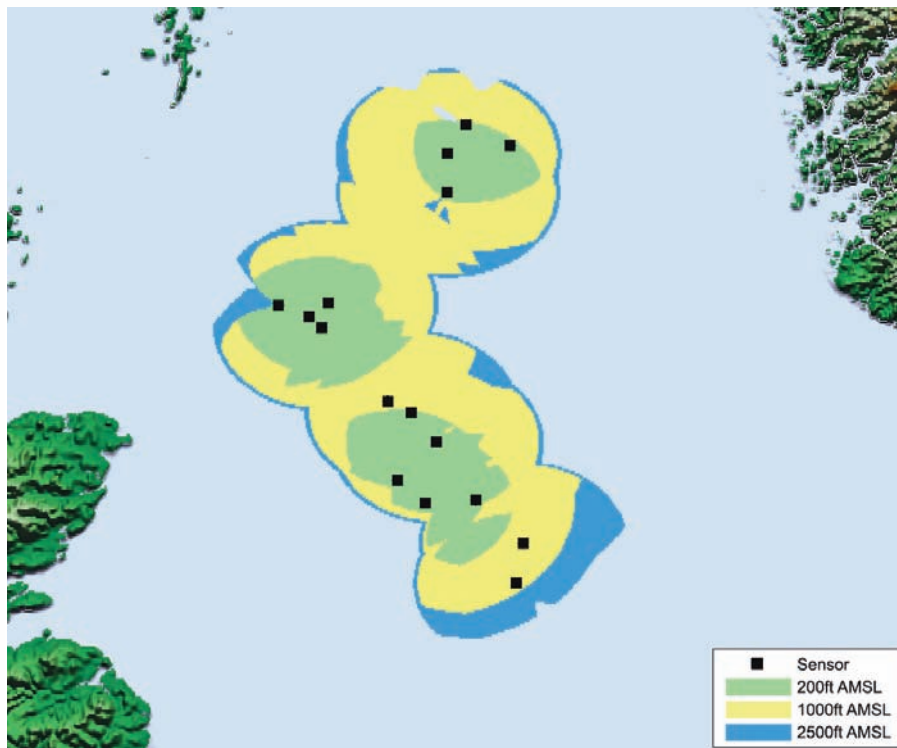
WAM

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 the North Sea, United Kingdom, Sensis WAM was selected for Tasmania, Australia; Vancouver Harbor and Fort St. John, Canada; Rifle and Hayden, Colorado; Juneau, Alaska; Yuma Proving Ground, Arizona; Patuxent River Naval Air Station, Maryland and Twentynine Palms Marine Corps Air Ground Combat Center, California.



North Sea WAM Coverage Area

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