

# Sensis Solutions at Work



## At a Glance

Lower cost option to beacon radar

Distributed and extensible architecture

Accuracy: 15 m.

Coverage: Ground level to 8,000 ft. for 350 sq. nm.

## Innsbruck, Austria WAM

### The Challenge:

Austro Control GmbH, the air navigation service provider for Innsbruck Airport, Austria, must ensure the safety of 200 aircraft movements a day within the difficult environment of the Innsbruck Valley. Surrounding the valley, mountain ranges over 9,000 feet high to the north and south make traditional radar surveillance logistically prohibitive, resulting in the need to route both incoming and outgoing planes in the same direction. The often inclement weather, including rain, wind, snow and low ceilings, combined with the mountainous environment can also be a hindrance to the repair of traditional radar.

To maintain safety and increase capacity, Austro Control needed a practical, cost-effective, and accurate alternative to traditional radar. The system requirements included providing a one second update rate and aircraft track accuracy equal to or better than Monopulse Secondary Surveillance Radar – 70m rms over 98% of the area covered. Additionally, the system needed to provide coverage for aircraft while maintaining all performance requirements with the loss of any single sensor.

### Sensis Solutions at Work:

To fulfill Austro Control's need for accurate surveillance, Sensis deployed Wide Area Multilateration (WAM) for enhanced terminal and approach surveillance. Sensis WAM provides air traffic controllers a surveillance picture with an accuracy of 15 meters on the runway and taxiway and 60 meters accuracy in the air. Regardless of the often inclement weather conditions surrounding the Innsbruck Valley, WAM offers coverage 18 nautical miles east and 13.5 nautical miles west of the airport. Sensis WAM allows multiple aircraft to be controlled within the airspace where previously only one aircraft at a time could be cleared for approach or departure.

The WAM system at Innsbruck is the industry's first commissioned multilateration system for wide area surveillance. Since going operational in early 2005, Sensis WAM has saved Austro Control more than EUR10 million (USD13.2 million) compared with the cost of conventional secondary surveillance radar, with no change in aircraft avionics requirements. Additionally, Sensis WAM provides both multilateration and Automatic Dependent Surveillance – Broadcast (ADS-B) positions, establishing the infrastructure required for today's surveillance needs as well as tomorrow's ADS-B equipage.



Sensor Installed at Innsbruck Valley

# WAM

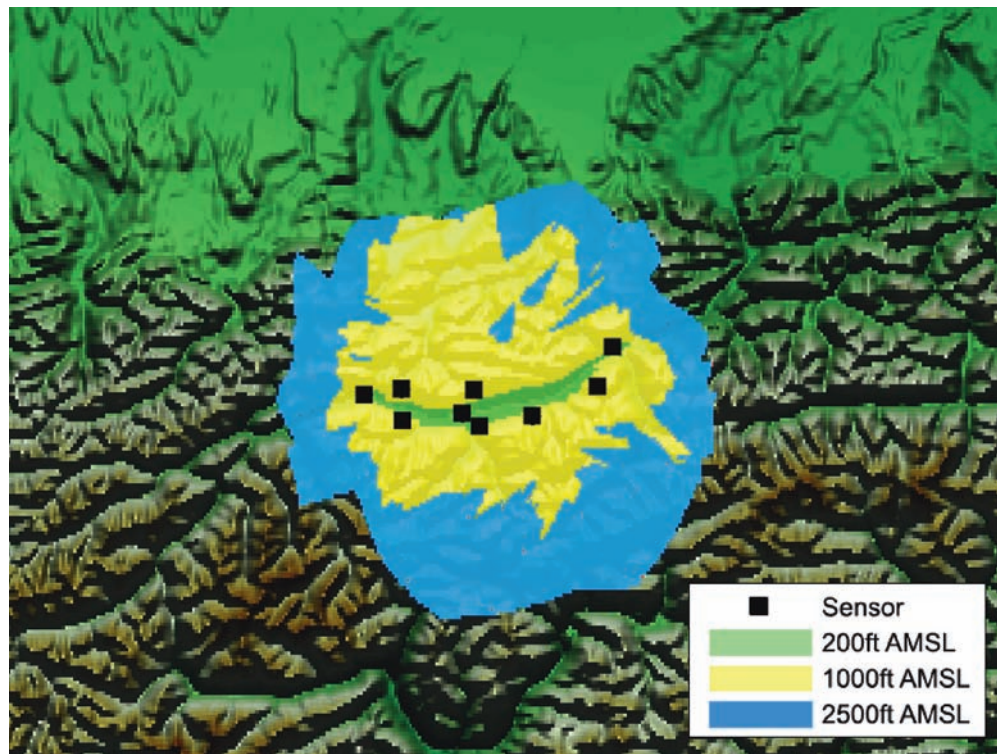


## Solution Performance

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 Wide Area Multilateration is a reliable and tested surveillance solution that is modernizing aviation surveillance worldwide. In addition to fielding the industry's first commissioned multilateration system for WAM at Innsbruck, Austria, Sensis WAM was selected for Tasmania, Australia; North Sea oil platforms, United Kingdom; 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.



*Innsbruck WAM Coverage Area*

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