

# Sensis Solutions at Work



## At a Glance

Improved situational awareness  
in all weather conditions

Precision monitoring with low  
occurrence of false targets

Accuracy: 7.5 m. in  
maneuvering area,  
12 m. in movement  
area

Coverage: Ground  
level up to 200 m.

## London Heathrow Airport Surface Surveillance

### The Challenge:

More than 1,350 aircraft pass through London Heathrow Airport every day and this capacity can fall by approximately 50% during periods of low visibility. To address the safety and efficiency challenges associated with Heathrow's high capacity and occurrences of low visibility, NATS, the UK's air navigation service provider, required a cooperative, multilateration-based surveillance system that would augment the existing primary, secondary and surface movement radar. This system would need to provide more accurate and reliable information to air traffic controllers by reducing the occurrence of false targets and tracks that can cause inaccurate safety alerts.

### Sensis Solutions at Work:

To address the challenges at London Heathrow, NATS selected Sensis to install Multistatic Dependent Surveillance (MDS), making Heathrow the world's first major international airport operational with multilateration in November 2002. Sensis MDS provides accurate position estimates and positive identification of all transponder equipped aircraft operating in runway, taxiway, ramp and gate areas. The surveillance data supplies air traffic controllers with enhanced airport situational awareness contributing to improved capacity and ensuring

safe, efficient movement of aircraft and airport vehicles regardless of weather conditions. The system provides precision comparable to global positioning systems along with a higher update rate than traditional airport surveillance radar.

As a result of the high performance of the original MDS system, NATS expanded the system to provide surface surveillance for the area surrounding a new air traffic control tower and for the airport's growth associated with Terminal 5. At Heathrow, MDS is covering the entire airport and gate areas with 23 sensors – an example of MDS' ability to achieve outstanding surveillance coverage with a highly efficient number of sensors for reduced life-cycle cost. Further, through its compatibility with developing concepts such as Automatic Dependent Surveillance – Broadcast (ADS-B), Sensis MDS provides a bridge to future technologies.



London Heathrow Air Traffic Control Tower

# MDS

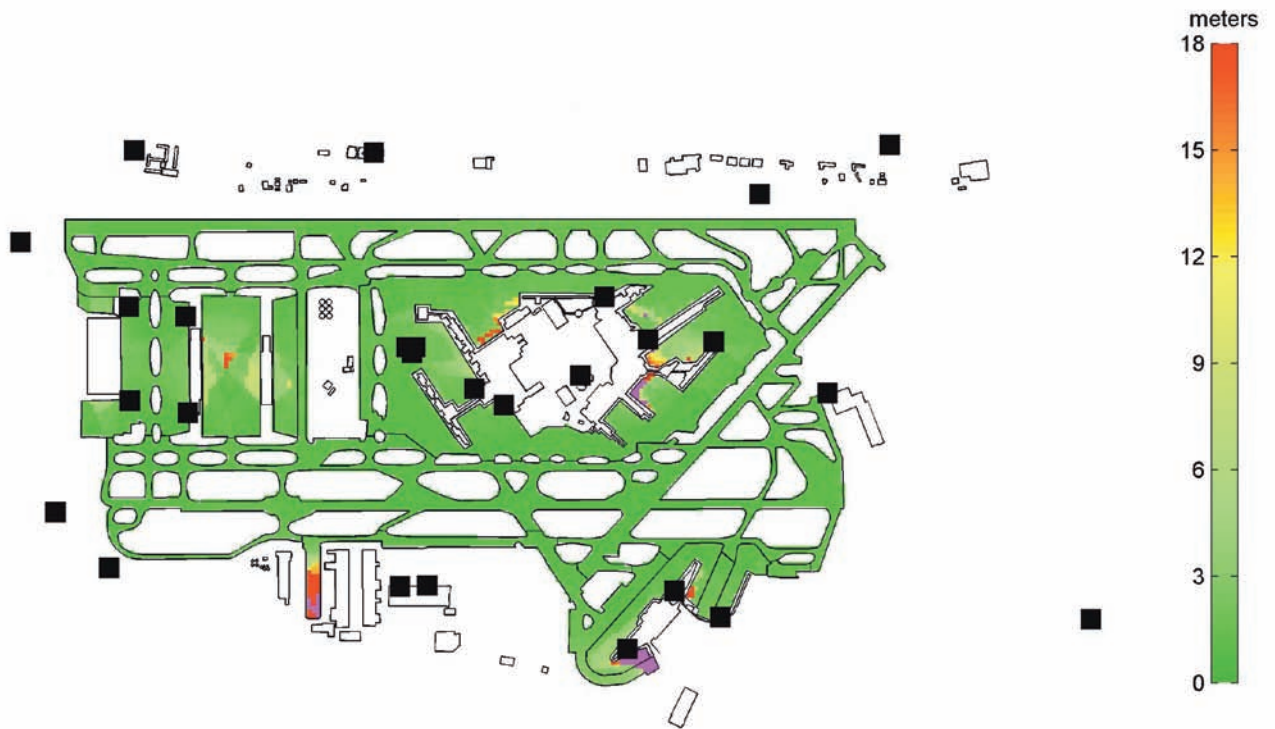


## Surface Surveillance

Feature:	Benefit:
Better accuracy and higher update rate than existing radar systems	Enhanced safety from more precise positional information
Adaptable coverage	Coverage over the entire airport area, including ramp and approach/departure areas
Strategically placed sensors	More accurate and reliable data
Tracks all transponder types: Mode S, Mode A/C, ADS-B	Transitions technology from currently equipped aircraft to those of the future

### About Sensis MDS:

Sensis MDS has been the solution of choice for more than 20 locations throughout Europe, Canada and Asia. Further, the U.S. Federal Aviation Administration is deploying Sensis MDS to 35 airports as part of the Airport Surface Detection Equipment, Model X program (ASDE-X).



Heathrow Coverage Area

**Sensis Global Headquarters** 85 Collamer Crossings East Syracuse, NY 13057

Phone: +1 315 445 0550 Fax: +1 315 446 2209 www.sensis.com email: info@sensis.com