

Sensors help keep noise within limits

Ruth Barnard

An environmental management specialist is changing how airports approach noise reduction

In February 2009, airport noise and environmental management specialist **Lochard** was acquired by Bruel & Kjaer (B&K), a leading manufacturer and supplier of sound and vibration solutions, to form a new Environment Management Solutions (EMS) business unit. The new global EMS business is headquartered in [Melbourne, Australia](#), and run by the existing **Lochard** executive team.

The merged organisation now supplies products and services to more than 200 airports and countless urban and industrial noise management projects around the world.

The merger blends B's involvement in noise instrumentation with **Lochard's** experience in environmental management in the airport domain. In addition to servicing the global airport market (including a technical and application support network in 55 countries), the merger with B&K enables **Lochard** to develop noise and environment monitoring into urban and industrial sectors.

The EMS team aims to combine the best of the **Lochard** and B&K product lines to create a 'best of breed' giving customers a greater choicer of solutions to environment management situations.

While merger discussions were taking place, **Lochard** was busy improving its noise management solutions and developing other products to meet the needs of its customers - many of whom have asked for extensions to the Airport Noise and Operations Monitoring System (ANOMS). **Lochard** responded by creating a series of software-based modules to meet the different needs of customers and markets. WebTrak is an example of one of these modules, designed as a low-cost subscription service for those airports who want to improve community communication on aircraft flight and noise data.

WebTrak FlyQuiet

In October 2008, WebTrak FlyQuiet was launched as a module built for airports seeking to enforce tighter rules and regulations at airports over noise abatement streamlining engagement with airlines and ultimately making airports quieter. The purpose of FlyQuiet is to inform pilots when they have flown off course or at the wrong time of day. The speed of transmitting this information by the airline to the pilot, usually within 24-48 hours, is important to enable the pilot to review their performance in a timely manner while the flight is still fresh in their mind. Armed with this information, the pilot can perform better next time and not make the same mistakes. The product was created in specific response to airports who wanted to stay on top of these types of issues and deal with them quickly.

In response to client requests for carbon footprint assessments, AirTrak Carbon Manager was built and launched in December 2008. The product enables airports to assess and track aircraft carbon emissions. Airports can use this information to implement, monitor and measure the success of carbon reducing activities. With airports under pressure to demonstrate they are doing everything possible to reduce their impact on climate change, expansion plans that directly conflict with national greenhouse gas emissions are under threat.

The most recent product is FlightOps which was released in June 2009. It was born in response to the request of smaller airfields who wanted more basic flight-tracking information such as locating where aircraft have flown and answering noise complaints. It is a low-cost portal that displays flight

tracks on simplified street and satellite maps and delivers automated reports on aircraft operations data.

The theme of these modules is that one size does not fit all. A core platform is built around ANOMS and clients bolt on additional modules according to their needs. All modules are subscription services that customers pay a monthly fee to access. As the needs of an airport change over time, it can add on different modules easily without changing a whole system - thereby improving efficiency and cost-effectiveness. B's goal is to produce a couple of new modules or services each year in response to industry demand.

Hurghada Airport in [Egypt](#) is among the latest to install products from B&K, adding an ANOMS system to those in use at Cairo and Sharm El Sheikh to form a national airport monitoring network. Valencia Airport in [Spain](#) has also commissioned a new ANOMS system and [Luxembourg](#) in early 2010 commenced its ANOMS installation.

ANOMS forms the core of numerous national airport monitoring systems with the system being installed for 16 airports in [Sweden](#) in 2009. The eight major international airports in [Australia](#) have also undergone an upgrade: [Sydney](#), [Melbourne](#), [Cairns](#), Brisbane, Gold Coast, [Canberra](#), [Adelaide](#) and [Perth](#) are now using ANOMS. In the US, Jacksonville Airport in Florida and Stewart International Airport in New York installed ANOMS in 2009.

Most recently, on 8 April Madrid Barajas became the first airport to deploy WebTrak in conjunction with the B&K 7804 Noise and Flight Tracking System (and the 46th to deploy WebTrak). Radar flight tracks and noise data from 27 monitoring terminals deployed around the Spanish hub are available to visitors logging on to the website of national airports operator AENA. WebTrak at [Madrid Barajas](#) uses the same data gathered by the airport's SIRMA noise and flight-tracking system.

AENA is using WebTrak to assess progress on its Environmental Action Plan, which aims to cut CO₂ emissions and noise generated by airport operations. According to B&K, AENA expects to extend the system to other Spanish airports.

B&K is also working with the Australian Department of Defence on running systems for five airbases. As military aircraft present a number of noise management issues, the company has been asked to collect data and manage permanent monitoring systems for the airbases.

*ANOMS is available as a series of software-based modules tailored to meet customer requirements. (Brüel & Kjaer)
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*Brüel & Kjaer Environmental Management Solutions (formerly **Lochard**) deploys monitoring terminals around airports to measure greenhouse gas emissions and noise levels. (Brüel & Kjaer)
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