

**The Cambridge-based research center has formed a project to develop the use of RFID and other ID technologies in the aerospace sector.**

By Jonathan Collins

Aug. 26, 2005—The [Cambridge Auto-ID Lab](#) has formed a research and development program to explore and develop the potential for RFID and other ID technologies in the aerospace sector. The goal is to bring together aviation standards bodies, RFID vendors and aerospace companies.

The [Aerospace ID Technologies Programme](#) is the first in a planned series of sector-based research groups to be launched by the Cambridge Auto-ID Lab focusing on the challenges and potential benefits presented by identification technologies, including RFID, as well as smart buttons (memory devices that can be interrogated using a probe rather than radio waves) one- and two-dimensional bar codes.



*Duncan McFarlane,  
Cambridge Auto-ID Lab*

"The program is focusing on research to remove barriers to broad adoption of RFID and other ID technologies within the aerospace industry, and working in harmony with the different standards bodies also working in that industry," says Duncan McFarlane, director of the Cambridge Auto-ID Lab, based at [Cambridge University](#) in the United Kingdom, one of seven such labs around the world focused on researching and developing a global RFID infrastructure based on the Electronic Product Code (EPC).

Aerospace ID Technologies' founding members are the aircraft manufacturers [Boeing](#) and [Airbus](#), aviation supply chain management services provider [Aviall](#), process-automation solutions provider [VI Agents](#), not-for-profit aviation network and communications company [SITA SC](#) and U.S. airline trade organization, the [Air Transport Association \(ATA\)](#). The group is looking for RFID vendors to play a role in the program activities, as well.

According to the group, the structure of its new program resembles that used by the Auto-ID Labs for developing RFID for the retail supply chain. "This is a project with a finite length," says James Lyon, program manager at the Cambridge Auto-ID Lab. "We have identified questions that need answering, and it will take 18 months to two years. After [the work of the program] has removed key obstacles to ID technology deployment, we will step back and let industry get on with it—as the Auto-ID labs did with its work on retail RFID."

End users who join the program early will have the advantage of being able to steer the research work into areas of their own special interests. The program is already set to complement such ongoing industry projects as the Airbus-Boeing Global Aviation RFID Forum (see [Boeing, Airbus Team on Standards](#)) and the RFID adoption efforts underway at ATA and the [International Air Transport Association \(IATA\)](#).

The program will hold its first meeting in Washington, D.C., on Sept. 15 to present some initial research papers developed by the Cambridge Auto-ID Lab, and to determine initial pilot projects.

Five initial research areas have already been selected: life-cycle ID management, which involves managing the evolution of a component or piece of equipment through its life cycle; ID application matching, to ensure the use of the best ID technology for each process; sensor integration, to evaluate methods for integrating ID data with other sensor information; synchronization of ID data between components and networked resources; and track and trace, where the program will design and evaluate methods for integrating ID data into existing and new track-and-trace strategies. More research areas are expected as additional sponsors bring their own specific issues to the program.

Tracking and verifying aircraft components and their maintenance will be examined from the perspective of each research area. The delivery of customer-related services such as ticketing, baggage-processing and meals will also be considered.

ID technology vendors joining the program, the Cambridge Auto-ID Lab says, will be able to help direct development of the research projects and get insight into potential areas for new product development..

In addition to influencing the direction of the work undertaken by the program, participating companies will have exclusive access to research outcomes and any intellectual property developed within the program for six months prior to wider dissemination.

The project will employ four full-time researchers on projects focusing on the five initial research areas. For companies with annual sales greater than £1 billion, there is a one-time fee of £40,000 to join the program. The fee for companies with sales between £100 million and £1 billion is £20,000; for those with sales below £100 million, it is £10,000.

All Auto-ID Labs around the world will provide input to the aerospace program. However, given its history of working with the aerospace industry as part of the [University of Cambridge's Institute for Manufacturing](#), Cambridge Auto ID Lab is taking the lead role.