

Airbus Trials Showing Strong Results

The aircraft manufacturer has decided to permanently roll out an RFID application for tracking jigs, and has also launched other RFID pilots for tracking work orders and tools.

By Mary Catherine O'Connor

April 16, 2008—[Airbus](#) has decided to permanently roll out one of the many RFID applications it had been testing in recent months, says Carlo K. Nizam, the company's head of value-chain visibility and RFID. According to Nizam, Airbus has also begun two other RFID technology trials.

The RFID application the aircraft manufacturer is deploying tracks the location of the large metal frames, known as jigs, that it uses to transport large aircraft sections between a total of 13 manufacturing and assembly facilities. Workers employ a cargo loader to move a jig onto and out of a huge cargo aircraft, dubbed the Beluga because it resembles a whale.

Airbus launched a pilot program last year at an assembly plant in Hamburg, Germany, in which an RFID interrogator mounted on the cargo loader collects the unique identifier encoded to a passive EPC Gen 2 RFID tag attached to each jig (see [Airbus' Grand Plans for RFID](#)). In back-end software, the company associates the tag's identifier with the part or parts being delivered on the jig.

The system is intended to provide Airbus with quick access to the jigs' location, based on their most recent tag reads. Because each jig is designed to accommodate a specific airplane part, it needs to be promptly unloaded and returned to the proper facility according to a tight manufacturing timetable. If not, Nizam says, the delay could negatively impact an aircraft's production schedule.

"In the past, we've had little visibility about what was where," Nizam says regarding the jigs. Previously, he notes, the company had only used manual methods—sometimes as rudimentary as a worker walking out to a storage area—to determine the frames' locations.

"We were very happy with results of the Hamburg pilot," Nizam says, "so management gave approval to move forward" and deploy the technology permanently. This deployment will begin at the Hamburg location, then expand to the 12 other facilities to which the Beluga delivers aircraft sections and subassemblies. Airbus is attaching tags from [Intermec](#) and [Confidex](#) to the jigs, as well as mounting EPC Gen 2 interrogators made by [Feig Electronic](#) to the cargo loaders.

According to Nizam, Airbus also recently launched two other RFID-based technology pilots. One trial is aimed at evaluating the use of RFID for tracking work orders, replacing a method that currently involves a combination of bar-code scanning and manual data entry. The company hopes using RFID can both help employees more quickly confirm each step in the process, and also make it easier to locate assembly parts and accompanying paperwork in storage in the event of production changes.

Airbus is employing passive RFID Gen 2 hardware for the pilot, attaching the tags to the work order documents. The firm began the pilot early this year and plans to continue running it until mid-May. At that

point, it will decide whether to deploy the system on a permanent basis. A second pilot, which commenced in January at an Airbus facility in Broughton, England, is a tool-tracking application. For this project, Airbus is employing a combination of passive RFID Gen 2 and active Wi-Fi real-time location technology.

"We are looking to see if RFID-enabled processes improve the handling of tools," Nizam says, citing three specific applications within tool tracking. One is an automated means of checking RFID-tagged tools into and out of a storage facility, intended to track the location of tools, as well as the person or group using them. Another application uses RFID tags attached to tools to locate the tools within a facility. And the third involves the use of RFID to track each tool's usage, to establish its maintenance and calibration schedule.

Presently, Nizam explains, tools are put through maintenance and calibration steps based on a calendar, regardless of how often they are used. "One tool might be used 50 times in one month," he says, "and another tool [of the same type] might be used 100 times in that same month. If we know this information, then we can maintain and calibrate tools when they need it, rather than per a time basis, and this will save us time and money."

The tool-tracking pilot will run until July, Nizam indicates, at which point the company will decide whether to deploy the system permanently. Airbus believes there are many other areas within operations that could benefit from RFID, including parts lifecycle tracking, but Nizam says the firm has not yet begun any formal testing of RFID in these areas.

To help it implement its various RFID deployment and pilot projects, the aircraft manufacturer recently signed a multimillion-dollar, multiyear contract with enterprise software firm [IBM](#) and RFID software and application provider [OATSystems](#).

The OATSystems RFID data management and asset-tracking software will run on IBM's WebSphere RFID device-management and data-filtering software. Martin Wildberger, IBM's VP of RFID solutions, says a flexible architecture makes WebSphere attractive to Airbus because the software can reside either directly on an intelligent RFID reader or on a separate server—depending on the business application—or it could be used in combination with a reader networking device.

RELATED_ARTICLES Michael George, chief executive officer of OATSystems, says his company has collaborated closely on a number of other RFID deployments, and that its platform contains software applications designed for specific business processes that Airbus will be able to leverage. These applications include parts maintenance, asset tracking and repair and overhaul.

At this week's [RFID Journal LIVE! 2008](#) conference, being held in Las Vegas, Carlo Nizam will discuss Airbus' RFID pilots and deployment plans.

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