Small DOD Supplier Deploys RFID, Foresees Internal Benefits

Nav-Aids, a 15-employee Canadian maker of test accessory kits for aircraft, has implemented a system enabling it to fulfill U.S. RFID mandates in-house.

By Beth Bacheldor

Sept. 24, 2007—Nav-Aids, a small Canadian manufacturer of test accessory kits used for aircraft, will begin affixing EPC Class 1 Gen 2 RFID tags this week, to shipments of its products bound for U.S. military depots and logistics centers. Nav-Aids is not the first company to tag goods shipped to the military—the U.S. Department of Defense (DOD) requires all suppliers to affix passive EPC RFID tags to incoming goods. Still, the RFID initiative is a major step for the Montreal-based company because Nav-Aids has only about 15 employees and ships a small quantity of products. These consist of highly specialized tools for testing onboard aircraft systems that measure air velocity and air pressure.

"The Defense of Department gave everyone a timeframe within which to become compliant," says Robert Marshall, quality program manager at Nav-Aids. "For large organizations that have the resources and the expertise available to them, they can usually adapt to this fairly rapidly. When you are dealing with small companies, they have limited resources and limited personnel."

Marshall considered outsourcing the RFID project, including the creation of RFID shipping labels, but realized the low Nav-Aids shipping volumes might make the cost of outsourcing too expensive. What's more, Nav-Aids has a very fast turnaround time—generally three to four weeks from when an order comes in to when the customer receives it—so there were risks involved in placing the tagging responsibility into someone else's hands. "If something goes wrong," Marshall says, "if you need the labels in two days and five days later you still don't have them, then you can't do anything."

Nav-Aids decided it made the most sense to install a system in–house, but the initiative didn't get underway as quickly as Marshall had planned, largely because he and his team were busy with other projects and everyday tasks. "Compliance to RFID was supposed to happen in December of last year, so obviously we are behind," Marshall acknowledges. In order to continue working with the DOD, Nav-Aids requested waivers to the RFID requirement in every request for proposal (RFP) to which it responded. And although the effort was successful, Marshall knew waivers were in limited supply.

Luckily, a colleague happened to read an article in a Montreal newspaper about RFID Academia, a local RFID training and research-and-development facility and systems integrator. To assist with the implementation, RFID Academia enlisted Ship2Save, a company that provides an asset-tracking RFID application, as well as middleware to collect and manage RFID data and share it with other systems.

Nav-Aid's RFID system leverages a Sato GL4e series printer-encoder to print 4-by-6-inch labels with the necessary identifiers (including bar codes) required by the DOD. It also uses the device to encode Avery Dennison AD222 RFID inlays, which are embedded within the labels. Nav-Aids encodes each inlay with a

unique serial number correlated with the product number, in accordance with the identification schema defined by the DOD mandate. Marshall says the vendors assembled the system in approximately three weeks, and helped train Nav-Aids employees at the company's facilities.

Nav-Aids staff members will print and encode the labels just before the products are shipped out. Once the labels are created, the Sato printer will interrogate each label's RFID inlay, the data from which will be fed into the Ship2Save software and shared with a back-end server. The employee will then attach the labels to the appropriate shipping containers.

Since the RFID data will be stored on Nav-Aid's server, the company will be able to use the information to automatically populate fields within advance shipping notice (ASN) forms accessed by a designated Nav-Aids employee. The worker will log in to the Wide Area Work Flow (WAWF), a Web-based paperless contracting application hosted by the DOD. Each label's serial number is associated in the application with a corresponding National Stock Number (NSN), a unique identifier used by the North Atlantic Treaty Organization (NATO) and the DOD to distinguish different SKUs. Before the addition of the RFID system, the information was manually input into the ASNs.

RELATED_ARTICLES For now, Nav-Aids will apply RFID labels only to shipments bound for the U.S. military, though it does supply test accessory kits to the commercial sector. During the first year, Marshall expects Nav-Aids will use just a couple hundred RFID labels. Nonetheless, he says, the company is proud of its RFID accomplishment. "I am now able to go back to all the contracting officers that I deal with across the United States Department of Defense and pledge to them that we are RFID-compliant. This is a milestone for us."

Although Marshall contends that the company is just getting its feet wet with RFID, he notes that he's already eyeing other opportunities. "I see potential here. We can use this technology for any number of in-house uses that would be beneficial to us working smarter, such as tracking assets."