

At a new cargo facility in Dubai, the airline will use active RFID to track assets and move to passive tags on cargo.

By Mark Roberti

July 11, 2005—[Emirates](#), a Dubai-based airline, is planning to make radio frequency identification an integral part of a new cargo handling system being built in Dubai. The airline plans to introduce an active tagging system to track unit load devices (ULDs), pallets and other assets, then gradually introduce the use of passive UHF tags on cargo.

"We want to take advantage of RFID, with the new system for asset management and managing the cargo itself," says Ram Menen, senior vice president of cargo for Emirates. "We want to move to tracking individual pieces of cargo, so we need the RFID to crack that. We think we have a solution that will work."



Ram Menen, Emirates

Emirates' freight division is called [SkyCargo](#), and the core of its cargo information system is hosted by [SITA](#), which provides telecommunications and other services to the air transport industry. Menen says the SITA system is limited because it's based on legacy technology. In order to take advantage of the latest technological developments and better efficiencies and transparency within the supply chain, the airline has decided to build a new-generation cargo system on a modern technology platform to replace the existing core system.

The SITA system works on electronic data interchange (EDI) messaging. Emirates wants to use an Internet-based communication system so that shipping and airline partners handing off or receiving cargo can have easy access to information about shipments. Next year, the airline will be moving into a new cargo handling facility with a capacity of 1.2 million tons, and it will need the new IT infrastructure to support it.

Menen says RFID will reduce the amount of time and labor it takes to process shipments, improving overall productivity. For instance, by associating a pallet's active tag with the cargo on that pallet, Emirates employees will be able to look up in a database what's on the pallet without breaking it down and scanning bar codes. "RFID will reduce our costs and speed up cargo shipments," Menen says.

Emirates plans to use a combination of active, passive and semi-active tags in the new cargo facility. The first stage, which should be rolled out in the second half of next year, involves tagging reusable assets, including pallets and containers. "As the tags become more economical, we'll tag physical cargo with passive tags," Menen says. "Right now, the cost is too high for every piece of cargo to be tagged. But we expect that by 2008 or 2009, the cost [of passive tags] will come down to a level where a large part of premium cargo [such as precious metals and semiconductors] can be tagged."

The challenge, according to Menen, is adopting a system when it's not certain which standards will be used in the airline industry. It's also not clear whether the air cargo companies will adopt the Electronic Product Code as their standard or try to introduce their own standard for the industry.

Emirates is currently talking to several RFID hardware vendors and plans to complete a proof-of-concept pilot by the end of October. The proof of concept will consist of tracking tagged cargo from the shipper to consignee, from the airport of origin to the destination, and also tracking the cargo in transit in the warehouse, on the ramp and at other locations.

By December, the airline expects to complete the first phase of its new core IT system, which is being built in-house. When that's done, Emirates plans to test the system extensively for six to eight months. Customers will have full visibility of their shipments, via the Internet, while in SkyCargo's custody. The system will support a totally paperless environment. As a part of the initiative, the airline aims to deploy the RFID system by the third quarter of next year.

Menen could not disclose the estimated cost of the RFID system, but says the system will deliver a return on the investment. "The ROI initially will come from an ability to better manage our assets," he says. "The real value will come when we can track every piece of cargo, but right now the business case doesn't stack up. It won't make sense until the cost of the tags goes down. But there is a business case for tracking assets."