

# Maritime RFID Sees Wave of Adoption

Lowering equipment costs and widespread communication infrastructure are fueling the use of RFID applications for oceangoing shipments, according to recent research.

By Claire Swedberg

Sept. 26, 2005—The age-old shipping challenge of tracking one's goods in transit now has an affordable solution in radio frequency identification, according to [ChainLink Research](#) CEO Ann Grackin. ChainLink is a supply chain research organization in Cambridge, Mass.

Grackin says the infrastructure is now in place to make purchasing an RFID system fairly painless. For \$10,000 or less, she estimates, a small maritime port or shipping company should be able to secure RFID tags and handheld readers (interrogators), as well as subscribe to an existing satellite system.

Currently, about 10 percent of the 1 million cargo containers in transit around the globe have RFID tags, the vast majority of them with long-range active tags, Grackin estimates. The exact number of tagged containers is unavailable, she explains, but the use of RFID tags on containers is increasing by 15 percent each year, and should continue to do so. The reason for that rapid growth, according to Grackin, is that RFID tags and readers (interrogators) have become less expensive, while necessary infrastructure, such as Internet and satellite communications systems, is readily available. The greatest challenge for shippers and ports is investing in the right technology—from the tags and readers to the middleware—to suit their needs.

According to insurance-company reports, Grackin says, more than \$50 billion worth of cargo is reported lost or damaged in transit globally each year. "If every container were tagged," she says, "the reduction could be extraordinarily significant," in part because RFID tags would reduce the number of lost containers. Grackin also sees other innovative uses for RFID in the maritime industry, such as rerouting cargo in the event that customers wish to change a shipment, or sending part of a container's cargo to a new location should shippers choose to do so. By using RFID, companies would be able to locate a shipment quickly and reroute a container or some of its items in midcourse.

Grackin names three RFID vendors as having the most customers for maritime RFID tracking solutions: [Savi Technologies](#), [WhereNet](#) and [NaviTag Technologies](#). Each company has a different focus.

Savi has the greatest percentage of the market, offering an end-to-end solution that generates \$100 million annually. Grackin calls Savi a big player in the network arena, with its data-synchronization hub that can use the Internet or satellite communications to transfer data from its network of RFID readers deployed at seaports. The firm's applications have been used by the military, as well as by the maritime industry. "Savi's been at this game a long time, and that's its forte," she says.

WhereNet, meanwhile, with \$20 million in annual sales, offers a real-time location system for tracking containers at marine terminals. And NaviTag is a younger company that provides the NaviTag library of shipping documents, which can be accessed by anyone in the supply chain.

ChainLink administered three surveys this year, interviewing a total of 459 product manufacturers, retailers and port representatives. The survey results, which were included in a recent ChainLink report entitled "RFID for Maritime," found that 92 percent of shippers are using RFID technology, foremost to solve tracing and tracking issues. In addition, 88 percent cited inventory management (keeping a shipment on schedule) as important, while 53 percent named container security as a key incentive to establishing RFID technology in their business. Moreover, 41 percent named brand protection—using tagging goods with RFID tags to distinguish genuine goods from counterfeit ones—as a valued application of the technology.

Grackin likens RFID to previous technologies, such as bar coding and e-commerce, that have gone through rocky maturation phases. "What I've learned is, once you get below the hype and the cynicism created by the hype, there's adoption," she says. "Out of the rubble comes some technology that really works."

RFID technology, Grackin says, has reached this phase already because of the presence of satellite connections and the Internet. "It's really about the enabling infrastructure," Grackin says. Wireless solutions such as satellite have become affordable and are largely in place, she points out, as is the Internet, through which RFID data can also be routed.

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