

Georgia Cargo Terminals Becoming RFID-Enabled

RFID interrogators and software are being deployed at terminals in Savannah, the country's fourth-largest port, to track shipments from all over the world.

By Beth Bacheldor

July 14, 2006—Cargo terminals in Georgia, including those at the Port of Savannah, are being outfitted with RFID readers and software so terminal operators and their customers can track shipments coming in from all over the world. The implementation is designed to let terminal operators collect real-time information on RFID-tagged containers so they can provide their customers—U.S. logistics companies, retailers and product suppliers—with greater levels of efficiency, real-time visibility and condition statistics for containerized cargo. In addition, the RFID infrastructure will serve as a test bed for research and development of RFID and other technologies that can be applied to maritime supply chains and processes.

The project is being directed by the [Maritime Logistics Innovation Center \(MLIC\)](#), a state program designed to facilitate collaboration between private industry, academia including the Georgia Institute of Technology, and federal and state authorities such as the [Georgia Ports Authority \(GPA\)](#), with technological help from [Savi Networks](#), a joint venture of RFID systems provider [Savi Technology](#) and seaport operator [Hutchison Port Holdings \(HPH\)](#).

GPA owns and operates the Port of Savannah's two terminals: Garden City and Ocean. The Port of Savannah is the country's fourth-largest port, in terms of 20-foot equivalent units (TEUs), a standard measurement of volumes that move through ports (a 40-foot shipping container, for example, equals two TEUs). A little more 2 million TEUs pass through Port of Savannah every year, according to Page Siplon, MLIC's executive director.

The MLIC's overall mission is to promote creative technology development and commercialization to improve efficiencies within the maritime supply chain, as well as to foster economic growth among Georgia's ocean and inland river ports. Since the fall of 2003, around the time it was created, the MLIC began looking at RFID technology as a promising technology that could aid in improving visibility and efficiencies of maritime supply chains, according to Siplon. "These happen to be problems Georgia is facing, but as I talk to others, they are also looking at ways to improve how fast they can move goods. If RFID can help, than we're interested."

The RFID implementation will leverage Savi Networks' SaviTrak, an RFID-enabled global container shipment-tracking service. Many of Savi Networks' customers are the companies that actually ship goods, such as shipping logistics company Mitsui USA, the New York-based subsidiary of Japan's Mitsui & Co. (see [Savi Networks Starts Tracking Cargo](#)). These companies use RFID tags affixed on containers so they can be tracked en route, including Savi Technology's Savi Tag ST-676 ISO Container Security Tag, a battery-powered (active) 433 MHz RFID tag that clamps onto the cargo container's door. The tag's unique ID number can be associated with the shipping manifest and other documents in a SaviTrak database hosted by

Savi Networks.

But Savi Networks is currently working with about 75 ports that are all in various stages of deploying SaviTrak RFID readers and software, according to Lani Fritts, chief operating officer at Savi Networks.

At its Savannah terminals, the GPA will use Savi Technology's 433 MHz Series 600 active RFID readers affixed to all their cranes. The readers will be placed in the cabs of the cranes, which are several hundred feet in the air, and will read tags on containers as they are lifted off and onto ships. In addition, the RFID readers will be placed at various gates throughout the terminals' facilities and yards.

In addition, the terminals will have SaviTrak's network software that coordinates all the tag information and funnels it to the hosted SaviTrak system. Terminal operators will be able to log into the hosted system to track when shipments arrive and leave and where containers are while at the port. Savi expects the implementation, now underway, to be completed and operational by year's end.

Meanwhile, the MLIC was able to leverage the RFID implementation to establish another partnership with the Georgia Electronic Design Center (GEDC), a research and development organization affiliated with Georgia academic institutions and funded by state and federal agencies and private industry. The two are working to further RFID-based research, and will leverage the Georgia Ports Authority's SaviTrak implementation, using it to test different RFID tags and technologies.

The GEDC team's expertise is in high-read-range, high-efficiency, low-cost, multifunctional UHF RFID antennas and integrated circuits. The GEDC's developments targeted for testing include thin, flexible organics (such as liquid crystal polymer) and hydrophobic paper-based substances such as substrates into which RF antennas and ICs can be embedded.

Copyright ©2005 RFID Journal, Inc. All Rights Reserved