RFID Container Seals Deliver Security, Value

Hutchison Port Holdings says its partnership with Savi Technology will help secure the supply chain and reduce costs for companies shipping goods.

By Mark Roberti

Oct. 31, 2005—Securing and tracking ocean shipping containers with electronic seals that communicate using active radio frequency identification technology will provide both business value and security by providing better information to shippers, according to Neil Smith, an executive at global terminal operator Hutchison Port Holdings. Smith is also the chief financial officer for container-security services provider Savi Networks, a joint venture between Hutchison and RFID technology provider Savi Technology.

Speaking at the "Truth in Technologies 2005: Supply Chain RFID" conference hosted by AIDC 100, a nonprofit organization for professionals in the data-capture industry, Smith said that as a container moves from point to point, as many as 20 different companies have to coordinate activities in the supply chain. These companies might include trucking firms, terminal operators, the shipping company, the manufacturer of the shipped goods, the purchaser, banks and so on.

Each time a container changes hands, or documents regarding the container are transferred, the potential for miscommunication exists. A trucker, for instance, might bring a container to a port but not communicate to the shipping company that it has arrived, causing it not to be loaded onto a ship. These kinds of problems cost money to the company awaiting the shipment. However, Smith said, RFID can help solve such problems.

"Our belief is that RFID will allow commercial entities, customs agents and others to look at the same data about the location and status of a container," he said. "It gives a company shipping goods the ability to take control of its supply chain."

According to a survey by A.T. Kearney, business executives believe RFID tracking could bring $1,150 in benefits per container. The savings come from reducing delays, cutting safety stocks and lowering penalties charged by some customers for late shipments.

RFID, according to Smith, can provide the shipment data that U.S. Customs requires to enable containers to move more quickly through a "green lane." When shippers meet certain requirements for security of shipments in transit, the "green lane" program enables qualified shipments to move through Customs with reduced inspections. Some believe RFID tracking will also help them comply with the Sarbanes-Oxley Act, which requires the heads of publicly traded companies to vouch personally for the accuracy of their financial statements, including the amount and value of goods in inventory.

Hutchison has invested in Savi Networks because it wants to secure its container terminals and other terminals around the world. The idea is to secure containers by x-raying them after they are loaded, then sealing each one with an electronic seal (e-seal) that detects if the door is opened without authorization. The e-seal also has sensors to detect changes in light and temperature if someone cuts a hole in the container's top or side. If a container is breached, the e-seal communicates that information to the system during the next tag read.

The A.T. Kearny study showed that many executives are concerned about security but won't invest in e-seals unless there are other benefits. As such, Savi Networks is highlighting the fact that e-seals can bring savings, while securing containers.

Vic Verma, CEO of Savi Technology, said companies could achieve hard savings from using e-seals. He pointed out that to prevent their containers from being used to smuggle drugs, some companies pay $200 per container to have security guards travel with shipments from some remote regions of Colombia to Colombian ports.

Through Savi Networks, Hutchison's goal is to work with Savi Technology to create a global network for tracking and securing containers moving through the world's supply chains. The system uses the ISO 18000-7 standard for active RFID tags. Standards are being developed for electronic seals, and Smith said Savi Networks would adopt the standards once they are finalized.

"We are working with other terminal operators to build a truly global network," said Smith. "We're being very aggressive because we're keen to have infrastructure in all our port terminals, and we hope other terminal operators adopt the same system."

Other terminal operators, said Smith, have not expressed concerns that Savi Networks is backed by Hutchison, one of their competitors. He added that in places such as Shanghai, where there is more than one terminal operator, some operators see RFID as a competitive advantage because it lets them offer a tracking and security service their competitors don't have.

Hutchison Port Holdings, the largest terminal operator in the world, has 236 berths in 40 ports in 15 countries. It is a division of Hutchison Whampoa Ltd., a global trading company and diversified conglomerate.

Hutchison invested $75 million in its partnership with Savi. The two companies are outfitting 40 terminals worldwide with Savi readers placed on cranes that load and unload ships, and at gates to track the movement of containers. The data is uploaded to a database hosted by Savi Networks, via software provided by Savi Technology.