

SSA Marine Adds RFID to Quicken Cargo

The international container-terminal operator is deploying WhereNet's Marine Terminal Solution at several of its West Coast ports.

By Bennett Voyles

Apr. 7, 2005—One of the world's biggest cargo companies will begin using a new generation of container-tracking technology at several West Coast ports later this year. [WhereNet](#), the Santa Clara, Calif., company that developed the system, estimates the application will cut the transfer time from ship to truck trailer by at least half.

WhereNet is rolling out the system for [SSA Marine](#), the world's largest privately held cargo- and container-handling company, a Seattle-based division of the Carrix shipping group. WhereNet executives say the system is being installed in three of SSA's southern California container yards, and they hope to bring it to SSA's facilities in Oakland, Calif., and Seattle as well. Edward DeNike, president of SSA Containers, a division of SSA Marine, says the system is still being tested now, and he hopes to bring it live by the end of the year.

"It's taken longer than we had hoped to test and we are experiencing some problems that have to be corrected, but we hope to have them done this year," he says. DeNike adds that the problems relate mostly to the accuracy of the system's optical character recognition scanners. In addition, DeNike says, truckers who drive into the yards still need to have WhereNet's RFID tags installed on their trucks.

DeNike says SSA asked WhereNet to develop the system because of growing freight volume being handled in the yard. "The volumes are such now that in order for us to service our customers properly, we need to embrace technology," he explains. "We have to get these trucks in and out of the terminals quicker, the ships need to be worked quicker. We have to have a more efficient understanding as to where the containers are in the yard. It's become an absolute requirement."

John Rosen, director of product marketing at WhereNet, indicates that the new system is a first for the firm. "We have worked at other marine terminals and provided RFID and location information. But SSA was our first customer that asked for a full black box solution from us," he says.

DeNike says his firm chose WhereNet because "quite frankly, they were the most impressive people we interviewed."

WhereNet launched the first version of its Marine Terminal Solution in 2003 (see [Dockside Cranes Get Brains](#)). What's new about this version, according to a WhereNet spokesman, is that it provides a layer of middleware in an XML format that takes the raw data on container locations and integrates that data more easily with the terminal's own enterprise management software.

The system is SSA's first foray into RFID. In nonautomated yards like SSA's, simply finding the right container in several hundred acres stacked with up to 10,000 containers can take a significant amount of time.

Rosen claims that WhereNet's system can cut the time it takes to unload a shipload of containers and hitch them to departing trucks from two or three days down to one.

"The operator used to work with a lot of radio voice communication to clerks down on the field, or [use] hand signals," says Rosen. "The drivers would come in...they would actually point to their container in the stack and then the operator would move containers around and deliver the one any given driver was looking for," he says.

Although DeNike said that some publications have "mentioned the fact that there's going to be some reductions in labor," he would not quantify the impact the new system will have on its unionized workforce. "We have a very difficult labor environment here on the waterfront," he explains.

But Rosen believes that rising cargo volumes will obviate a workforce reduction. In recent years, the growth of volume in Asian exports has surged. The largest ships today can carry up to 8,000 twenty-foot containers—a huge cargo that can take a 40-mile convoy to unload—and many analysts are forecasting more growth for the rest of the decade.

Working out a solution for shipyards wasn't as simple an application as it might seem. Rosen says that containers typically belong to many different companies, and an industry standard for tagging containers has yet to be worked out. To work around the limitation for their system, WhereNet engineers instead tagged both the heavy equipment that moves the containers through the terminal and the trucks that haul the containers away, and had those active transponders send information back to the terminal's internal business systems, he says.

"When the container comes off of the ship, there's a set of [optical character recognition] cameras on every crane that interprets the container number and provides that number to our system," Rosen explains.

Once that container is identified, the system tracks its whereabouts by following the movements of the machines that transport that container. The system deduces the container's location by recording when and where, for instance, a rubber-tired gantry train drops off a container and another machine simultaneously picks up that container at that same location.

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