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December 2003

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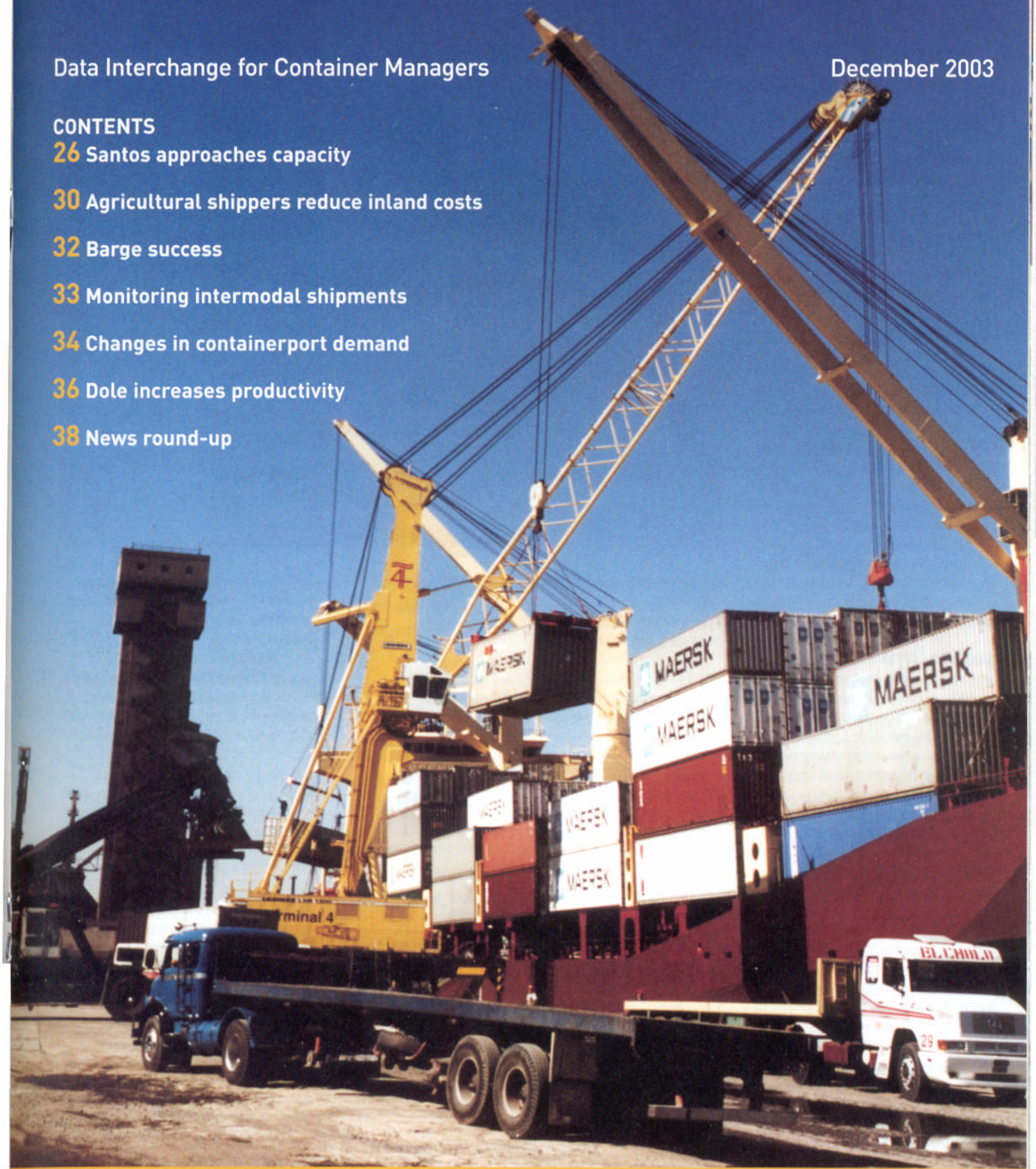

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Agricultural shippers benefit from barging

Exporters of agricultural products from the US Pacific Northwest to Asia are reducing their inland transport costs by using a container-on-barge service via the Columbia-Snake River's Port of Pasco. **Robert L. Wallack** reports.

THE PORT OF PASCO, WASHINGTON, on the confluence of the Columbia- Snake river system, provides container- on-barge service for Pacific Northwest agriculture shippers. Alfalfa hay and onions are grown, packed and shipped down the river highway to deep water Port of Portland for transloading to ocean vessels exporting to Asia markets.

The container barge transportation system began in 1975, shortly after the Port of Portland opened its Terminal 6 container facility. There are eight hydroelectric dams with navigational locks -four on the lower Snake and four on the Columbia. Moreover, three competing tug and barge lines move up to 50,000 containers on barges annually, contributing to the $14 billion in commerce through the lower Columbia River.

Besides the Port of Pasco, three other barge ports comprise the navigable portion of the Columbia-Snake: easternmost lewiston, Idaho; Umatilla, Oregon; and Boardman, Oregon's Port of Morrow that handles dry and refriger- ated containers. The 14ft deep riverway courses 355 miles from lewiston to the 40ft channel at the Port of Portland's Terminal 6 before a final 1 05 miles empties into the Pacific Ocean.

last year, barged agriculture container export volumes through Terminal 6 were lower than the total of 51,556 accounted for in 2000. In 2002, Port of Portland's container-on-barge volumes were 40,630. Port of Pasco moved 8,344 in 2002 down 8 percent from 9,106 in 2001, whereas lewiston barged 14, 437 and Boardman 9,690 in 2002.

"The market for hay was down and there was a West Coast port lockout," John Akre maritime official for the Port of Portland tells Container Management. Now, we are in a good position with a new Port of Pasco terminal operator, improved economies in Asia, especially Japan, and a more favorable US dollar for exporting. For the fourth quarter and next year, things are looking up."

"The most measurable benefits shippers find at the Port are from the container barging system."

SHIPPERS BENEFIT

The Port of Pasco borders the fertile farmland of the Columbia River basin with direct links to barge, mainline rail, interstate highway and nearby freight to worldwide markets. The Port's 600 acre Industrial Center together with its 250 acre food Processing Center accommodates warehousing, agriculture packing, and light industry needs from the 500,000 acre Columbia Basin Irrigation Project.

The most measurable benefits shippers find at the Port are from the container barging system. Port of Portland reports shipper savings of 10- 50 percent over competing inland modes, which can amount to $200 saved per container and use consider- ably less fuel (thus producing fewer polluting emissions). In fact, one ton of cargo can be transported on one gallon of fuel 514 miles by barge, 202 miles by rail, and 59 miles by truck.

The success of agriculture container movements depends on the co- ordination of regular weekly schedules between the barge company and the vessels leaving Portland. In May, the Port of Pasco began a 1 O-year agreement with Northwest Container Services, Inc. (NWCS) of Portland to operate the Container Barge Terminal as well as a short rail service.

"We receive the steamship booking information from the hay or onion shipper and contact Tidewater Barge Line to order empty containers from Terminal 6 some two to six weeks ahead of time," says Bryson Pomeroy, Terminal Manager, NWCS. "Empties are stacked in the yard according to steamship line and size. We have two top-pick lift machines for loading containers on pre- mounted truck chassis ready for the customers' truckers. We also have a crane for loading on the barge itself, and we are getting ready to use EDI (electronic data interchange) with the Port of Portland."

Last year, the Port of Pasco handled over 8000 containers loaded with agricultural produce.

HAY, ALFALFA AND ONIONS

Zen-Noh Hay, Inc. of Pasco processes alfalfa cubes and double compressed alfalfa bales from nearby farmers in a facility adjacent to the Port for exporting to japan, Korea and Taiwan.

"We compress the raw material into forms to get the maximum weight into the container and ship through the Port of Pasco on barge to meet with Hyundai, Hanjin and APL vessels in the Port of Portland," says Tim Osborn,

General Manager, Zen-Noh Hay.

In 2002, hay was the largest commodity barged from all river ports through Portland with 32 percent of the 40,630 total containers followed by paper (20 percent) and frozen potatoes (13 percent). Through August 2003, with the onset of the Lewis and Clark bicentennial, Pasco's 220 river miles and 31 hour container barge to Terminal 6, amounted to 2735 40ft containers for a total tonnage of 79,000 tonnes, of which hay accounted for 80 percent, whey 11 percent, and onions 2 percent, according to Port of Pasco records. Hay is important to Asia buyers as an ingredient for cattle feed.

Easterday Farms Produce Company of Pasco is a 5th generation family business that grows, packs, ships and exports Spanish yellow, red, and white onions in Pasco for Asia markets. Located 30 minutes from the Port, onions are harvested, and moved to storage to dry and cure. Once USDA (United States Department of Agriculture) has inspected and packaged by size, Easterday trucks pick up empty containers from the Port of Pasco for stuffing 1008 bags of onions by pallets into 40ft containers ready for barging.

Easterday moves 5 to 10 containers per week by barge, or 25 percent of its total exports. These are then loaded on Maersk and NYK vessels for ports in Kobe, japan and Taipei, Taiwan. Seventy-five percent are shipped by local truckers 220 miles north to Puget Sound ports in Seattle and Tacoma, Washington where ocean going vessels call.

Hay, alfalfa cubes, double compressed alfalfa bales and onions are all shipped in containers.

"Barging is easier for us because we are not tied to schedules of other truckers," says Mason Garrison, spokesman for Easterday Farms. "We have control over when and where containers are loaded. Barging is a quick process. Shipments go from our location straight to the barge and are unloaded faster at the Port of Portland than trucks that wait in lines and are late." &:I

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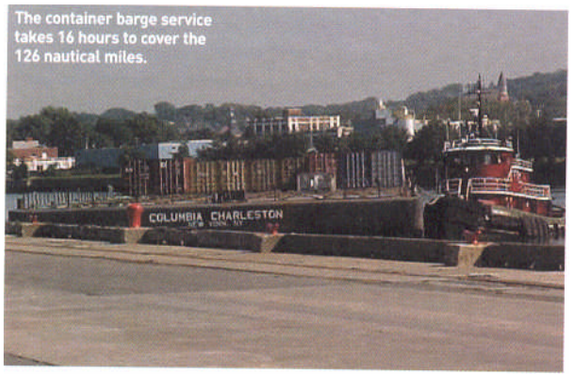
Barge success

A new barge service operating on the Hudson River is aimed at easing container traffic congestion, while also offering substantial cost savings. **Robert L. Wallack** reports.

THE PORT AUTHORITY OF NEW YORK and New Jersey (PA) is one of the top three load centers in the United States and handles over 3 million containers per year. By 2010, growth in container traffic through the PA terminals is estimated to double, and triple by 2020 based on globalization of production. Most of the containers are trans/oaded to trucks which clog interstate highways.

The new Albany ExpressBarge service is swiftly gaining acceptance by cargo owners and ocean carriers. Since April, imported goods by containers are loaded onto barges at terminals of the Port of New York and New Jersey and towed up the Hudson River to the Port of Albany. The system attempts to reduce truck congestion and air pollution, lower fuel costs, as well as create new low cost distribution opportunities for regional businesses.

Columbia Coastal Transport operates the twice weekly Albany Expressbarge service.



The container barge service takes 16 hours to cover the 126 nautical miles.

PORT NETWORK

The Port of Albany inland barge service is one point of the Port Authority's Port Inland Distribution Network (PION). The other points, in the planning stages, include barge feeder ports along the East Coast at Bridgeport, Connecticut; Providen~Rhode Island; and in the Delaware \(alley. In addition, rail feeder services are in the works to points west in Pennsylvania and in upstate New York. The PA plans to divert one third of containers onto barge and rail services away from trucks. The inland terminals of the PION are near distribution areas in a 13 state region where eighty-two percent of the container market is found within a 50 mile radius of these points.

The PION feeder ports are required to secure funding for at least two years of operation along with a long term plan that shows financial self-sufficiency. The PA will chip in $1.2 million in funding support for each feeder port based on an activity based formula, but other public and private sources are needed for start up costs, said Steve Coleman, spokesman for the Port Authority.

The Port of Albany is revitalizing its transportation hub heritage which first brought Englishman Captain Henry Hudson up the river in 1609 on his ill- fated search for the North-West passage to the Orient. At one time, the Port benefited greatly, from the Hudson River which feeds into an extensive canal system and was once a booming shipping center. Now, the 16 hour and 126 nautical mile container barge tow from PA terminals is improving workflows for importers, terminal operators, and ocean carriers.

Columbia Coastal Transport is the barge carrier selected by the Albany Port District to operate the twice weekly Albany Expressbarge service linking Port of New York! New Jersey with Albany, New York. "The service is starting to take hold now and we are crawling not walking, yet," Tom Delaney, Senior Vice President, Columbia Coastal Transport told Container Management.

10% SAVINGS

Currently, the new Inland Express barge service is averaging twelve 20ft and 40ft containers per voyage just once a week. Columbia Coastal anticipates 50 containers per voyage in a month, 100 containers in six months, and 200 loads per week within a year which will include empties and loads for imports and exports with the capacity to handle 200,000 containers barged throughout the northeast from the Port Authority.

The base cost of barging a container up the Hudson River to Albany is $350 and empties cost $425. The PA and Columbia Coastal are aggressively marketing the new service to steamship lines so that a pool of empties can be established in Albany to serve shippers for outbound loads. Already, the PA estimates savings range from $25 to $50 per box shared by shippers and carriers which depends on the cargo's weight, final destination from Albany, and equipment availability. Carriers and cargo owners benefit from the efficiency of freight moved by barge and from the distribution advantage it offers.

Columbia Coastal arranging direct truck pickup and delivery from and to the customer's door via Albany. "We just cut one check for the barge and truck door service for Columbia," said Bill Jenkins, owner, Albany Tile who imports from Spain and Italy.

Northern Safety is a national distributor of 20,000 brand name safety and industrial supply products 100 miles from Albany. The company imports containers of gloves and safety glasses from China as well as footwear from Italy by OOCL and COSCO carriers. "The service is excellent and extremely smooth. The trucks go to Albany for us instead of New York City to get the containers. Everything falls into place in Albany with the trucks in and out in no time back to our distribution warehouse in Utica," said Beverly Seif, Import Director, Northern Safety.

> "Everything falls into place in Albany with the trucks in and out in no time back to our distribution warehouse in Utica."

For exports, Columbia Coastal is moving some logs and lumber for a customer at the Port of Albany. The Port leases a facility to a private contractor with a fumigation process. "The customer from Vermont and New Hampshire picks up containers, stuffs them with logs and lumber and trucks them back to the Port for processing, barging down to New York/New Jersey, then loads onto COSCO or Hyundai for the Far East," said Delaney. 1m

Monitoring intermodal shipments

A container and truck monitoring program is being trialled in the US Pacific Northwest, with the aim of setting uniform standards and procedures of growing international trade. **Robert L.Wallack** reports.

THE NORTHWEST INTERNATIONAL TRADE

Corridor & Border Crossing Program is a public-private partnership to integrate freight management systems and technologies for containers moving across the United States- Canada border.

TransCore, the San Diego, California based systems integrator, is evaluating the feasibility of using electronic container seals to monitor the movement and processing of in-bond intermodal shipments for shippers, carriers, the US Department of Transportation and customs so that low risk cargo will flow securely and more smoothly. The results of the operational tests will prove useful in setting uniform standards and procedures of growing international trade.

Canada is the United States' largest trading partner where truck congestion at the border and potential for terrorist threats are increasing. In 2002, the total trade amounted to $353 billion which was tipped in Canada's favor by $68 billion. Already this year through March, imports from Canada increased 10 percent to $55.6 billion and exports were up 7 percent to $36.4 billion over the same period last year, according to U.S. Department of Commerce statistics.

Washington States's Blain~uglas commercial vehicle Port of Entry is an ideal site for TransCore to monitor and evaluate trucks, drivers and containers for both export and import of bonded trade shipments. The Blaine border crossing is the fourth busiest truck crossing on the US-Canada ~rder which amounted to a doubling of tru'tk traffic in 2001 of more than 900,000 trucks from 1991. Over 100 miles south of the crossing, Puget Sound's Port of Seattle and Port of Tacoma are implementing a FAST Corridor program (Freight Action Strategy for the Everett- Seattle-Tacoma Corridor) of $400 million by building rail and road grade separations in antici- pation of even greater intermodal traffic from mega-container ocean carriers.

Port of Tacoma (pictured) together with the Port of Seattle are implementing a FAST Corridor program (Freight Action Strategy for the Everett-Seattle-Tacoma Corridor) of $400 million by building rail and road grade separations in anticipation of even greater intermodal traffic from mega-container ocean carriers.

TAG TECHNOLOGY

The first and second phases of the Northwest Corridor Program detects and identifies the truck, driver, and cargo by applying Radio Frequency Identification (RFID) transponders, or tags on the truck cab windshield. Automatic vehicle identification (AVI) tag readers are at the exit gates of American President Lines terminal at the Port of Seattle and of the Maersk Sealand terminal at the Port of Tacoma. Each tag has a unique identification number with reference to the shipment, carrier and vehicle that are detected by the readers at the port gates, en route at weigh stations, and at the US Customs border crossing in Blaine.

The Trade Corridors' Information Management System compiles the trade transaction information and the data is transmitted onto the project's website for use by the authorized public and private users in the program. TransCore ties together the data from AVI readers, the shipping line's information system, and the US Customs' Automated Manifest System (AMS) by an Internet based management system called the Trade Corridor Operation System (TCOS). TransCore's technology deployment of the Program's Northbound and Southbound In- bond System began in 1997 with federal and state funding to improve the trade transaction processing at the border utilizing Intelligent Transportation Systems (ITS) operational procedures and technologies.

"We know when in-bond shipments leave the shipyard and when they leave the country. We automatically, close-out in-bond shipments (TCOS interfaces with AMS), and know when the shipment is received and payment for the goods are made so that bond money can be released to those that have money tied up in the bonding process," Bill Steiner, Technical Director, Transportation Systems, TransCore told Container Management.

Now, the Program is into the third phase and will be completed in June 2004 with TransCore working with shippers and customs to evaluate the accuracy and performance of electronic container seals used in a secure freight management system.

The RFID transponder is applied as an electronic seal that secures the container doors. An electronic reader can detect if the seal was broken and read stored information in the seal such as the container ID. Operational tests of disposable, e-seals show they are less costly than container tags and global standards are achievable within a year or so.

TOTAL SYSTEMS ENVIRONMENT

However, Steiner admonishes, "The seal does not provide for security by itself. It is easy to by-pass. So, seals are used in a total systems environment to detect and identify the transaction. Monitoring the movement of the transaction between trade gateways and measuring the travel time provide security."

The post-9/11 shipping and transportation environment reorganized US Government and business priorities with urgent need to secure the international supply chain.

The twenty-four hour rule of advance filing notice of cargo data prior to arrival of ocean carriers is carrying into truck and rail modes. Substantial benefits are expected for truck firms who participate in automated pre-processing and targeting of cargo programs such as the Free and Secure Trade (FASn program.

FAST is in the early stages and requires electronic cargo data filing to Customs 30 minutes prior to arrival of a truck to the border. FAST certified truck firms and drivers will receive higher priority in customs release and priority gate lanes. US Customs is completing a module onto its Automated Commercial Environment (ACE) computerized reporting system for automated truck manifests for 2004. TCOS is able to interface with FAST and ACE among other automated document processing systems. "What we are trying to do is make all of those initiatives compatible with each other instead of stovepipes," said Steiner. 1m

Dole: increasing productivity

Dole Food Company is using new technology to improve productivity at its Latin American container terminals. **Robert L. Wallack** reports.

BANANAS AND PINEAPPLES FOUND IN local grocery stores from the fruit plants of Latin America would not keep their freshness without the tight links of communication throughout the transportation chain. Dole Food Company, the world's largest producer of fresh fruit, vegetables and cut flowers, owns and operates 11 marine terminals in North, Central, and South America and owns 27 vessels. In July, 2002, Dole selected Tideworks Technology of Seattle, Washington, a division of SSA Marine, (formerly, Stevedoring Services of America), to deploy terminal management and container handling software at all of its terminals.

Tideworks' Mainsail Terminal Operating System is one of several computer application tools for terminal operators to ensure a continuous communication of information with vessels, truckers, and intermediaries. Mainsail uses the Internet browser for inventory management of container movements at the terminal gate, in the yard, and on vessels or rail cars. For example, real-time information is available for truckers to schedule pick- ups and deliveries in advance to eliminate waiting. Dole produce is synonomous with quality and any delays are costly, in hourly charges by truckers, potential spoilage of fruit, and most importantly, damage to the Dole brand image.

"This new technology enables centralized and standardized processes which eliminate redundancy and manual processes, therefore increases efficiency and in turn driving down cost and, in some cases, reducing excess labor," Dennis F. Kelly, Vice President, Dole Food Company told *Container Management.*

Spinnaker Planning System is the graphical tool for scheduling vessel berthing, planning container stowage on vessels, as well as automatically, assigning terminal yard positions for container movements. The benefits are better management of container order volumes for quicker vessel turn times. "Spinnaker Vessel Planning is used by customers throughout the Americas at facilities as few as twenty thousand containers per year to well over one million containers per year. The system has proven extremely successful in Dole's Santa Marta, Colombia marine terminal where users began with little or no computer skills to Manzanillo International Terminal in Panama (MIT). Spinnaker's graphical 'drag and drop' functionality enables users to plan multiple ships at once, view all information 'real-time' and plan events and work sequences will in advance," said Steve Kingma, Vice President Tideworks Technology.

"This new technology enables centralized and standardized processes which eliminate redundancy and manual processes."

The Tideworks terminal management software Is integrated with various technologies to keep the data flowing, continuously. Electronic data interchange (EDI), the standard messaging system, is used to communicate between the shipping lines and terminal operators for stow plans. Furthermore, Tideworks partners with various companies such as Psion Teklogix whose hand held radio and

SSA Marine's operation at MIT, Panama.

mobile computing solutions connect workers and equipment to the terminal operating systems. Other linking technologies for timely communication of data are Science Application International Corporation's Optical Character Recognition (OCR) at gate and quay, and Savcor's global positioning system (GPS) to detect container positions, accurately.

The teamwork between Dole and Tideworks is possible because of their similar backgrounds. Tideworks is part of privately held SSA Marine that operates terminals in more than 150 locations around the world and began over 100 years ago. Dole, a $4.5 billion multinational founded in 1851 in Hawaii, is in total control of its own production, transportation and logistics operations. The company manages six supply ports in Latin America: Ecuador, Colombia, Costa Rica, two in Honduras,and Guatemala.

The Port of San Diego, California is one of five North American receiving ports. Dole Refrigerated Container Facility at the Tenth Avenue Marine Terminal in San Diego opened in October, 2002 under a ten year renewable lease. The facility has the capacity to handle 40,000 containers per year off of Dole vessels from Central and South America once per week. The Port of San Diego was also the site of lideworks' first software implementation for Dole. "For the year 2003, Dole will be handling approximately, 200,000 container moves between Central America and North America. Better than 95 percent of these are reefer containers and an approximate 65 percent cargo utilization," said Kelly. The other receiving ports are in Delaware, Texas, Mississippi, and Florida.

Recently, SSA Marine, Mexico became the sole owner and operator of the ports of Manzanillo, Cozumel, Veracruz, and Progreso through a $120 million acquisition from Transportacion Maritima Mexicana (TMM). Tideworks announced in April, 2003 that the Port of Manzanillo would deploy Mainsail and Spinnaker to improve handling of their 250,000 annual container moves.

In Panama, SSA Marine began building Manzanillo International Terminal (Min in 1993 and "built it from a greenfield site to what it is today," said Andy McLauchlan, Senior Vice President, SSA Marine. The company invested $300 million into the facility which handled 1,450,000 TEU in 2002, the most by any Latin American port, according to the Inter-American Committee on Ports. Tideworks' Mainsail and Spinnaker are in operation at MIT Panama improving productivity and communication for terminal customers. B:I

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