

## Ready, steady, stop!

In the load and discharge operation of a vessel it is most efficient to have an empty chassis waiting to receive a container or a container ready to be lifted on the vessel. To achieve this, systems are used to place the container or vehicle directly in line with the spreader removing the need for crane gantry motion or vehicle shuffling as the crane waits. A terminal that can save 10 seconds per move on shipload or discharge could move from 30 moves per hour to nearly 33 moves per hour and could save over 8% in equipment running time and consequent fuel, labour, and maintenance savings. International Terminal Solutions (ITS), UK, has launched the LoadVIEW system which can help to achieve this. From the early days of installing basic Trailer Positioning Systems, ITS have developed and implemented 4 generations of systems from the ATPS for multi-trailer operation, to STRAPS for straddle and truck operation, and STRAPS II with an on-board vehicle display. Now ITS have developed what they believe to be the most cost effective flexible solution in straddle carrier and truck alignment systems. The new system allows the driver of a truck, trailer train or straddle carrier to view the vehicle in relation to the stopping position. In basic terms, it is a computer-augmented bird's eye view. Unlike most systems, with LoadVIEW the driver gets a real time view of the container or vehicle in relation to the stopping position. Most existing systems use a light or series of lights to show the driver the stopping point making it difficult to judge the exact position. The system allows the driver to adjust his speed to suit, as he is able to see the exact distance to the stopping point. The system is rapid to implement and cost effective as it does not require an external operator, and can be configured to load and unload any combination of containers. The LoadVIEW system works by positioning cameras on the crane pointed at the loading area both under the crane and in the back-reach. Target markers are overlaid on the image and



the composite image transmitted to the driver who has a wireless display and selector enabling him to display the images from the appropriate crane. With the

new system it is possible to achieve an exceptional level of accuracy. ■



is in attendance, and immediately when the equipment is available for operations. The benefits to the terminal are two-fold, it allows the ERP system to automatically manage and allocate resource and material to unplanned breakdowns, and just as importantly, it automatically keeps the operations department updated as to the equipment resources available. Another issue that ITS has responded to is terminal security. "In the old days we used to implement a system with twist-locks which inhibits to stop all unauthorised moves. This was to prevent high value cargo from being taken from its safe 5-high position and being grounded during the night. Now the security requirement is for all together different reasons," Lambert told *WPD*. ITS have implemented a security control system on each piece of container handling equipment in the yard. To start the equipment, the operator has to insert a valid access card, this card is checked over the RDS system with the ITS security server. If authorised, the operator will be issued with



operating systems and back office processing has developed and become more automated the thirst for automated data direct from the operation has mushroomed. Whilst we still provide the base systems, we have developed and integrated a host of additional modules that help to provide real-time operational data minimising human processing," Lambert added. ITS also sighted another development where a module is being added to provide real time data for a terminal's ERP system. If there is an unplanned equipment outage the system on the equipment will allow the operator to specify the basic fault using his screen. The system then automatically contacts the ERP system with the details of the repair required and the time the equipment was out of service. This allows the ERP system to define the requirements and assign an engineer to the job. Whilst attending the job using a specifically designed Hand Held Unit the engineer signs on and off the system following the repair. The system is connected to an ITS operations monitor located in the terminal's operations department. At an instant the operations department can see the status of all the equipment, the nature of the problem, if the engineer

work instructions. If the user is not authorised the system will alarm and prevent the operator moving the equipment or accessing information over the RDS system. The card readers are also installed on the quay crane RDS system for authorisation to access load and discharge information. The additional benefit of the system is the ability to monitor the movement of containers, positively identify in real time the operator moving the containers, the location to which they have been moved and prevent unauthorised access to data, or use of equipment. With the system installed it is not possible to move a container or gain access to sensitive container data in the yard without authorisation. The terminal management knows automatically in real-time who is moving what and where. The system allows real time control, monitoring, and logging of access, equipment operation, productivity, time keeping and damage control.

## International Terminal Solutions

International Terminal Solutions (ITS) offer similar configurations of their software with the aim to streamline and automate the data transfer and provide optimisation in the terminal operation. "ITS implemented 15 years ago basic systems like Radio Data (RDS), Position Determination (PDS), Automated Gantry Steering (AGSS) and Semi automated yard crane controls," says Lambert. "As the terminals