Shoreham Port's New "Track-a-Pack" System

Shoreham port now uses the Datalogic Viper™ RF terminals for its unique stock control system.

Shoreham is the premier Sussex port in the United Kingdom and its main activities are divided between cargo handling, fishing, leisure, and a thriving property portfolio. The site is a sprawling collection of open storage areas and sheds containing various cargoes received by ship for distribution by road or rail and goods received by road ready for export. Main cargoes handled include: aggregates, sawn timber, steel, locally grown cereals, scrap metal and general cargo. Fast, efficient cargo handling and reliable distribution are the key elements to Shoreham's well-deserved reputation for satisfying customer needs.

Viper™
Pistol Grip Terminal

As part of its strategy to stay at the forefront of cargo handling, having launched their unique "Track-a-Pack" system, Sussex Port Forwarding (the port's wholly-owned stevedoring company) now has a stock control system which utilises bar code and radio frequency technology to monitor stock records to the internet. This technology allows receivers to view up-to-date information and facilitates total inventory visibility for "Just-in-time" deliveries, consolidating SPF's position as a premier timber handling port.

The port's Finance Director Tim Waggott explained that "… the basic requirement of the system was to provide complete traceability of all goods bought into and despatched from Shoreham Harbour. Historically this had been done using a paper system, whereby the items unloaded would be stacked in a certain area and then independently counted to check that the unloaded quantity matched the ship's manifest. There are obvious problems with this method, mainly that of matching pack specifications against actual packs discharged (i.e. length, width, depth, pieces per pack etc), which had to be performed after the boat was fully unloaded. This also caused identification problems when a customer called for specific packs/sizes to be loaded on the lorries for despatch which had either not

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Timber being scanned in to storage location

been landed or had already been delivered. Other difficulties arose with storage demands, some packs need to be stored under cover in the sheds, if they are not then the timber can be ruined. Therefore, the new system needed to provide accurate data capture in real time for both the unloading of ships and the loading of lorries."

SPF were looking for the system to improve pack handling and pack identification coupled with improvements in stock control and to act as an incentive to new customers to sample their services. SPF would be able to provide complete traceability of customers' stock at any time, even allowing the customer to check their stock levels via the internet. Some of the biggest savings would come from time saved by ensuring that all deliveries were correct at the time of leaving the harbour. Another saving would be in the general running of the business, such as loading of lorries and finding timber when required, combined with better stock turnaround for the customer.

An additional requirement was the need to connect various PC's to the central system, utilising the RF infrastructure. This would give the benefit of saving a large amount of money on ISDN/hardwired installations. SPF engaged local Datalogic Accredited Reseller, Barcoding Solutions Limited to system Integrate the solution.

The biggest challenge was the sheer size of the areas that needed to be covered by RF. The total length of coverage was in excess of 1 mile and roughly 250 metres wide, which was further complicated by the fact that there were four different locations separated by other businesses which meant that each site had to be treated as an individual and then the information sent back to the main office. The complex 802.11b RF network was installed by Datalogic Quality Partner, Blackroc Technology Ltd, who also supplied all the hardware for the project. Due to the difficulty of providing adequate RF coverage within areas of stacked timber, a reduction in the use of bandwidth was required, and this was achieved by using a middleware solution from George James Business Systems to optimise the RF network by using it for text only as opposed to full emulation. Hence, full coverage over the entire port is possible utilising fewer RF antennas.

The system consists of an extensive Cisco Aironet® WLAN RF infrastructure coupled with 15 Datalogic Viper™ handheld terminals, validating and uploading data into the main computer system. This is coupled with internet access for the various customers to allow online validation of current stock holdings, sizes and location etc. The application solution involves total management and control of all stock items, giving full history on the items as soon as a shipping docket is received to inform SPF of a delivery due in the future. Therefore, all products stored at the site (typically large consignments of timber) are bar coded and their location around the site is tracked using this barcode. The operators drive large lift trucks to unload/move/store and reload for distributing the product while on site. The working environment is a mixture of indoor and outdoor and is very exposed to the elements being situated right on the coast. This requirement means that the barcode scanner has to be weather resistant, as the boats are unloaded regardless of weather, (the only exception is winds over 40mph). The Datalogic Viper™ was chosen as it is ideal for this environment due to the IP65 rating and good drop test resistance as well as the good ergonomics, scanning performance, etc.

Tangible internal benefits are already being gained from the system with improved identification of stock on discharge and faster turnaround on lorry movements. In addition labour time for all the various processes throughout the operation has been reduced. SPF's General Manager Alan Motterham was delighted with the new system "… it has reduced loading time for lorries as well as time spent identifying packs that have lost their original wrappings and pack details," he said.

This value added solution for it's customers is an example of Shoreham's continuing focus on finding new ways of improving the traditional port service offering.

Viper™

Viper™ *is the Datalogic pistol grip portable RF terminal in the mobile@work™ rugged product line, available as a DOS or CE version with colour display. It is a powerful and robust portable pistol grip radio terminal which is light-weight, equipped with internal antenna, well-balanced and shaped to fit the hand providing the best user comfort in its product class. Communication management to the legacy system takes advantage of the new software product line that includes terminal emulation connectivity for OS/400, Unix, and Microsoft Windows platforms, including the most used ERPs, such as SAP R/3.*

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