

Case study

YCH Group



At a glance

Industry: Logistics

Market: Integrated Logistics – Supply Chain Management

Applications: RFID, Warehouse Management, Inventory Tracking

Products: Intermec CV30 Rugged Fixed Mount Computer

Partner: Y3 Technologies Pte Ltd

The logistics and supply chain market has become increasingly competitive in Asia Pacific over the past decade, with multi-nationals, local and specialized industry players all vying for market share. Companies, particularly during the economic downturn of 2008 – 2009, demanded higher levels of reliability and accuracy, whilst also focusing on cost, transit and stock Turn-Around Time (TAT) reductions. YCH Group, founded in Singapore over fifty years ago, seeks to address and exceed the expectations of customers by providing innovative solutions and an integrated approach to technology adoption. YCH's strategic use of technology enables intelligent end-to-end management of supply chains and helps drive competitive advantage for customers. This approach also allows YCH to add value in specialized markets such as high-technology, chemical, pharmaceuticals and Fast Moving Consumer Goods as well as cold chain and manage supply chain routes in multiple geographies. Over the past decade YCH significantly grew its operating footprint in Asia and now has facilities in Singapore, Malaysia, Thailand, Indonesia, China, Taiwan, Hong Kong, Philippines, Australia, India, Vietnam and Korea.

Stepping Up to the Next Level

In 2008 YCH management made the decision to upgrade their Penang, Malaysia facility to become their largest scale implementation of Radio Frequency Identification-enabled Supply Chain Management Nerve Center in their network. The facility, which provides supply chain solutions for a large global technology company, was selected to debut the next generation management platform for a number of reasons. Firstly, the customer requested a significant improvement in stock Turn-Around Times (TATs), which would require a thorough re-examination of existing systems. In addition, the complexity

of the 220,000 square foot facility would provide an ideal business case for the technology implementation. In the space of roughly two football fields around 3,000 Stock-Keeping Units are managed for the customer, from over 300 suppliers, in over 30,000 storage locations. It would have been impossible to speed up turnaround times in this complex operating environment without fundamentally overhauling the warehouse management flow.

Smoothing the Workflow

The plan for the RFID-enabled Supply Chain Management Nerve Center involved drastically reducing human data entry error and the need for time-consuming corrections. Technology implementation would be a tool for optimizing the workforce with a minimum of retraining; but was not designed to totally replace full-time staff. One of the key areas where technology would benefit staff would be the elimination of manual data input. Previously Reach Truck operatives would manually deal with paper stock records whilst simultaneously operating the vehicles. To improve the process, YCH IT staff devised a system where each pallet arriving at the facility would be RFID tagged at the Inbound Staging Area. Operators would then put away each pallet in the recommended racking for that particular SKU. RFID reader on the Reach Truck would sense if the pallet is in the correct location. If an operative attempts to store a pallet in an incorrect racking location the RFID system automatically issues a warning and the correct destination location.

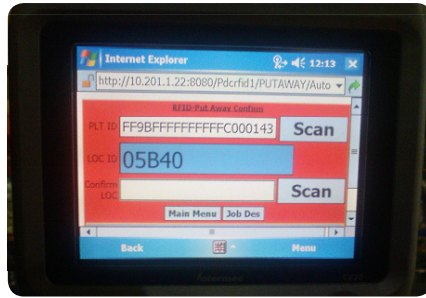
When orders are received by the warehouse a similar system works in reverse. Pallets removed from the racking locations automatically communicate via the RFID tags to confirm the correct stock is collected, and eliminate errors during retrieval and order picking. Orders

are sorted into different Outbound Staging Areas and again the pallet RFID will communicate with the customized loading gantry tag to ensure accuracy. At each stage of the operation operators are alerted if pallets are in the correct location, or if a mistake has been made.

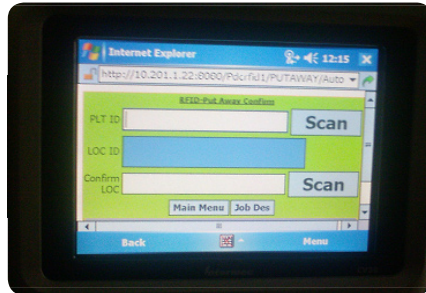
Seeking Solutions

Several options were investigated when deciding how best to interact with operatives. For the new system to work it was crucial to adopt a clear, simple and intuitive way of alerting operatives to correct pallet location and warn of any mistakes. SMS messages were found to be too distracting for staff, small-screen devices were not clearly readable and devices emitting sounds were found not to be sufficiently audible in the warehouse environment. During the selection process for a suitable display unit, the Intermec CV30 Fixed Mount Computer was found to meet the needs of the operatives and management alike. The compact, rugged design was perfectly suited for fixing to the Reach Trucks in the warehouse, yet the full screen would be clearly visible to operatives using the trucks and does not block line of sight during operations. A further benefit of the CV30 was the touch-screen, which eliminates the need for bulky keypads and operatives having to key-in data. The flexible platform, which supports either Microsoft CE.NET 5.0 or Windows Mobile 5.0 operating systems, allowed a simple colour-coded alert to be shown on each pallet stowage or pickup.

The 75 operatives working at the warehouse helped to assess the CV30 and provided feedback during the selection process. Operatives were positive about the flexibility of the CV30, which when mounted in Reach Truck cabs, allowed safe and efficient ease-of-use whilst moving. Crucially, the paperless and wireless system allowed operatives to work more accurately and productively. Training and rollout



Red Indicator Screen for Wrong Location Putaway



Green Indicator Screen for Correct Location Putaway

of the devices took a minimal use of time, with full support from Intermec's partners, Y3 Technologies on the ground in Malaysia. The durable units also coped well with the continual use, dust and temperature range in the warehouse.

In addition, the CV30s help to provide accurate, real-time inventory information by communicating wirelessly. Shift leaders can manage the supply chain real-time as the RFID system automatically communicates the movement of pallets in and out of the warehouse facility. In the longer term the information communicated will be incorporated into a database to further streamline processes through a real-time Business Intelligence dashboard.

Striving to Continuously Add Value

Immediate results were noticeable in that operatives no longer had to manually update paper records, and managers could instantly receive a snapshot

of real-time inventory management data. Over the longer term manpower utilization improved as operatives could be redeployed from data-entry to assist with other inbound or outbound activities. There is also a decreased need to bring in temporary staff to help cover peak periods of the year. The RFID-based system of alerts and automated cycle count quickly led to the elimination of misplaced pallets. The result is that labor-intensive checking and disruption to warehousing activities are down 40 percent. Most importantly, the primary business objective of improving stock Turn-Around Time (TAT) was exceeded. Calculations show that a marked improvement of 20 percent has been achieved.

The RFID solution and Intermec CV30 units implemented drastically increased productivity through more efficient sorting and loading processes. There has been a clear reduction in unnecessary duplication and automation allows for less use of resources. YCH has also reported improved Reach Truck operative safety due to the use of the full-screen, conveniently mounted CV30 units. In addition, the removal of paper from the system is kinder to the environment as part of YCH's initiatives for Green Logistics and requires less storage space for records.

Moving forward, YCH is further committed to provide value-add to its world-class customers by enhancing IT optimization throughout the supply chain. Increased adoption of RFID, wireless, mobile solutions and web services assist in achieving these goals through real-time information flows, system control and connected eBusiness. As such, YCH is already planning to implement the learning and technology from the Penang facility in other Asian locations - and values having a globally trusted partner in Intermec on this journey.

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