

PINC Solutions adds accuracy and efficiency to yard management

Speedy implementation, low cost components yield real time visibility and swift returns

When a company considers using new technologies to resolve productivity issues, the bottom line is the great equalizer. PINC Solutions, a leading Real Time Location System (RTLS) provider believes low system cost is an essential component of technological innovation.

This Berkeley, Calif.-based company has championed the use of passive RFID to keep cost of entry low for their yard management solution. This minimizes the period of time required to achieve a positive return on investment. With real time location systems being applied to improve logistics management, sometimes in challenging environments, the overall costs not only include installation, but maintenance as well.

The prevailing method of managing yard operations still depends on manual processes. Technological upgrades involve keypunching data into yard management



Yard operations can be far-flung and complicated, and manual audits slow information flow and limit accuracy, but RFID systems enable automated, reliable, real-time information. Inset: The use of passive RFID tags reduces maintenance costs and simplifies installation.

systems (YMS) to optimize routing and task assignments. While useful, this still relies on manual effort. Barcode systems require line of sight, and in a yard covering acres or more, that still means shoe leather transmission, instead of wireless.

Yard operations can be far-flung and complicated, and manual audits slow information flow and limit accuracy. For larger facilities, software alone does not address the fundamental issue of accurate and timely information gathering, which is essential

for making optimized decisions. Recognizing this problem, PINC Solutions developed Yard Hound, an RTLS-enabled yard management solution that leverages standard, off-the-shelf elements such as passive RFID, GPS, Wi-Fi and other sensor technologies. Yard Hound's web-based interface provides real-time, clearly rendered visibility into locations, moves and status of yard contents.

"A majority of yards are being managed with labor-intensive procedures, relying on security guards to record arrivals and departures using pens and paper or, at best, spreadsheets," said Michelle Kiang, Vice President of Marketing at PINC Solutions. Even if a software solution is in place to supplement the manual processes, the output of the YMS is only as useful as the input data is accurate. "In other words, real-time visibility is the starting point to an efficient yard," she said.

Once in the yard, trailers are often out of visibility until someone walks through the yard to conduct a yard audit to find out what is there. This is a time-consuming process not suitable for handling the dynamic environment of a yard with trailers coming, going and moving all the time. PINC's web-based system is the exact opposite—accessible by all concerned parties, so complete visibility can be shared by stakeholders regardless of physical location, including suppliers and customers. This reduces the administrative strains of phone calls and faxes and increases reliability of data.

Low cost of ownership promises swift ROI

PINC Solutions provides yard management solutions that can be operated as a stand-alone system or integrated into warehouse management or other enterprise resource planning systems. Integration is usually straightforward, utilizing standards-based protocols delivered over the web. Using web-based software built on service-oriented architecture, PINC cost-effectively customizes features and functionality according to the needs of the client.

Being web-based is one of the most important aspects of Yard Hound; and the system is typically hosted by PINC Solutions.

"Most of our customers choose to have us host the service and the server," Kiang noted. "This helps the customer bring the system up more quickly—they just need to have a secure internet connection for the deployment site."

Another key to the simplicity and low cost of the system is the employment of passive RFID technologies as the RTLS platform. The use of passive RFID tags reduces maintenance costs and simplifies installation. Active-device based RTLS require batteries in the tags and location detectors installed throughout the facility, creating substantial infrastructure and maintenance requirements.

Using GPS-enabled readers mounted on the tractors, PINC Solutions is able to achieve all the necessary functionalities while avoiding the use of active tags by leveraging existing yard processes. Fleet trailers can have permanently installed tags to expedite check-in and check-out, while "transient" trailers—those independently owned or otherwise unaffiliated with the facility—can be tagged temporarily upon arrival, with the tag removed for reuse upon departure.

Hard and soft savings speed ROI

Search time reduction, along with the increased number of moves per hour, is one of the key quantifiable metrics of hard savings. Where before, three to four moves per hour may have been considered typical, with PINC's system, eight to nine moves per hour is common, even 12-15 per hour is not unheard of. Meanwhile, data collected automatically by the system lead directly to a reduction in time and resources spent on yard checks by Yard Hound's users.

Improved tractor and driver utilization and the elimination of manual yard audits both contribute to measurable savings. Soft savings include fewer instances of critical load delays or losses (e.g., locating raw materials necessary to run a manufacturing line, or products that can spoil), as well as reduced demurrage and detention charges. Users find utilizing RFID can facilitate yard and business process redesigns or greater asset and facility usage optimization.

While PINC Solutions states that ROI is typically achieved within one year, in-



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dividual companies set their own metrics. PINC client Cost Plus World Market used a conservative standard in the definition of saving metrics and still achieved ROI in less than a year.

"We had a short learning curve and we have used the system to improve our processes," commented Joe Hall, Director of Domestic Logistics at Cost Plus World Market. "The data has enabled us to make fact-based, pro-active decisions about our yard operation, something that we couldn't do before installing the system."

Similarly, when Kimberly-Clark implemented Yard Hound, the company expected increased visibility to help it improve efficiency and streamline its yard operations. "The accuracy of the data and the amount of actionable information sometimes come as an eye-opener to clients," said Kiang. In addition to the instant benefits such as search time and detention cost reduction resulting from the use of PINC's system, Kimberly-Clark is investigating how to further leverage the visibility gained from the system to facilitate a process redesign.

Modular structure covers all contingencies

PINC Solutions has structured its Yard Hound product in modules, allowing facilities to scale their use of RFID according to their priorities. The PINC Gate system is used to monitor trailer traffic through the gate, and to keep track of what assets are in the yard and their status/history. The PINC Tracker and Monitor, installed on the yard tractors, allows drivers to communicate with the traffic managers in real-time through an easy to use graphical user interface. Contributing to the simplicity of implementation is the fact that any additional modules can be added easily and seamlessly over time as facility needs warrant.