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WALLENIUS WILHELMSSEN USES WIRELESS INTERNET SOLUTIONS TO INCREASE LOADING EFFICIENCIES AT SOUTHAMPTON PORT

In the harsh and demanding world of automotive and "high and heavy" machinery transportation, time really is money.

Wallenius Wilhelmsen is one of the world's largest ocean transport and logistics specialists, handling 1.7 million vehicles by sea and 1.5 million vehicles by land annually from major ports on every continent. It does so via a fleet of 60 gargantuan vessels best described as 12-storey car parks...that happen to float.

Despite the complex logistical and technical factors that underpin its ocean transportation operation, Wallenius Wilhelmsen's defining goal is simple:

Transport vehicles on and off the correct vessels and store them within the port as safely, efficiently and quickly as possible.

In pursuit of this goal, Wallenius Wilhelmsen has installed an Internet Protocol (IP) wireless solution from industry technology specialist LXE and the world's leader in IP networking, Cisco Systems. The wireless IP network has transformed the supply chain, increasing the speed of operations, and providing a true end-to-end solution from the dock to the desktop.

Wallenius Wilhelmsen expects to achieve ROI on this project in two to three years. Furthermore, the company is now well placed to implement further advanced technologies converging on its common IP infrastructure. In practice it means everything from corporate IP telephony to mobile soft phones running over LXE terminals and streaming video - all at a fraction of the traditional cost of a similar disparate network, simply by taking advantage of its new network infrastructure in order to gain a competitive advantage.

This is the story of how Wallenius Wilhelmsen achieved it.

THE NEED FOR IMPROVEMENT

Wallenius Wilhelmsen's operation at Southampton docks is quite a staggering sight for the first time observer.

Thousands of commercial and light industrial motor vehicles are driven, one by one, on and off gigantic vessels and parked in the sprawling dockside bay area, ready for collection by a host of customers ranging from Rolls Royce to Caterpillar.

It's a highly labour intensive process.

"The most important question for us from a cargo logistics standpoint is always: What's the status of the loading of a vessel? How much cargo is loaded, and how much do we have to go?" explains Wallenius Wilhelmsen's Senior Project Manager Phil Gartell.

"Traditionally, we've gotten the answer once the vessel has completed loading and we could compare manifests. For some time we've been investigating solutions that could improve the way we capture cargo loading information in real-time so that we can have absolute control of our own supply chain, which starts with the cargo's location status."

The "old" system for monitoring cargo movement and storage in the port simply involved vehicles being manually counted on and off vessels and then allocated to parking bays on site at Wallenius Wilhelmsen, using "dumb" terminals on the quayside running a batch system that was periodically uploaded.

"Using the batching system did not provide the local port, Global Operations or the customer with the real-time status of a vessel, which meant we were losing a major strategic advantage," explains Gartell. "Also, the data we did collect was often of questionable accuracy as it depended on when the last batch upload was completed."

Wallenius Wilhelmsen had successfully implemented RF technology at its Baltimore site in the USA, and as part of a wider corporate company transformation programme aimed at improving communication between worldwide offices, it is looking to implement the solution in other offices where it makes the most sense - with Southampton being the top priority.

AT A GLANCE

- Wallenius Wilhelmsen is one of the world's largest suppliers of roll-on/roll-off ocean transportation and logistics, carrying nearly 2 million vehicles by sea and 1.5 million by land annually, and provides logistics management for another 2.5 million vehicles annually
- The company wanted to improve visibility, accountability and productivity of the transport process by accessing information in real-time at its European hub in the Port of Southampton.
- These improvements will also be used as a competitive differentiator to help win new automotive and industrial manufacturing customers
- Wallenius Wilhelmsen chose an IP solution with LXE providing mobile, IP-enabled terminals on the quayside, linked to Cisco's Fixed and Wireless network. Together, they enable real-time connectivity to Wallenius Wilhelmsen's enterprise network
- Wallenius Wilhelmsen expects the solution to have paid for itself in two to three years and is set to implement similar technology at its operations in Belgium and Finland in the next year
- The company is also looking at harnessing the power of the new network to deliver value-added services like IP telephony and video at a fraction of the traditional cost.

MORE THAN JUST A SHIPPING COMPANY

Wallenius Wilhelmsen is a global leader in ocean transportation services and inland and supply chain solutions.

With revenues approaching \$2 billion and 3,000 employees in 80 offices around the world, the company offers a range of services that bring together process engineering expertise and IT, to deliver a superior service to its customers.

In fact, when it comes to technology, Wallenius Wilhelmsen is light years ahead of the competition.

CASE STUDY: WALLENIUS WILHELMSSEN

ENTER LXE AND CISCO

Cisco partner LXE was selected to help implement the wireless network in the port terminal area. The company specialises in producing internet-enabled, mobile terminals for use in harsh and challenging environments. With internet connectivity, a battery life of up to 10 hours and easy-to-use control pad, LXE's high-resolution colour terminals are tailor-made for the exposed areas of the Southampton Port.



"We knew the idea of an intelligent terminal that you can carry around on the quayside with IP capability would really appeal to Wallenius Wilhelmsen," explains Derek Harris, LXE account manager. "Not only does it provide far improved visibility and productivity, but it helps Wallenius Wilhelmsen sell its own solution to manufacturers – all of whom want to know where their vehicles are in the transport chain."

As a result, Wallenius Wilhelmsen is now using 15 Mx5 terminals to monitor traffic around the port. Every vehicle moving on and off the vessels contains a barcode, which is scanned using the LXE terminal and then allocated a specific storage bay within the port area, all in real-time. Most importantly, this information is accessible by Wallenius Wilhelmsen offices world wide thanks to a wireless IP network from Cisco that links LXE's devices over IP protocol, to Wallenius Wilhelmsen's back office applications.

"Aside from its ability to provide an end-to-end solution, the most obvious and immediate benefit of Wireless IP for us was not having to lay down cables," says Gartell.

"The Southampton Euro Terminal is a large site and the disruption and cost of laying cables would have been huge." Like most companies within Southampton Port, Wallenius Wilhelmsen is essentially a leaseholder, with the British Port Authority owning the land itself. All of which makes a wireless IP network even more appealing to Wallenius Wilhelmsen.

Another critical factor was that vessels don't always dock at the same berth - so a conventional network would prove very restrictive for Wallenius Wilhelmsen.

Cisco's Aironet network solved all these problems by providing a completely wireless IP solution consisting of a series of access points, dotted strategically around the port. These access points pick up IP packets from LXE's terminals and route them to Wallenius Wilhelmsen's corporate network using Cisco's highly versatile Aironet bridges and routers. Ultimately it means that Wallenius Wilhelmsen has an always-on internet connection between the port area and its corporate servers in Oslo.

"Our Aironet technology provides coverage in the difficult environment of the port in much the same way that mobile operators provide nationwide coverage for their phones," explains Cisco's mobility specialist Scott Bain. "It uses a limited number of RF channels configured to operate in specific areas - the end result of which is very consistent coverage."



Cisco's Aironet access point is situated on top of Wallenius Wilhelmsen's multi-deck terminal, one of the largest of its kind in Europe, capable of storing some 7,800 vehicles.

AN INVESTMENT IN THE FUTURE

Ultimately, like all technology projects, the bottom line for Wallenius Wilhelmsen is return on investment.

"IS&T plays a key role in our organization and like other business areas approval for new projects is necessary at an executive level" says Gartell.

"So while I firmly believe that you get what you pay for, I also needed to demonstrate to my management team that this solution would deliver the goods financially."

Wallenius Wilhelmsen expects to see ROI on its wireless solution within three, possibly two years. And based on the lessons learned from the Southampton installation, the company expects to implement similar solutions in Belgium and Finland in less than half the time.

The Cisco network offers a vast amount of versatility and flexibility. Based on open, IP protocols, it will enable Wallenius Wilhelmsen to piggyback many value-added services at little extra cost. An application like IP telephony alone could save a globally operating company like Wallenius Wilhelmsen thousands of dollars in phone bills. And looking ahead, the vessels themselves could one day conceivably be fitted with either Wireless IP or satellite broadband networking technology to enable them to communicate seamlessly with the land-based offices using IP telephony.

INSIGHTS

"Many ports around the globe are still trying to achieve the new technology within their terminals – which is something Wallenius Wilhelmsen is achieving now," Gartell says.

"The biggest reason for the failure of internet and mobility solutions in our industry has been that companies try to shoehorn the solution into their existing systems instead of building their business around the IP network strategy – which is really where the future lies," he says.

Another important success factor is credibility and unity of suppliers. "It's absolutely critical to standardise suppliers and that's what we've done with LXE and Cisco. Wallenius Wilhelmsen is very keen to keep pushing ahead with this technology to sustain the advantage we've built, and we're quite open about the fact that the LXE/Cisco team has worked very well together. As long as they continue to deliver, we'll use them for all our future installations."

Nigel Nawacki, Cisco's Business Development Manager for Seaports/ Intermodal & 3PL Solutions, agrees.

"This is a great example of how Cisco - together with its alliance in LXE – is providing integrated IP network solutions that deliver access to real time data anywhere in the yard. It's very clear to see how Wallenius Wilhelmsen is reducing risk and cost, and is improving the effectiveness of their operations through the use of this solution."



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