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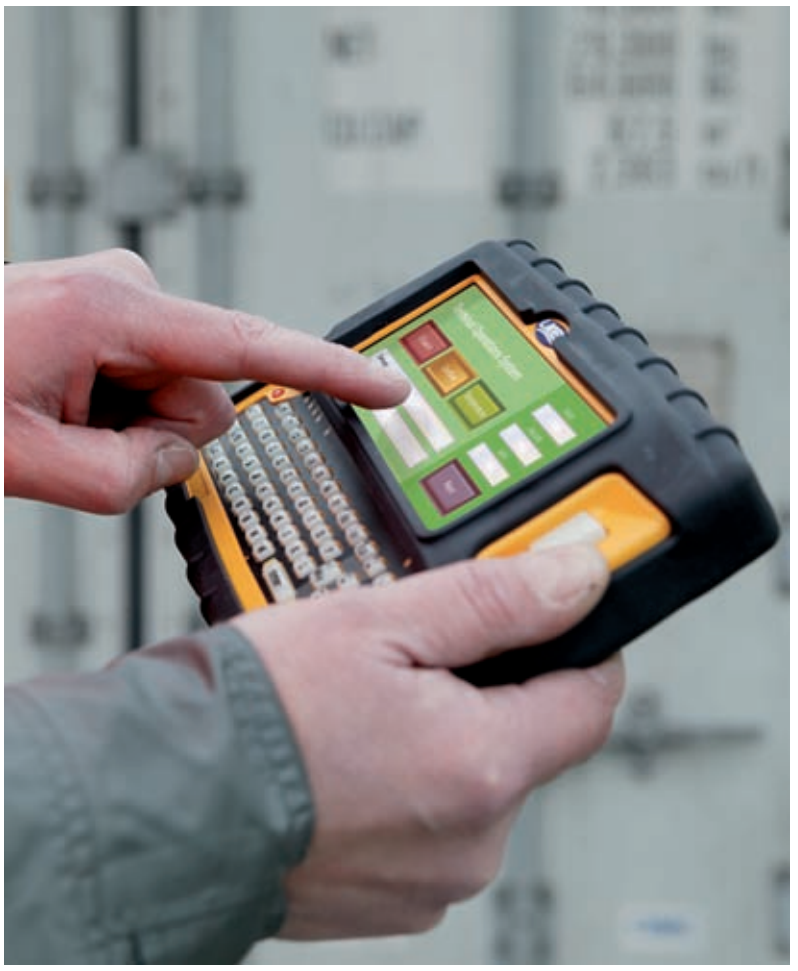
New

Let the sunshine in

New MX3Plus portable computer and VX3Plus in-cabin computer, both with sunlight-readable display



The ½ VGA, Windows® CE .NET driven VX3Plus is a smaller, economical vehicle computer perfect for use in smaller vehicle cabins with limited space for mounting a computer. The VX3Plus vehicle computer is the perfect addition to LXE's comprehensive line of traditionally sized and powered vehicle-mount computers. The unit is smaller than a traditional vehicle computer, and offer's newly enhanced hi-bright color screen options to insure uncompromised readability in any lighting condition, even in direct sunlight.

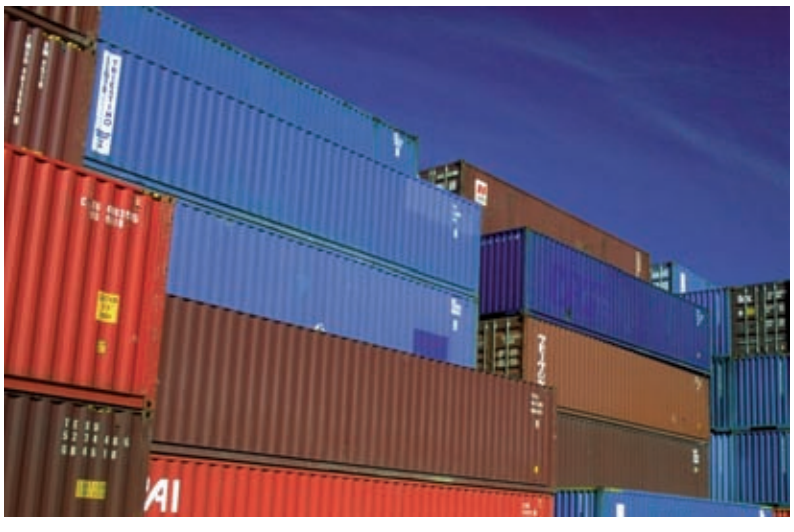
The MX3Plus portable data collection computer offers unparalleled ergonomics. It can be handheld, worn on a belt, or even attached to the operator's hip thanks to a lightweight, practical hip-flip tablet. Its outdoor display makes it easily readable in direct sunlight.
Both units include LXE's legendary toughness - Sealed against water and dust, specialised plastics that absorb impacts versus shattering; solid state, industrialised electronics that resist shocks and vibrations; and a fully ruggedised display and keyboard that can handle the rigours of any port operation. As is the case with all of LXE's computers, the VX3Plus and HX3Plus are “born rugged, not made rugged.”

Agreement

Hutchison Port Holdings Standardizes on LXE

World's leading terminal operator Selects LXE

LXE has entered into a global agreement with Hutchison Port Holdings (HPH), the world's leading port investor, developer and operator, to provide a full line of rugged wireless computing solutions for HPH's terminal operations.
The LXE equipment will be fully integrated with HPH's Terminal Operations Systems (TOS) software, nGen and other third-party TOS, e.g. Navis™. These systems process and control vessel planning, vessel operations, container movements and storage of containers in the yard. LXE's handheld and vehicle-mount computers are certified working solutions with HPH's nGen applications and are Navis-Ready. LXE hardware is currently deployed in eight HPH ports located in China, Europe, the Middle East, Mexico and Southeast Asia. “LXE is delighted to serve as HPH's strategic partner to deplo y our award-winning rugged mobile computing solutions across their global terminal operations. Today's agreement solidifies LXE's leadership in the intermodal market, where half of the world's ports rely on our ruggedized computers for wireless container tracking,” says Frans Kok, VP Global Accounts, LXE,Inc



Education

The Future is Converging

A new white paper

Traditional wireless technologies (Voice, GPS and RFID) and the yard management systems they support are proven productivity boosters, but the relationship between the operator, the management systems and these technologies is changing. Full automation is highlighted in the newest designs for Greenfield ports, but can existing operations achieve similar gains? The best results are achieved through the convergence of automation AND true productivity from empowering workers with more flexible combinations of wireless technologies designed around human behaviours, not the other way around. The new LXE white paper outlines how to get to the next level of efficiency in the port with wireless technologies.

- **Request your copy of the White Paper 'The Future is Converging' by emailing your details at ports@lxe.com**

Case-study

AICT goes wireless with IBEX-LXE

Improved tracking and tracing of containers

Alexandria International Container Terminals (AICT) operates the ports of Alexandria and El Dekheila on the Mediterranean Sea in Egypt. The ports needed a wireless solution that would improve the tracking and tracing of containers. Simple enough, except for the fact that working conditions can get awfully nasty. A typical day, depending on the season, can bring any combination of salt spray, rain and dust, making it an extremely harsh environment for wireless data computers and wireless networking devices. Therefore, it was essential that any wireless equipment purchased was truly ruggedized to withstand this extremely harsh environment.

AICT decided on the latest 2.4 GHz wireless network, LXE's Spire® Solution, and LXE forklift mounted and handheld computers. The advantages of a 2.4 GHz wireless network include a higher data rate and that it's an IEEE open standard - enabling mobile devices to communicate with a wired network and run any software, just like an ordinary work station.

"We selected the best possible solutions and products to meet our unique requirements," explains Engineer Walid El Sahar from AICT Egypt. IBEX-LXE proposed and delivered a state-of-the-art 2.4 GHz solution that not only future proofs AICT's investment but enables the deployment of any WiFi certified equipment. The solution also incorporates a 5 GHz wireless bridge which enables networks in various areas throughout the port to connect wirelessly, and provides online connection to vehicles and handhelds in the container yard.

Because the LXE Spire® Antenna can provide up to 50% greater coverage than conventional antennas, AICT was able to reduce the quantity of access points required for necessary radio coverage, and was also able to reduce the amount of new power and data cabling required. LXE's rugged mobile computers are used to update a container management system which features a real-time 3D plan of

the container yard, and generates a range of management reports.

Benefits gained include faster vessel turn-around times, prompt response times, higher productivity, and increased accuracy and service levels. In addition, time-consuming batch processing has been replaced by rapid real-time data processing. Both yard operations and gate operations are faster and more efficient, while lost containers most definitely belong to the past.

LXE acquires Åkerströms

On 11 February 2008, LXE announced the acquisition of Åkerströms Trux AB. The Vehicle Computer market leader in the Nordic region brings to LXE a new, market-ready Windows XP-based product line targeted at customers running advanced wireless applications in demanding intermodal environments. LXE expects the acquisition to accelerate the market share growth of its business for vehicle-mount computers used in Ports applications globally, by leveraging the strengths of two leaders in key industrial mobile computer markets. Frans Kok, LXE VP Global Accounts, comments: "The addition of the Trux product line instantly strengthens our vehicle-mounted thick client offering – a growing segment of the market driven by customers deploying advanced applications and standardising their IT infrastructure."

Case-study

TCB uses VMC and HHC from LXE

2.4GHz implemented in port of Barcelona

Operated by Terminal de Contenidors de Barcelona (TCB), the container terminal at the Muelle Sur wharf, is one of the main logistics platforms in the Mediterranean Sea. Located at the heart of the port of Barcelona, this modern terminal focuses its activities on the development of intermodal traffic throughout south Europe.

Barcelona's geographical situation enhances its strategic position as Europe's southern gateway. In addition, TCB offers other important benefits. The terminal is ideally located at the entrance canal of the port, has its own in-house rail connection, there is immediate access to highways and the motorway network, and is close to the airport. However, the existing narrow band communication system was proving ineffective, and faster response time and improved control of operations were required. The solution was to migrate to 2.4GHz wide band technology.

"LXE was chosen for its experience in port environments and for easy integration with our IT systems," says David Serral, IT Manager Group TCB. "In addition, we needed robust equipment with low battery requirements."

The solution implemented includes Cisco Access Points for LAN, LXE MX5 handheld computers for ground operations and VX6 vehicle-mount computers for straddle carriers and fork-lift trucks.

The new solution is highly beneficial. "We are currently carrying out all the movements in the container terminal controlled by IT systems in real time,"

explains Serral. "At any given moment, more than 70 LXE handheld, straddle carrier and fork-lift truck computers are simultaneously receiving and sending information from and to the Terminal Operation System without delays."

In the next few years TCB will expand from its current 50 hectares to 89 hectares, covering the additional space with the wireless LAN using the same modular solution from LXE.

Case-study

Modern WiFi network in Antwerp

PSA HNN selects sector specialists

PSA HNN arose in 2002 from the merger of two established terminal operators: PSA and Hesse-Noord Natie. For its operations in the new Deurganck dock in the port of Antwerp, instead of joining forces with a large engineering consultancy, PSA HNN opted to establish alliances with partners that each have their own specialization. The company had been familiar with LXE's expertise for some time through wireless implementations at a number of different terminals, so was a clear choice for one of the sector specialists.

PSA HNN's specifications were clear: a wireless network that guarantees that each WiFi participant within the stated zones will always come within the reach of at least two access points and ensure a measurable real transmission speed for each participant within these zones.

LXE was the first to introduce 2.4 GHz technology in the port sector. Broadband is not only more modern than narrow band, but the performance and results are better, and everything runs smoother and more flexibly. The technology also guarantees that future extensions such as the exchange of GPS coordinates with straddle carriers will be possible, and allows the terminal to be expanded while retaining the basic concept.

Although spread spectrum has the reputation of requiring many access points for large surfaces, LXE can refute this idea thanks to the Spire® Antenna in combination with Cisco access points. This revolutionary antenna technology means that only a limited number of access points are needed to guarantee optimum coverage. Using this approach LXE was effortlessly able to meet the coverage requirements that PSA HNN had set.

“The 2.4 GHz project at the Deurganck terminal was implemented without too many teething troubles,” says Jan Callens, IT Project Manager at PSA HNN. “The unbelievably short construction period, from wasteland to operating terminal in five months, demanded a JIT approach. Without light masts there were no access points, without power and communication cables there were no light masts and if the cabling was not underground the site could not be surfaced. The wireless network has become so obvious now that we occasionally forget how everything happened in the starting phase. The project can definitely be viewed as a success.”

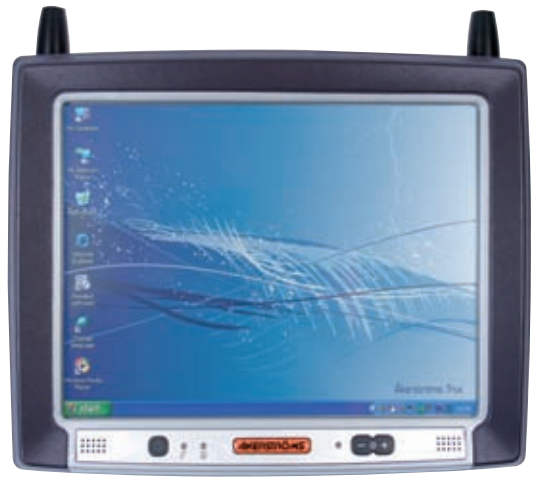
Product

Tx700 & Tx800

XP computers for ports

Following LXE's acquisition of Åkerströms Trux, customers can now order the Tx700 and Tx800 high performance rugged Windows XP based vehicle mount computers from their local LXE office or integrator. The Tx700 and Tx800 rugged vehicle mount computers are based on a modular design architecture that can easily be tailored to meet your needs. Both devices are engineered to operate in tough logistics and industrial environments.

The Tx700 features a bright 12.1” SVGA or XGA display with a hardened touch screen. The Tx800 features a bright 10.4” SVGA display with a hardened touch screen. Both devices are available with a 600MHz Celeron Mobile or 1.4GHz Pentium Mobile processor and come with an 802.11b/g radio. Options include memory, Bluetooth and various software applications such as terminal emulation and on-screen soft keyboard.



Case-study

Cisco and LXE combine in Port of Rauma

Signal Networks Finland implements the solution

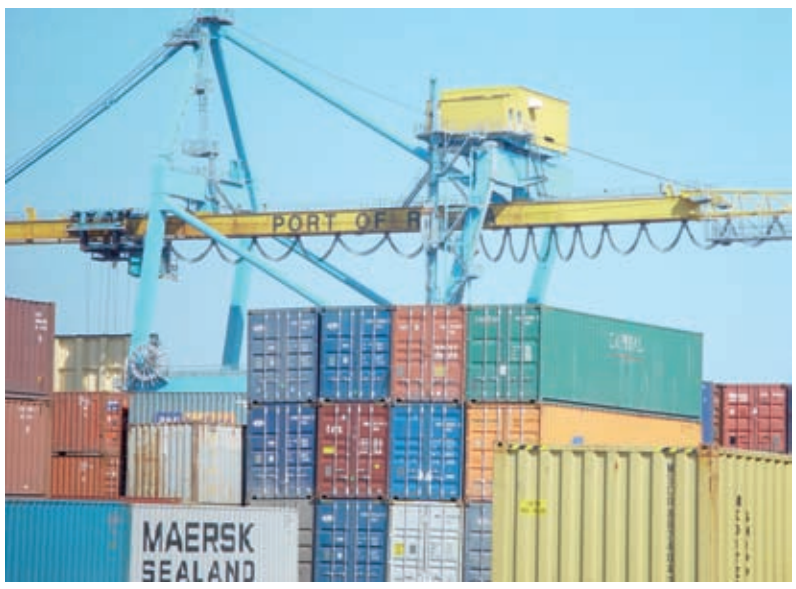
Oy Rauma Stevedoring Ltd. is the largest operator in the Port of Rauma, Finland. When the time came to revamp its IT system, a real-time inventory management system was built, which required the renewal of the port area network. Signal Networks Finland, a Cisco partner and the Finnish integrator of LXE equipment, delivered a standard WLAN network solution.

“We selected a browser based WLAN solution because of versatility and efficiency. We want to have the same application for Vehicle Mount Computers, Hand Held Computers and workstations. Signal Networks has the know-how for port solutions; they were the best company to deliver a turnkey solution”, says Rauma Stevedoring IT manager Hannu Ketola.

The new system encompasses all information management of import and export processes, from the tender stage to vessel loading. This includes a new system for real-time inventory management, which enables improving operative processes, development of services and renewal of hardware and applications which have reached the end of their lifecycles. The functionality required was not possible with the old narrow band radio system; it was slow, obsolete and lacking in functionality.

The entire port of Rauma is now covered by an indoor and outdoor WLAN. The basis of the solution are Cisco ACS authentication servers, Cisco WLSE monitoring servers for network appliance control and Citrix MetaFrame servers for terminal administration. Cisco Aironet 1200 Access Points were installed with LXE SPIRE® antenna to cover the port and its buildings.

The new system is more reliable, faster and more extensive than previously. The technology also meets future needs. The process approach eliminates overlap and makes resource usage more efficient.

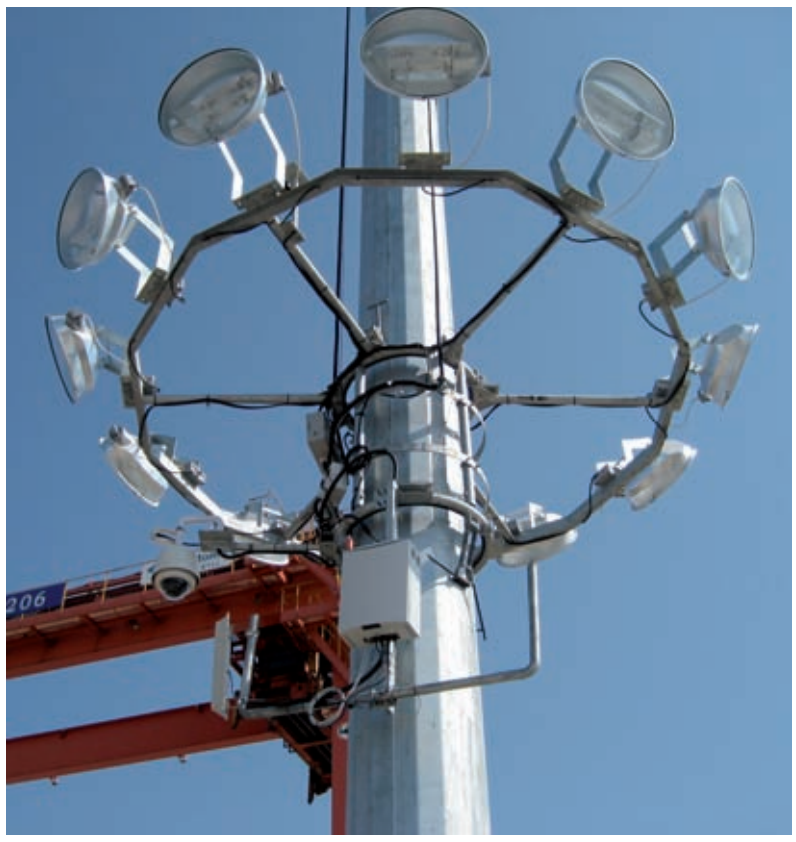


Education

Wireless mesh networking

Technology Snapshot

With traditional wireless networks, the access point connects a group of radio data terminals to the network. In order to allow roaming, there has to be a hand-off to another access point, which is traditionally managed by a wireless LAN controller or wireless switch.
This technology is fine in areas where there is a wired network to connect to, but in some places it is not always easy to create a that infrastructure. Wireless mesh applications are ideal communications in difficult environments such as container ports and other large outdoor storage and distribution facilities.
Wireless Mesh technology is a wireless co-operative communication infrastructure between individual wireless transceivers that have Ethernet type capabilities. What this means is that each device co-operates with its neighbours to forward or relay data packets to allow information to traverse the network to its destination. This type of infrastructure can be decentralized (with no central controller) or centrally managed (with a central controller), both are very reliable and resilient, as each node need only transmit as far as the next node. Nodes act as repeaters to transmit data from nearby nodes to peers that are too far away to reach, resulting in a network that can span large distances.
Mesh networks are also extremely reliable, as each node is connected to several other nodes. If one node drops out of the network, due to hardware failure or any other reason, its neighbours simply find another route. Extra capacity can be installed by simply adding more nodes.



Case-study

SCA Transforest chooses LXE Tx700

Windows-based applications become easier to use

The SCA Transforest terminal in Sundsvall is located on the east coast of central Sweden. The terminal was established in 1967. It transports paper pulp, paper and wood products from Sundsvall, mainly from the SCA Group. It also handles incoming volumes and large quantities of other goods for transport to industries in Sundsvall and surrounding regions. The terminal is strategically located with open sea just around the corner, and calling at the port is fast and effective. Close proximity to major road networks heading north, south and west plus the railway network simplifies the logistics process.

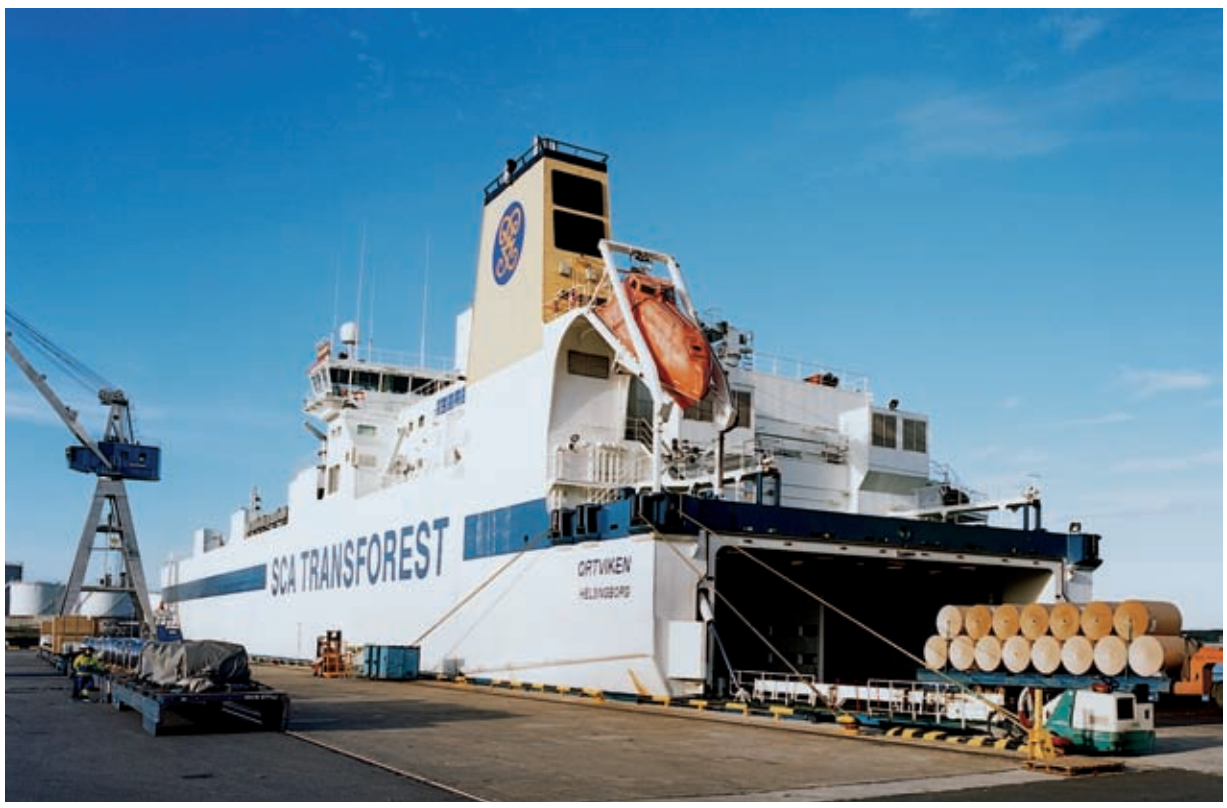
The problem was that the existing narrowband radio network was proving difficult to maintain, and also was not suitable to host the latest WMS applications. In August 2007 an LXE 2.4 GHz wireless network, LXE forklift mounted computers and a Warehouse Management System from RedPrairie were implemented at the port.

“The whole system gives us more possibilities as the 2.4 GHz network does not have the constraints of the narrowband system,” says Roger Salgh, IT Manager SCA Transforest.

Forty Tx700 Windows-based vehicle mount computers were chosen. They offer a 12.1” XGA or SVGA display and are available with a 600 MHz Celeron M or 1.4 GHz Pentium M processor.

The RedPrairie WMS is running on UNIX servers in Gothenburg. Centralizing the servers in a single location instead of having a WMS in every port means that it is not necessary to have IT experts stationed in each terminal.

Altogether, 40 Access Points are in use at the Sundsvall port, and no major problems have been encountered. “Coverage is always a potential problem in a port that is handling large quantities of paper, as the paper rolls absorb radio waves,” says Roger Salgh. ”However, careful positioning of the Access Points avoided this problem.”



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