

## Case Study: TSI Terminal Systems Inc.

### *Seamless connections keep Canada's largest container terminal moving.*

*At TSI Terminal Systems Inc., huge gantry cranes transfer containers on and off vessels, "bomb carts" shuffle containers about a 162-acre yard, and movable gantries load and offload trucks and rail cars. Keeping up with the constant motion of billions of dollars worth of goods calls for precise tracking, reliable data connections – and Mobility XE from NetMotion Wireless.*

### About the Deployment

Managing thousands of shipping containers and meeting tight shipping schedules calls for delicately orchestrated movements on a massive scale. Workers perched on ten shipside gantry cranes, roaming in 75 trucks, and stationed at 20 truck gate kiosks track container moves and keep TSI's Deltaport facility in Vancouver, B.C. running at peak efficiency.

Constantly moving, fully loaded shipping containers present a challenging environment for wireless signals. TSI covered the facility originally through a mesh of 2.4 GHz Wi-Fi access points, recently augmented with newer 3G technologies.

Checker stations on the gantry cranes and trucks in the yard are fitted with Wyse Thin Clients running Windows XP embedded. At the gates, workers use Psion Workabout Pro handheld units to check in trucks as they arrive. These devices originally ran an in-house application, since replaced with a more robust NAVIS terminal operating system.

"We put Mobility XE in and it made a huge difference ... It really reduced our support calls."

— Kurt Jesson  
Terminal Support Specialist

### Maintaining Connections in a Unique Environment

As Terminal Support Specialist, Kurt Jesson is responsible for the data communications infrastructure. He explains the problem that TSI encountered with their 2.4 GHz system: "Our environment is very unique for 2.4 because it's like a little city that keeps changing. We have containers that are stacked five-high, going up and down all the time, and the 2.4 won't penetrate the containers. We were running a basic telnet session to our terminal operating system, and it was all menu-driven. Users could get ten menus deep into our system. If they lost their connection and then regained it, it would kick them all the way back out to logout. This became really frustrating, and slowed down production.

"We put Mobility XE in and it made a huge difference. When the connection came back, users were right where they needed to be. It really reduced our support calls. We had been getting on average, five to seven calls a day regarding connection problems. After we brought in Mobility XE, it dropped to about one support call every other day."



Terminal Systems Inc.

### Organization

TSI Terminal Systems Inc.

### Industry

Container terminal operator

### Objectives

- Maintain seamless application connections
- Implement redundant connections for greater reliability
- Provide transparent VPN for travelling executives

### Solution

- Mobility XE Mobile VPN
- Wyse touchscreen terminals
- Psion Workabout Pro handhelds
- Airlink Raven Modems with 3G SIM cards
- 2.4 GHz Ethernet bridges
- NAVIS terminal operating system

### Results

- Dramatic drop in support calls
- Greater reliability and overall production efficiency

#### NetMotion Wireless

701 N 34th Street, Suite 250  
Seattle, WA 98103 USA

TEL 206.691.5555

FAX 206.691.5501

[www.netmotionwireless.com](http://www.netmotionwireless.com)

## Psion Handhelds for Gate Check-in

Check-in at the perimeter calls for a different solution, again made more reliable through Mobility XE. "When the trucks come in, they go through several gates and the guys there inspect the containers for damage and do other checks," says Jesson. "They're walking around the trucks and inputting data. So we use Psion Workabout Pros, with Wi-Fi & 2G vendor SIM cards and running the Mobility XE client. One of things we do with Mobility XE is use a policy to start the application session automatically. But we're just scratching the surface on what we can do with policies."

## Redundant Networks for Reliability

TSI added an extra layer of redundancy to their data connections with a 3G network from a local carrier. Jesson explains why: "Our gantry cranes are by far the meat and potatoes of our operation. Any little hiccup, including a break in connectivity, can slow us down. We tested 3G and found that while it is a slower connection than the 2.4, it's much more robust in terms of connectivity. But with the 3G network, if there's an outage, it's out of our hands. So we're using Mobility XE policies to ensure that 3G is the primary connection, with the in-house 2.4 as a backup."

"In all the time we've been using it, there's never been an issue with Mobility being down. We're quite happy. It's been a very, very stable product for us. "

## VPN for Traveling Executives

TSI is now part of GCT Global Container Terminals Inc., which oversees container terminals in Vancouver, New York, and New Jersey. This presented a greater need for executive travel. Therefore, says Jesson, "We added a separate Mobility pool strictly for laptops used by our managers and directors. This simplifies their VPN access and connection back into our systems. They don't have to start a VPN connection. It automatically happens. Even though all hotels are not created equally when it comes to their networks, all in all the Mobility XE VPN has really worked well for us."

## Support and Stability

"Having more control and being able to use policies has made a big difference for us," declares Jesson. "So I appreciate the support we get on those kinds of issues. In fact, between all the vendors that we deal with, NetMotion's probably had the best support. I'm amazed at the follow up. I have the tech guys emailing me, calling me, wanting updates on how things are going. You just don't see that with anyone else."

"And, in all the time we've been using it, there's never been an issue with Mobility XE being down. We're quite happy. It's been a very, very stable product for us. "

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