

Utilising the latest broadband mobile technology for port security

The Port of Turku, Finland

The Port of Turku is utilising the latest broadband mobile technology for guarding and securing its port area. The Port's Mobile Video Surveillance project created a system in which the digital camcorder carried by the Port's Security Manager transmits video and audio information wirelessly through a WiMAX network to the Port's control room and, if necessary, further to other authorities and experts. The connection works in both directions. The solution enables quick and flexible reactions to the changing security situations in the Port.

Introduction

Security in the Port means above all anticipation and prevention of dangerous situations, such as fires and oil spills, as well as guarding of the area to prevent access by unauthorised persons. It must be possible to react quickly and with efficient measures based on correct information to any arising situations. The transport of various flammable liquids and corrosive and environmentally harmful substances are supervised carefully, and the goods are stored in the area built in accordance with the IMDG regulations.

Surveillance system

The Port of Turku was among one of the first to introduce an IP-based, digital video surveillance system that utilises the wireless WiMAX broadband service. The previous surveillance solution was based on fixed surveillance points. There was a need to expand the video surveillance over the entire port area, to exceptional situations and as a daily tool for the Port's Security Manager.

WiMax

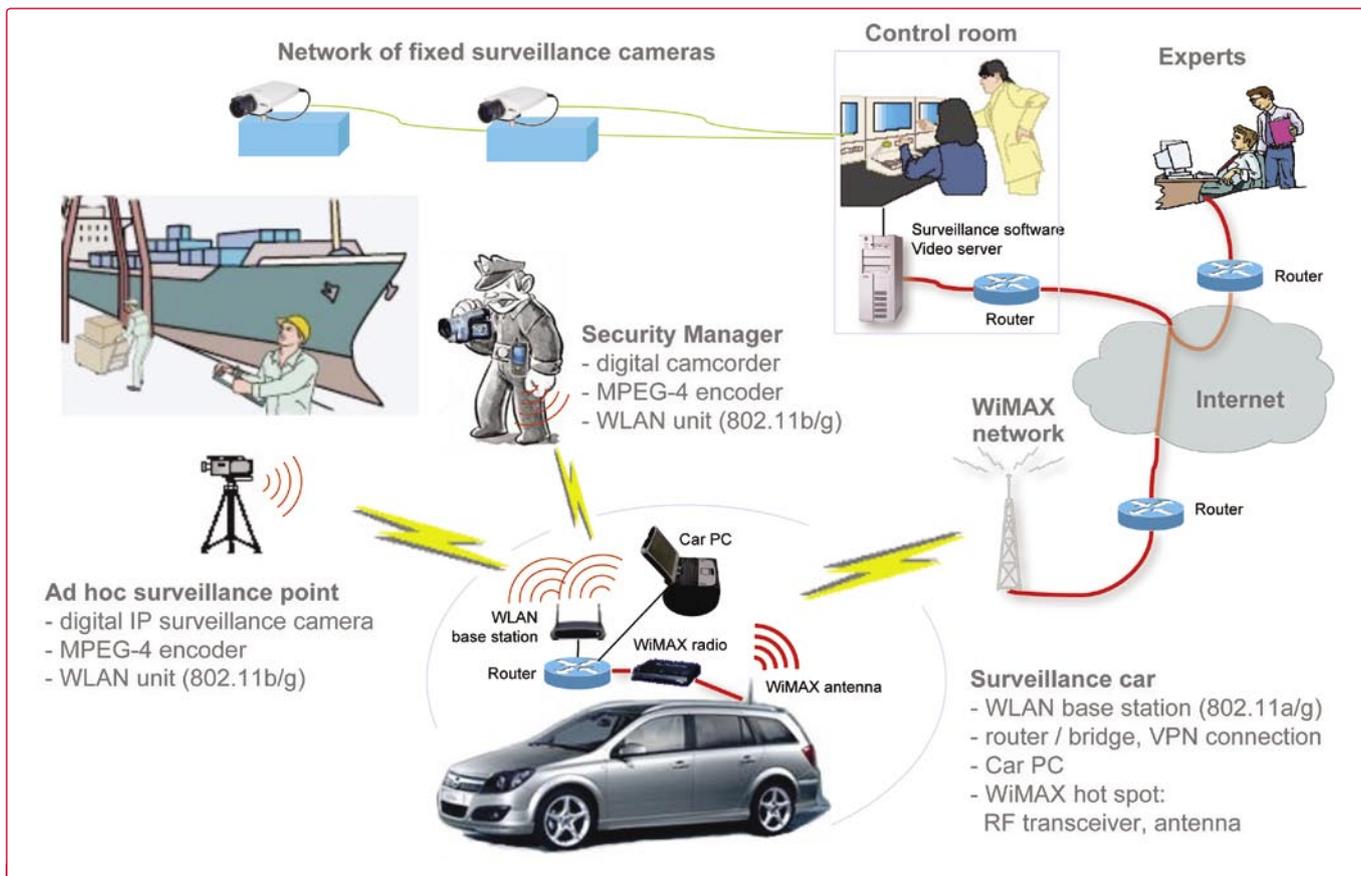
Reijo Toivonen, Financial Manager of the Port of Turku, states that wireless surveillance is an advanced method. "I first read about surveillance and control implemented using WiMAX technology, and network connections three years ago. Once we had familiarised ourselves with the system and its functioning we decided to take it into use. In the new system, surveillance cameras were wirelessly connected to the Port's control centre in the same way as the workstations were connected to the Port's computer system." Mr Toivonen says that the system has worked excellently. "Cameras and workstations connected wirelessly to the system are easy to move from one place to another. Adding new equipment to the system is also simple, and no expensive cabling work is needed."

Mobile video surveillance

The Port of Turku's Mobile Video Surveillance project planned and implemented a technology solution (Integrated Security Concept, ISC) that allows expanding the Port's video surveillance system in the port area quickly and flexibly as needed. The project created a concept for the solution and built a prototype. In the system, a digital camcorder carried by the Port's Security Manager transmits video and audio information wirelessly to the surveillance car that serves as a base station. From there the information is forwarded through the wireless WiMAX network to the Port's control room and, if necessary, further to other authorities and experts. The car's equipment for measuring and recognising different gases and radioactivity are also connected to the system, and information from them is also forwarded to the control centre. The car is also



The surveillance car serves as a base station. From there the information is forwarded through the wireless WiMAX network to the Port's control room and beyond if necessary.



Basic configuration of the Port of Turku's Mobile Video Surveillance solution.



The new system has significantly enhanced the opportunities to improve the safety of both passenger and cargo traffic in case of an accident and prevent unauthorised access to the port area.

fitted to receive video surveillance data from the Port's network of fixed surveillance cameras. The system is being developed further, keeping pace with the development of WiMAX mobile standards and other peripheral devices.

According to Mr Toivonen, the surveillance car helps the Port of Turku to better comply with the requirements of port surveillance in accordance with the ISPS code. "The EU-financed DaGoB project that studies transports of dangerous goods will also increase the surveillance tasks which we can now handle better."

Enhanced safety

The new system significantly enhances the opportunities of the Port of Turku to improve the safety of both passenger and cargo traffic in case of an accident and prevent unauthorised access to the area. At the same time it enables better surveillance of construction and environmental sites as required by the Port's operative management and its quality systems (ISO 9001, 14001, 18001). The 24-hour access control system in the entire port area covers all operations of the Port and prevents unauthorised access to the area.

Finland's EU Presidency has brought large international conferences to Finland, and the security issues have created extra pressure on the authorities. "Vehicles equipped with WiMAX technology will provide the authorities with better opportunities for surveillance of different events and directing the actions in cases of accident. The Port's pilot project has been followed with great interest," Mr Toivonen ponders. The police have also adopted similar technology. "Through wireless surveillance our opportunities to control the port area and direct operations in cases of accident are significantly improved," Mr Toivonen says.

The project was implemented by EDI Management Oy and EVTEK University of Applied Sciences, with Suomi Communications Oy ja Taitotekniikka Oy as partners.

ABOUT THE PORT

More than four million tonnes of cargo and over four million passengers pass through the Port of Turku annually. Individual services and flexible operating models are an essential part of the efficient operations of the Port.

Co-operation with the companies in and around the harbour and with the IT field have made the Port of Turku an important provider of logistics services. Today, the Port forms a versatile entity of transport services that actively develops its operations.

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