



EVERYTHING OVER IP

Flemish Government Pioneers Remote Waterway Management

March Networks video recorders are part of an ambitious automation project spearheaded by Belgium's Flemish government to centrally manage the operation of bridges and locks on the region's waterways.

Based in the waterway authority's high-tech monitoring center in Antwerp, a handful of traffic controllers are able to monitor canal traffic, communicate with marine personnel and remotely operate lock systems and bridges.

March Networks™ Certified Solution Provider Tein Telecom played an important role in the project, supplying a Gigabit Ethernet network, cameras, recorders and video over IP encoders.

The Flemish government authority, Waterwegen en Zeekanaal, conceived the project to improve service and efficiency. The voice, video and process control network links upwards of 30 bridges and 10 locks on three waterways, or sea canals, over a combined distance of 100 kilometers.

The principal canal links Antwerp and Brussels and serves as an important artery for commercial traffic. The other two – one linking Antwerp and Leuven, the other



About Tein Telecom

Tein Telecom (www.teintelecom.com) is a Belgian company acting as a leading architect and supplier of innovative and integrated network-based Voice, Data and Video solutions. With a technical staff of 85 people working in both Belgium and The Netherlands, the company has reached a high level of expertise in multimedia integration. Success in complex projects with advanced and customized applications has helped the company to invest in people and technologies. Following a strong R&D investment strategy, Tein Telecom has recently developed a unique software package offering highly intuitive management of an entire surveillance infrastructure. To contact a sales representative, please call +32 2 240 64 64, or email sales@teintelecom.com

between Brussels and Charleroi – are primarily used by pleasure craft.

Images from cameras at the bridges and locks are transmitted via a high speed IP network to the central monitoring station, providing authority staff with multiple views of each location to safely direct traffic. Splitters are used to send video both to the central monitoring station for live viewing and to March Networks recorders for archiving.

Collisions

“If there is a problem or an accident, we use the archived video as evidence so we can determine the cause,” explains Waterwegen en Zeekanaal Project Engineer Luc Donders. “Without the recorded video, it would be much more difficult to determine who was at fault if, for example, a boat collided with a bridge.”

The authority has also been able to respond to requests for video from law enforcement agencies investigating traffic accidents and other incidents.

The waterway authority insisted on real-time transmission and high quality images to guarantee precise operation, notes Tein Telecom’s Kurt de Neve.

“The four critical success factors for the project were minimal delays in image transmission, high resolution, equipment reliability and rapid intervention in the event of a technical problem.”

The system also includes a Voice over IP solution, allowing marine personnel to signal their presence at a bridge or lock to waterway staff at the central monitoring facility.

“In the past, the procedure was for the boat to call ahead to the bridge operator using radio communications,” says de Neve. “But with everything operated centrally, we had to capture that radio signal and send it to the central monitoring facility over the IP network, so in effect it’s a radio over IP solution.”

The system includes approximately 200 cameras and 50 March Networks recorders

– either 3000 or 4000 Series DVRs, depending on the requirements at each location.

March Networks recorders were selected for the project because of their reputation for reliability and efficient performance in a networked environment, says de Neve.

The Flemish government is eager to promote increased commercial usage of its waterway system to reduce road congestion and cut down on pollution.

Centralization, says Donders, will streamline operations and optimize efficiency. On the main Antwerp-Brussels canal, for example, the authority required a staff of 80 to operate the locks and bridges. With central management over IP, the same job can be accomplished with fewer than 30 employees.

“It’s a state-of-the-art project,” says Donders. “We are definitely pioneering the use of this technology for waterway management.” ✨



About Waterwegen en Zeekanaal

Waterwegen en Zeekanaal is a Flemish government agency responsible for the management of the region’s inland waterways, including the operation of locks and bridges (www.wenz.be)