



Paper Mill Monitors Materials & Process with Wireless Video

A major paper mill located in the southern U.S. selected IVC's video management solution to monitor various aspects of mill operations:

- fire detection
- monitoring of loading/unloading of raw materials and product
- safety monitoring of boiler system
- monitoring flow of material for production

Design and implementation of a new wireless network by IVC partner R.E. Mason (REM) and IVC camera management software provide the backbone for the solution. IVC's IP encoders provide IP conversion of legacy analog cameras for inclusion in the comprehensive, plant-wide, centrally-controlled, wireless video monitoring solution.

The IVC solution provides central operations personnel with a single user interface for flexible video viewing and camera controls for all cameras on the wireless network. Tools to manage and tune bandwidth parameters, at the camera level and at the network level, allow configuration and optimization of video transmission and preservation of overall network performance. The resulting video system helps the customer improve regulatory compliance, plant processes, and safety.

Requirements

To meet the customer's requirements, the customer required video monitoring of

loading and unloading hazardous materials in an area that did not have an existing network infrastructure. Any new wireless infrastructure to support video monitoring needed to connect seamlessly to the customer's existing plant networks. Also, the customer desired to integrate existing analog cameras located in the boiler/turbine and remote conveyer facilities into the new video network. The requirement was for live and recorded video from all cameras, including legacy cameras, to be centrally managed and controlled. The customer required plant control room operators to have a single interface for simultaneous viewing and control of live and stored video from multiple pan, tilt, and zoom (PTZ) cameras.

Because of the company's distributed network environment and data transmission requirements, the customer needed flexible configuration, testing and management of bandwidth parameters to optimize storage, video transmission and network performance.

Solution

An IVC-based solution was delivered by systems integrator REM. REM chose to implement the wireless network infrastructure using radio products from ProSoft Technologies. The deployed system provided the customer with a cohesive, wireless video monitoring solution with a single point of contact for design, delivery, and installation. IVC's Relay Server camera management software provides system administrators a web-based interface for



An IVC wireless PTZ camera with an integrated ProSoft Technology radio.



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camera and system configuration, user management, and storage management. Other authorized system users may also use the Relay Server interface to view and control live and recorded video. ProSoft radios were selected because their robust feature set satisfied some unique distance and environmental conditions at the plant.

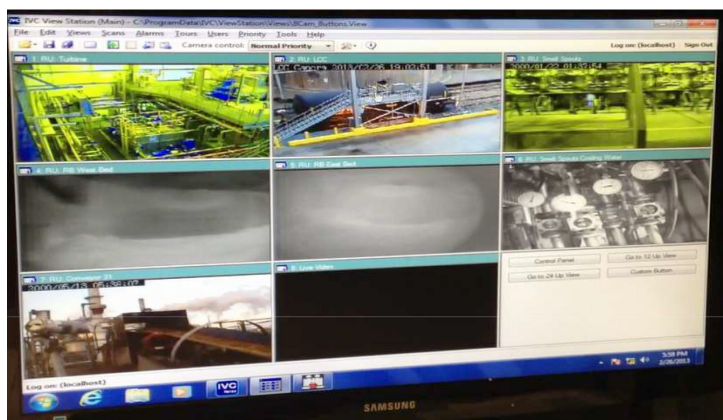
IVC provided PTZ cameras, IP encoders, and camera management software for the solution. IVC's pan, tilt, and zoom cameras and all IP-enabled cameras on the network are managed and viewed on plant control room displays. IVC's video management software allows for set up and tuning of individual cameras and network parameters to meet video storage and bandwidth management parameters.

IVC's PTZ-3330-14-1-110 outdoor cameras,

installed on the freight car loading network, feature day/night switching, 18x optical zoom, and are housed in outdoor all-weather domes. IVC's IP encoders are installed in the analog cameras in the boiler/turbine and remote conveyor facilities. Video from all cameras is viewed and controlled within View Station fat client and Relay Server web clients.

Video Management

IVC's Relay Server Software is the camera management and control center for the video monitoring solution. The RSS provides a scalable architecture for installation and management of large networks of cameras. The Relay Server provides camera management, video storage, user management, and bandwidth management from a single, web-based interface.



IVC's View Station provides tools to create customized operator consoles to give operators a complete view of critical system operations.



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Relay Server includes tools to:

- Configure each camera's resolution, image quality, and frame rate, for both live viewing and storage
- Configure panoramas and presets for pan-tilt-zoom cameras
- Tune system's bandwidth consumption on a system level (bandwidth consumption is also affected by individual camera settings)
- Manage users and user privileges
- Manage system storage settings

IVC's View Station Software, a client of the Relay Server, includes tools to create an unlimited number of customized operator views. Use of screen real estate is completely programmable. Screen elements that can be displayed in a View Station view include:

- Live video
- Saved video
- Playback controls
- Button panels
- PTZ camera controls
- Camera lists
- Alarm logs

View Station views and included controls

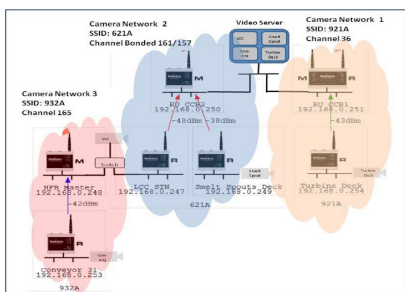
can also be configured to support touch-screen displays and multi-monitor control rooms.

Benefits

The IVC solution, as delivered through REM, provides the customer a cost-effective, scalable, wireless video backbone with robust video viewing and management for all designated processes in the plant. Through a detailed cost analysis, the integrator and customer determined that legacy camera conversion with IVC's IP encoders combined with new IVC wireless cameras contributed a 48% cost savings over a traditional wired analog camera installation. REM's network integration and project management expertise coupled with IVC's open, scalable framework provided the timely integration of all networked cameras from three plant sectors. The result is a comprehensive, plant-wide video management and viewing solution that is straightforward to operate, maintain, and expand as needed.

The customer benefits include:

- 48% savings by converting legacy analog cameras and investing in a wireless network and new IVC cameras
- improved process monitoring and personnel safety for all aspects of the operation
- improved regulatory compliance and reporting



The ability to seamlessly integrate legacy analog cameras into new IP video network was a key deciding factor for the customer.



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- investment protection and savings in cost and time with adaption of legacy analog cameras
- improved visibility into all plant sectors through a single interface in the control room
- lower costs for installation and maintenance, with upgrade path for future camera investment



The per camera and system bandwidth management features of IVC's Relay Server software were crucial in tuning the wireless network for optimal performance and operator experience.

Summary

The customer was delivered a comprehensive solution for monitoring and management of three sections of their plant operation; including the freight loading and unloading facility. Through their IVC solution, the customer has improved central control and monitoring of all of their plant processes over a wireless network. Through a network design that optimizes bandwidth use over the network, the customer has a robust, state of the art, scalable, video monitoring solution that is designed, tested, and implemented to meet the customer's monitoring needs.

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About IVC

Based in Newton, MA, IVC delivers a broad range of quality IP-based video systems to industrial, commercial and military applications. A key strength of IVC is its ability to develop cameras, enclosures, and software to meet demanding customer requirements.

About R. E. Mason

For over 60 years, R.E. Mason has been the trusted supplier in the Carolinas for Fisher Valves and Regulators. Now featuring the latest in digital valve positioner technology, Fisher offers FIELDVUE™ Digital Valve Controllers for traditional analog, diagnostic rich HART and Foundation™ Fieldbus applications. We maintain a large inventory of Fisher and complementary control and automated (on/off) valve products, including parts and accessories. Learn more at www.remason.com.

About ProSoft Technology

ProSoft Technology® specializes in the development of communication solutions compatible with the large automation suppliers' controllers such as Rockwell Automation®. The primary focus is to provide connectivity solutions that link dissimilar automation products. ProSoft Technology provides field-proven connectivity and communication solutions that bridge between various automation products as seamlessly as if they were all from the same supplier. Learn more at www.prosoft-technology.com.