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CASE STUDY

Motorola Uses Coactive's Technology to Monitor Environmental and Process Equipment in a Multi-Building Environment

Background

Motorola is converting to LonWorks control networks to manage facility and process control equipment throughout their facilities. These networks typically include HVAC control, fans, lights, pumps, chillers, and valves, as well as temperature and chemical sensors involved in the production process. Motorola has found that in new construction, distributed control systems cost 50 to 60 percent less than point-to-point control systems. They have implemented these mission-critical systems in nine of their semiconductor manufacturing plants worldwide, including facilities in the U.S., China, Scotland, France, and Switzerland.

The Motorola control networks are sophisticated. They contain thousands of nodes connecting equipment from many different vendors located in different buildings. For example, the plant in Richmond, Virginia, currently uses over 6,000 control nodes. In future facilities LonWorks based products are expected to number more than 20,000 nodes per plant.

The Challenge

In Motorola's Austin manufacturing plant, the facilities and maintenance office and production are located in two separate buildings. The equipment in the production building is controlled by a Fisher control system. In the office building, air conditioning is supplied by a York chiller which has a TCP/IP compatible Coactive Router built in. There is an existing Ethernet connection between the two buildings.

Motorola wanted to be able to monitor and control the Six Sigma environmental and process control systems in both buildings from a single location. To save money, they wanted to be able to use the existing equipment and network infrastructure. Specifically, they needed a solution that would work in an environment where:

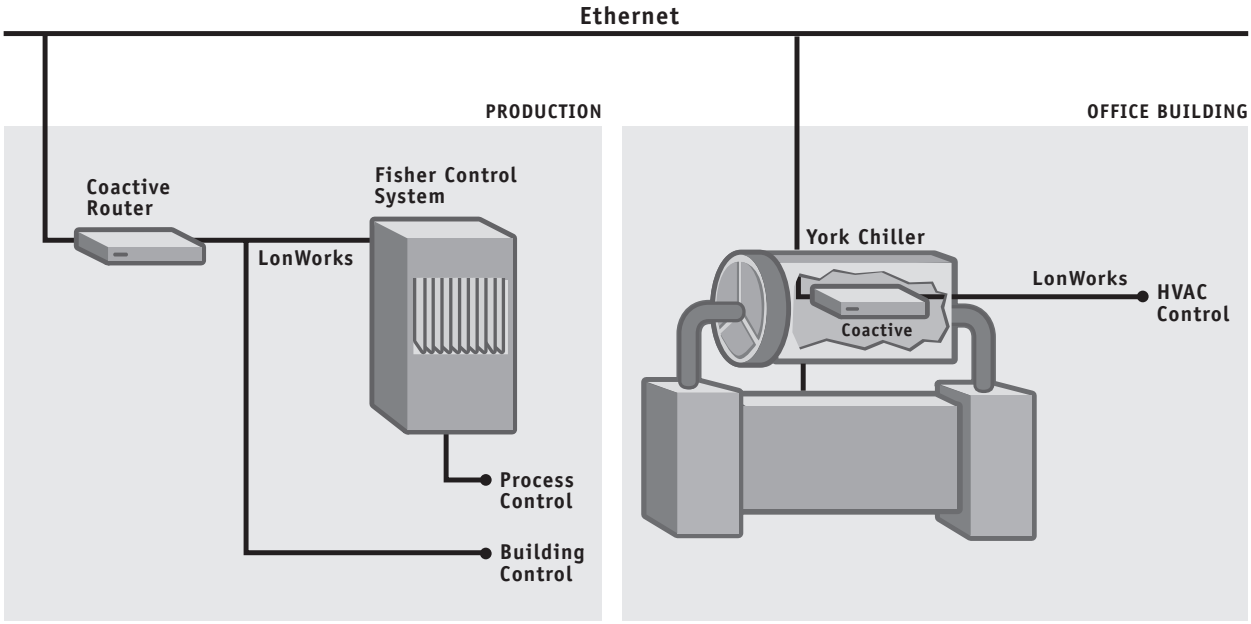
- The existing control networks were LonWorks based;
- The existing Ethernet backbone would be used for data transport; and
- The existing Fisher control system would be used to monitor and control systems in both buildings.

They turned to Coactive Networks, the market leader in providing open solutions for connecting LonWorks to enterprise networks and the Internet.

The Solution

Motorola installed a Coactive Router between the Fisher control system and the existing campus-wide Ethernet network. The York chiller was also connected to the network via the built-in Coactive Router. With these additions, the system now provides communications between the other subsystems and the Fisher control system. Coactive's router products, as part of Coactive's IOConnect Architecture, provide a reliable, embedded, distributed solution to integrating next-generation networking technologies on both the control and data networking sides of the system.

The Motorola system now allows maintenance and operations personnel to monitor facility and process equipment from a centralized location. This central control point can monitor both buildings, and can in most cases make setting changes and modifications without sending personnel between buildings. The addition of Coactive's technology has allowed Motorola to monitor and control this six sigma production facility from a centralized location in a multi-building environment.



About Coactive's IOConnect Architecture

The Coactive IOConnect Architecture addresses the convergence of control and enterprise networks with an open, embedded, distributed, and scaleable solution based on a coherent approach towards the connectivity problem. The IOConnect Architecture supports a variety of control standards, including LonWorks, the leading control network technology. It has been specifically designed to support and leverage Internet Protocol (IP) standards and technologies. This approach provides unmatched flexibility, reduces system costs, and enables new functionalities. The technical benefits offered by Coactive's IOConnect Architecture include:

- Leveraging existing LAN wiring and IP infrastructures in control systems;
- Increasing the return on investment made in the data networking infrastructure;
- Allowing the physical and logical segmenting of large control systems;
- Reducing the total cost of ownership of control and automation systems; and
- Enabling a new class of applications via seamless web and database access to control information.

About Motorola

Motorola is a publicly traded (NYSE:MOT) Fortune 500 company that manufactures and markets a diverse line of electronic equipment and components, including communications systems, semiconductors, electronic engine controls, and computer systems.

About Coactive Networks

Coactive Networks is a leading provider of open solutions for connecting control systems to enterprise networks and the Internet. The company offers a full line of routers, servers, and gateways for creating powerful next-generation applications. Coactive is the market leader in providing connectivity solutions for LonWorks, the leading control network. Coactive is a privately held corporation based in Sausalito, CA. Detailed information on Coactive products, news announcements, seminars, training, and support is available on the World Wide Web at http://www.coactive.com.