

Case Study

Industry: Manufacturing & Industry

Joy Mining Machinery



The background.

Active on five continents and with a network of 55 facilities spanning China, Russia, India, Poland, the United Kingdom, Australia, South Africa, and the United States, Joy Mining Machinery, a subsidiary of Joy Global, Inc., is a worldwide leader in the manufacture of underground mining equipment. Wherever coal, iron ore, copper, gold, and other embedded materials are mined, chances are good that Joy Mining loaders, conveyors, haulers, and other products are hard at work.

Joy Mining Machinery's headquarters are in Warrendale, Pennsylvania, 20 miles north of Pittsburgh. Although the majority of the company's equipment is assembled at its main factory in the town of Franklin, approximately an hour's drive south of Erie, many other facilities in the U.S. and elsewhere manufacture various components and secondary products. Sales, warehousing, and equipment service functions are conducted at many of these locales as well.

Its objective: consistent branding, instant communication.

With Joy Mining customers and employees spread from Tychy, Poland to Tianjin, China, implementing and maintaining a common corporate culture is a challenge. To help solve the situation, the Joy Mining Machinery marketing team proposed a network of digital video displays in facility lobbies that would convey both local and companywide information, unified under a consistent graphic look.

"We knew that to control the branding and messaging, we would have to manage the network from our graphics and video production unit in Franklin," recalled Chuck Fickter, Marketing Information Manager for Joy Mining. "The only way to do that is with a powerful, easy-to-operate content management system."

The solution.

After a couple of "fits and starts," as Fickter described it, the Joy Mining team discovered the iCOMPEL™ digital signage appliance platform from Black Box. "Many of the units we looked at were complicated to use. Others didn't have all the functions we wanted," he stated. "But iCOMPEL is very easy to hook up, with very intuitive software that's easy to learn."

Suitable for both standalone and networked environments, iCOMPEL is an all-in-one device that supports the full range of content management including subscription, organisation, design, and publishing. Controlled by a standard Web browser, iCOMPEL is flexible in a variety of deployment situations. Users can combine video or live TV with scrolling text, photos, Flash, and Web content to create dynamic, multipurpose displays that serve multiple needs.

"Almost all of our 55 facilities eventually received a digital display in their lobbies, all controlled by iCOMPEL devices," said Fickter. "The screens are typically subdivided, with about two-thirds of the message area reserved for companywide content such as product information, company news, videos, and the like. Stock prices, local weather, and general news are conveyed by a crawler at the bottom of the screen. There is also a message centre that can be controlled by the local office to post specific messages like on-time delivery statistics, or to welcome guests or customers."

Fickter noted how little time was required to install the initial iCOMPEL unit — only a half hour. Training was fast as well. Before long, a dozen iCOMPEL devices were installed around the world at various Joy Mining Manufacturing locations, all controlled by the company's video production staff in Franklin.

"The Black Box customer service staff were very, very supportive. They took the initiative to follow up with us, asking what was next."
Chuck Fickter, Marketing Information Manager, Joy Mining



Case Study (Continued)

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An asset takes off.

Little did anyone know at that point how far the project would go. First, Joy Mining Machinery's engineering staff came to Fickter with an idea. "We were presented with the notion of using the digital screens to provide engineering metrics — performance data and the like. We saw the potential and immediately began rolling out the information to 19 screens around the network," said Fickter.

Next the Human Resource Department approached. "They told us about how they are required to post job bids and awards in the company's union facilities. Normally, that requires a whole day or more of driving from one location to the next, just to post information on bulletin boards," Fickter recalled. "If we installed dedicated screens in employee-only areas, HR said we could instantly eliminate that step and save the company a ton of time and money."

Possibly the most innovative idea, however, came from Operational Excellence, a company task force working to optimise manufacturing quality and efficiency. Its proposal: Use digital screens on the factory floor to display "Kanban" inventory information in real time. Kanban, a Just-in-Time manufacturing discipline, tells workers which parts are in inventory, which are in transit, and in what bins particular parts are found. It also feeds information back to offsite fabricators, ensuring that appropriate parts are being produced only as needed, and just in time for use.

Traditionally, the Kanban system uses paper tickets to relay inventory information. By switching to digital displays, the company could eliminate paper and provide faster, more detailed updates. "To execute the Kanban idea, we needed to pull information from our SAP Enterprise Resource Planning system. All we had to do was create a Web service by pointing our iCOMPEL units to the correct IP address," said Fickter.

Joy Mining has installed a number of Kanban displays at the Franklin manufacturing plant with impressive results. Its next move is to link the Franklin facility to other Pennsylvania plants as well as its South African operations. The solution will instantly communicate manufacturing and inventory information about essential equipment parts, even around the world.



Digital screens are also used to display "Kanban" inventory information in real time. These screens inform workers of which parts are in inventory, which are in transit, and in what bins particular parts are found.

Productivity and morale improve.

"We discover new uses for digital displays almost every day," Fickter stated. "A recent employee survey, for example, indicated a desire for more awareness of what different Joy Mining facilities around the world are doing. That sparked the concept of 'Joy TV' — an in-house video channel that will produce and distribute 'Facility Focus' documentaries about various Joy Mining activities and people."

Fickter, as well as the marketing and production teams, are both excited and a bit surprised by the hugely positive and imaginative response to the introduction of the iCOMPEL powered digital display network. "Suddenly, what was once intended to be simply a coordinated display system for lobby guests has become a global, interconnected and highly strategic set of tools," he said. "We're continually impressed by the potential of our displays."