

# Customer Profile

iWay Software's suite assembles powerful, pre-built components for enterprise-class integration scenarios – without custom code – delivering the fastest, most cost-effective, and simplest way to integrate business processes and achieve the promise of SOA: true reusability.

## Murphy-Hoffman Company

### Snapshot

#### Organization

Murphy-Hoffman Company (MHC), one of the largest dealers of Kenworth trucks in North America.

#### The Challenge

Eliminate manual B2B processes and improve the accuracy of exchanging common business documents, from purchase orders to parts catalogues.

#### The Strategy

Establish general-purpose EAI architecture for industry standards to create automated workflow processes between MHC and its major vendors.

#### The Results

The first application, created in just 10 days, met rigid requirements; other applications are also in production to automate the creation and exchange of parts catalogs, work orders, invoices, and other business documents.

#### Information Builders Solution

iWay Adapter Manager, iWay Read/Write Adapter for DB2/400, iWay Utility Adapter Bundle, iWay X12 EDI Adapter, iWay Internet Protocols Adapter, and iWay Consulting.



## Real-Time B2B Communication Initiatives

### XML-Based Document Exchange Sets Precedents for Automotive Industry

While most successful manufacturing companies have achieved a high degree of automation within their own operations, many inter-company business processes are still characterized by antiquated communication technology and legacy EDI systems. Murphy-Hoffman Company (MHC) is an exception.

"We source parts from Caterpillar, PACCAR Parts, Cummins, Haldex, and other companies to take care of our customers needs," says Jeff Murphy, CIO at the Kansas City, Missouri-based company. "We're using enterprise application integration technology from iWay Software to streamline inter-company communications."

As one of the largest dealers of Kenworth trucks in North America, MHC has established a multistate network of Kenworth dealers, providing more than 40,000 customers with a full range of trucks and truck-related services. The company operates in the central United States with more than 33 dealerships, three full-service transport refrigeration locations, 12 full-service leasing and rental operations, one maintenance facility, and a finance company.

**“iWay offered a mature XML solution that was broad enough to work with many different types of databases and applications.”**

One of the ways MHC meets customer needs is by taking advantage of new technologies. Each of its dealers is linked directly to manufacturers' parts distribution and technical centers via frame relay, and the IT staff has developed customized software solutions for a variety of customer needs, from bar-code scanners to vehicle dispatch systems to just-in-time inventory management applications. Now MHC is taking its software architecture a step further by using technology from iWay Software to send and receive XML-based business documents.

“All of our major software is developed and maintained in house,” says Murphy. “We purchased iWay because it gives us lots of flexibility to develop custom links between our systems and our suppliers' systems.”

### **The Road to EAI**

MHC began its enterprise application integration (EAI) odyssey by automating a routine business-to-business (B2B) process with Caterpillar, one of its leading parts suppliers. MHC frequently orders parts from Caterpillar to fulfill the immediate needs of truckers and trucking companies.

“MHC and Caterpillar wanted to eliminate multiple steps in their purchase-order process, and especially minimize the rekeying of purchase-order information,” explains Murphy. “We started to investigate technologies that could improve the throughput of the order process so parts could be delivered more quickly and accurately to our dealers.”

Formerly, the purchase-order process was governed by an RPG program, which built a flat file and sent it to Caterpillar via FTP. Caterpillar parsed the file and used e-mail to relay individual orders to its dealerships. Each Caterpillar supplier had to manually rekey the purchase-order information and fulfill the order, and MHC often lost track of the order status details. In other instances, MHC representatives had to phone Caterpillar to request parts from inventory, keeping customers waiting for as long as 20 minutes to determine availability.

Murphy and his team wanted to use XML and Web technologies to streamline the parts-ordering process by automating the exchange of purchase orders and related business documents. They envisioned a new ordering process that could transmit Common Business Library (xCBL) documents over the Web using the HTTPS protocol. xCBL is an open-XML specification for the cross-industry exchange of business documents such as product descriptions, purchase orders, invoices, and shipping schedules. HTTPS is a protocol for conducting secure, Internet-based communication.

“We looked for a tool that could speed up these B2B processes,” recalls Ken Swisher, a programmer/analyst at Murphy-Hoffman. “iWay was a leading contender with its general-purpose EAI technology.”

According to Swisher, iWay appeared to be ideal for converting information from DB2 into an XML format and moving it wherever it is needed. Also, iWay had much more flexibility for the types of data it could work with. “iWay offered a mature XML solution that was broad enough to work with many different types of databases and applications,” he says.

### **Getting Started With iWay**

MHC purchased the iWay Adapter Manager along with the iWay Read/Write Adapter for DB2/400, iWay Utility Adapter Bundle, iWay ANSI X12 EDI Adapter, and the iWay Internet Protocols Adapter. They also hired iWay Consulting to develop a prototype for the purchase-order process.

**“The iWay consultants accomplished everything we needed them to accomplish, on time and within budget. Even though we ran into some issues, they stayed the course and delivered the results that they promised.”**

“The iWay consultants helped us set up an EAI application that uses iWay HTTPS emitters to send XML documents over the Web, then listens for a response with HTTPS listeners,” explains Swisher. “In addition to eliminating errors, this new process automatically provides feedback about the status of each order. It is much more seamless and informative than what we had before.”

The team began the project on November 10, 2003, and completed the bulk of the integration work just four days later. “We engaged iWay for a one-day joint application development session to identify components and develop test cases,” says Swisher. “After that, the solution came together very quickly. We had to work through an issue with our digital certificates, which held us up a little bit, but we still moved the application into production on December 10, 2003.”

iWay Consulting uses iWay technology to dramatically reduce the custom code required to complete B2B integration projects. This makes its services comparatively affordable, with an average ratio between services and product of 2:1 (versus an industry average of anywhere from 5:1 to 20:1). With iWay, most of the consulting time is spent on architecture and integration design, not custom low-level coding.

“The iWay consultants accomplished everything we needed them to accomplish, on time and within budget,” acknowledges Murphy. “Even though we ran into some issues, they stayed the course and delivered the results that they promised.”

### **B2B Automation**

The new iWay-driven purchase-order process is now online, essentially making Caterpillar’s inventory an extension of MHC’s inventory. Customers learn about the availability of the parts they need immediately. This not only helps to boost sales, but also increases customer satisfaction.

Here’s how the B2B process works. Whenever an MHC dealer orders a Caterpillar part, an iWay RDBMS listener submits an SQL process to retrieve the pertinent records from MHC’s DB2 purchase-order file, enrich it with trading partner information, and convert it to an xCBL invoice. Then, an HTTPS agent is used to transmit the information to Caterpillar, and an HTTPS listener is used to wait for a response. Incoming xCBL order response documents are transformed to update the PO status to “accepted” or “rejected.” iWay copies the final document to a Web server where it can be viewed via a Web browser.

“With iWay, we can map the pertinent information from Caterpillar’s xCBL invoices to the same file on our end, then match the invoices to the POs, verify pricing, and – if everything matches – pay them,” says Swisher. “iWay helps automate this workflow process in a completely hands-off fashion, integrating B2B systems with legacy systems in real time with no changes to our legacy applications.”

If MHC developers had attempted to create this same set of capabilities from scratch, Swisher estimates it would have taken between 90 and 120 days to accomplish what took only 10 days using iWay. “We had never written Java™ or CGI applications for transmitting documents over the Internet, and we were very unsure about how to handle the response document Caterpillar would send after receiving a purchase order,” he admits. “Additionally, we would have had to create our own XML file and our own Web-interfacing program for sending and receiving documents over the Internet via secure sockets layer (SSL).”

## Find Out More

To see how we can help you succeed, visit us at [iwaysoftware.com](http://iwaysoftware.com), e-mail us at [info@iWaySoftware.com](mailto:info@iWaySoftware.com), or in the U.S. and Canada, call toll-free **(866) 297-4929**.

### Onward and Upward With iWay

Since the new purchase-order system went online, MHC has used iWay to complete several other EAI projects. For example, iWay enables MHC to receive and process dozens of EDI 810 invoices each day from PACCAR, the automotive manufacturer that produces Kenworth trucks. They also use iWay to combine parts information from many different vendors into a common electronic catalogue. "Each of our vendors sends us parts numbers, prices, and lots of other information, and the format varies widely from one vendor to the next," says Swisher. "Using iWay, in real time we process and transform information that we deem important into one common file. No matter what the source format is, iWay can read it and transpose it into the right format for storage in our database."

Foreseeing other EAI projects on the horizon, Murphy-Hoffman recently hired Information Builders to provide four days of on-site training for two other key developers who are now using the iWay tools: Andrew Singh and Steve Shouse. Singh says the training was helpful and it was fairly easy to pick up the technology. "The iWay design-time tooling, including mapping capabilities, is straightforward for most developers," he says. "Everything you want to connect to is built into the solution. It supports HTTPS, FTP, e-mail, X12, EDI, and flat files. Since there is no custom code involved, iWay applications are easy to understand and maintain."

### Tallying the Payoff

MHC has had iWay for less than a year, yet Murphy believes his organization has already made significant progress toward recouping their investment in the software. While the return on investment is obvious, he is not inclined to look for a direct payoff from any one particular endeavor. "Our decision to purchase iWay was not based on just one or two projects," he stresses. "It was part of a larger decision that impacts many of our IT systems. We wanted tools that could be used for many types of integration projects, and that's what we have obtained with iWay."

For example, in addition to the purchase order, invoice, and electronic catalog systems now in production, Murphy-Hoffman has major B2B projects planned with PACCAR, Cummins, and other vendors. "We want to roll out new capabilities without having to develop dozens of custom B2B integration points," says Swisher. "XML is becoming an industry standard for exchanging business documents, and we plan to be a leader in helping our business partners move in that direction."

Murphy concurs, adding that each project is a little bit different, which is why having general-purpose EAI technology is so valuable. "XML is catching on, but we must be prepared to deal with many types of information from a diverse array of information platforms," he concludes. "With iWay, we can handle information in just about any format – and do it fairly quickly. Whether a supplier wants to send me an Excel spreadsheet or a flat file from a mainframe computer, I have one product that can take care of it for me."



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