

**IN BRIEF**

- **Goal:** To be able to communicate with different vendor systems real-time over the Internet via XML. Receive real-time product price and availability information. Submit purchase orders real-time and receive invoices real-time.
- **Solution:** Modifications to the Purchase Order and inventory Management modules in MAS 200®.
- **Results:** After the modifications were implemented, the result was a success. All the real-time functionality was built into MAS 200 and was as simple as click of a button for the end-user.

**About the Company**

My Technology Company (not the actual name of company) is a direct solution provider of business grade computer hardware and software technology products. My Technology Company has four primary suppliers that they buy products from and drop ship through.

**Situation**

The IT Manager of My Technology Company described the situation as getting real-time price and availability information from their key suppliers into MAS 200® as a must to allow their salespeople to close a sale. Since hardware and software sales are low margin sales, staying competitive in the market was very important for My Technology Company, and getting real-time price and availability information would give them the edge that they needed. The IT manager also wanted to receive the suppliers' invoice information real-time so they could invoice their customers faster, which would then result in a better cash flow situation for them.

My Technology Company outgrew their accounting software and decided to purchase MAS 200 SQL from HighTower. After a very detailed process review, HighTower determined what kind of modifications My Technology Company would need to operate their business. HighTower needed to modify Sales Order, Return Merchandise Authorization (RMA), eBusiness Manager, Accounts Receivable, Accounts Payable, Inventory Management, and Purchase Order modules. This case study focuses on the modifications to the Purchase Order and Inventory Management modules, since those modifications are directly related to real-time communication between MAS 200 and suppliers' back-end systems. During the process review, HighTower determined that all the suppliers that My Technology Company purchased products from were capable of communicating over the Internet utilizing XML (Extensible Markup Language).

XML is not exactly a markup language. Instead, it's a mechanism for creating your own markup languages, and a set of standards to ensure their interoperability, stability and longevity. XML is also not a programming language. XML represents data, but requires a written application to process that data. The primary uses of XML are:

- **Exchanging information** between heterogeneous applications, enterprises, databases, etc.
- **Enabling styling and presentation** of the same information on multiple output devices and/or for different purposes and audiences.
- As a **storage format** for long-lived or structurally rigorous document-centric information, such as aircraft manuals or enterprise information models.

In My Technology Company's case XML would be used to exchange information between heterogeneous applications.

### **Challenges**

The main challenge HighTower faced in this project was to determine how to create and parse XML documents in ProvideX. After doing some research, HighTower decided to use Microsoft's XML DOM object to create and parse XML documents inside of ProvideX.

### **Solution**

After several design meetings between HighTower and My Technology Company, the required modifications for MAS 200 were defined. HighTower created a new program called "Vendor Ecommerce Maintenance." This new program enabled My Technology Company to set up a supplier as an e-commerce vendor, and enter all the required information that would be necessary for the 'real time' communication to that vendor's system.

HighTower added a new button to the Inventory Maintenance/Inquiry 'Vendors' screen to retrieve the real-time price and availability of an item from the selected vendor (if the vendor was set up as an e-commerce vendor). HighTower also enabled My Technology Company to set up separate warehouses per vendor to keep track of what the vendor had on hand at any given time.

HighTower developed a new button for XML order creation, and a new field for the Vendor Order Number on the Purchase Order Entry screen. Once a purchase order was entered, if the selected vendor was an e-commerce vendor, the XML order creation button became enabled. Clicking on this button would create a sales order in that vendor's system. The vendor's order number would then return and update the Vendor Order Number field on the Purchase Order Entry screen. The same button was also added to the Purchase Order Inquiry screen to receive the status information from the vendor's system.

Another major custom program created in Purchase Order module was the “Auto Generate XML Invoices” feature. This new program would review all the open purchase orders that were created via XML, and communicate to the corresponding vendor’s system to retrieve the invoice information for the order if it was shipped by that vendor, and create the receipt of invoice entries.

The Receipt of Invoice Update feature was modified to automatically generate sales order invoices for the purchase orders that My Technology Company received invoices for. The program also updated the cost of goods sold of the sales order line item with the invoiced cost of the purchase order line item.

### **Results**

After the modifications were completed and installed, My Technology Company started using the real-time inventory price and availability, purchase order creation, and invoice creation programs. The result was a success.

Before they had to log into vendor’s website and search for the item in order to retrieve the price and availability. Now, it is just a click of a button inside of MAS 200.

Before My Technology Company had to call, fax, or enter the purchase order online after they entered it in their accounting software – now they enter the purchase order in MAS 200, click on a button, and the sales order is created automatically in the vendor’s system. No phone calls, no faxing, and no online order entry.

In the past, My Technology Company had to rely on regular mail to receive vendor invoices, and now they run their auto generate XML invoice program several times during the day, and receive all the invoices over the Internet via XML. This feature enabled My Technology Company to receive their cash for a sale faster – about seven days earlier than with their old process.