IBM

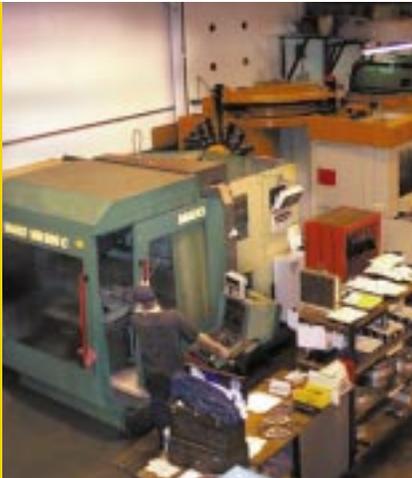# Optimized scheduling and production take flight at Metalex

IBM AS/400e and ComMIT-APS400 reduce crises with intelligent, proactive manufacturing.

Metalex Manufacturing Inc. knows that producing complex, one-of-a-kind parts requires one-of-a-kind software.

Metalex, a contract manufacturer headquartered in Cincinnati, produces prototypes and specialized machinery and parts, primarily for the aerospace and converting industries. It produces critical parts for the U.S. space shuttle, and later generations of its prototypes show up in the most advanced products for NASA and leading aeronautical companies. Some components can be machined relatively quickly; others can take more than a year. Additionally, as many as 20,000 separate operations must be tracked throughout the facility. All components and operations, however, compete for the same limited resources.

This complexity meant that Metalex couldn't rely on typical planning and scheduling systems predicated on standardized, sequential manufacturing. Metalex required an advanced system that could accommodate such unique manufacturing techniques as grouping components together based on manufacturing efficiency rather than similarity. Unlike most manufacturing facilities, Metalex will allow machinery or a work station to stand idle if work on a component would disrupt the scheduling of other products.

"Most software vendors were shocked when they saw how different our operations were," remembers Jim Alford, vice president of operations.

But ComMIT™ Systems knew its ComMIT-APS400 and IBM® AS/400e™ could handle Metalex's unique requirements. ComMIT-APS400 is an advanced planning and scheduling (APS), supply chain management and decision support system with the capability to understand, learn and adapt itself to an organization. As a result, manufacturers don't have to alter their processes to match software functionality.

Answering the smart questions

ComMIT-APS400 enables manufacturers to be intelligently proactive so they can anticipate events instead of constantly putting out fires. For example, while other systems might permit queries about inventory levels, ComMIT-APS400 enables companies to ask the smart questions like "how much inventory do we need?" Offering links to SAP® and other major ERP systems, ComMIT-APS400 can generate detailed operating plans that automatically synchronize and optimize all manufacturing operations.

ComMIT-APS400 is being rearchitected with Java™ to improve the interface, enable extensive functionality within extranets and intranets, and provide customers and suppliers with secure access to enable synchronization of the entire supply chain. Java also allows ComMIT-APS400 to be integrated seamlesslywith new enterprise and legacy systems. At Metalex, ComMIT-APS400 can even incorporate unorthodox operations like CNC (computer numerical control) machine programming into scheduling.

"We previously scheduled based on infinite capacity and dealt with the inevitable bottlenecks as they arose," says Alford. "But ComMIT-APS400 automatically redistributes the work in advance, substantially increasing our throughput and productivity. If there are scheduling conflicts, we can arrange for subcontracting or another alternative instead of incurring premium charges to solve a last-minute crisis. This capability alone has more than paid for the system."

Promises made, promises kept
Because of the improved scheduling, customers now receive more accurate delivery dates. Customers can receive weekly or monthly updates concerning percentage of completion, allowing them to fine-tune their own production or marketing plans. Metalex also avoids making commitments for products or deadlines that later prove impossible to keep, understanding that this is a key factor in continued high customer satisfaction.

AS/400e also helps Metalex keep its customer commitments. It offers the storage and data handling capabilities required to track the 20,000 operations that can be needed to produce all components. Instead of wading through a sea of green-striped reports, managers can view required information in near real-time. And, AS/400e, in conjunction with the new Java-based ComMIT-APS400, provides a scalable computing foundation for the next ten years.

Companies always search for "best-of-breed" software. But even the best-known offering can be unacceptable if it requires too many changes in customer-driven operations. By combining the operational flexibility of AS/400e with a time-tested ability to adapt to the specific requirements of any manufacturer, ComMIT-APS400 helps keep Metalex's profitability and productivity aloft.

Benefits
- Improved operational performance
- More on-time deliveries
- Higher throughput
- Proactive scheduling

Applications
- Planning
- Scheduling
- Supply chain management
- Material requirements

Software
ComMIT-APS400