MatrixOne

Changing the Way the World Brings Products to Market™

The Company

Cherry Corporation comprises nine global divisions and multiple joint ventures for the manufacture of proprietary and custom electrical switches, sensors, electronic keyboards, and controls for the worldwide automotive, computer, consumer, and commercial markets. Cherry Electrical Products is the most diversified of the operations in terms of products, applications, and customers. Cherry Electrical's commercial product offerings include snap-action and rocker switches, sold to the appliance, office equipment and industrial markets; solid-state sensing devices such as Hall-effect sensors; and standard and custom computer keyboards that incorporate magnetic stripe, smart card, or bar code readers based on customer specifications.

The Challenge

When Cherry Electrical first began evaluating software tools for the commercial product area in 1997, the company was primarily seeking a vault for its drawings and a simple front-end for making changes to the MAPICS manufacturing resource planning (MRP) system. After more closely examining its engineering change notice (ECN) process, Cherry Electrical determined that it was more important to re-engineer the process itself, which was entirely paper-based. Notification and viewing of engineering changes occurred in a central location, often requiring several weeks for finalization and approval.

Electronics

The Success

- **ECN Process Streamlined**
  Integrated MRP and manufacturing floor through eMatrix eliminates up to one week from the ECN process
- **Improved Speed and Accuracy of Customer Quotes**
  Reduced time required to determine product availability for customer quotes from weeks to 24 hours
- **Customer Collaboration**
  Customer generated drawings and specifications maintained and accessed through eMatrix

The Story

"eMatrix has enabled us to control and streamline far more processes than we originally planned. Deeper insight into our own product information and a real-time collaborative engineering change notice process helps us to accelerate the right product to market and meet our customers' needs."

Bob Herscher
Manager of PDM systems

Cherry Electrical also needed to streamline its engineering service request (ESR) system. Customer Service representatives use the information in the ESR to prepare a quote for customers, which requires significant interaction between the sales and engineering groups. In Cherry Electrical's switch business, off-the-shelf products can be modified to meet each customer's needs. The company's mainframe-based workflow system was woefully inadequate for ensuring all interested parties were involved in developing an appropriate price quote for each customer. Once quotes were developed, Cherry Electrical had no system to track and compare the status of all existing quotes.

Both Cherry Electrical engineering and manufacturing groups view drawings to ensure each product is built to the proper specifications. The time and cost of archiving and retrieving print drawings in a centrally located print room justified the selection of a viewing tool and database.architecture and support of Web access."

The Solution

Complex ECN Process Streamlined

Through eMatrix, Cherry Electrical has streamlined its engineering change notice (ECN) process. The validator of an ECN designates what departments and individuals should participate in the approval process, and then promotes it to the next stage. CAD work and verification are assigned and coordinated through eMatrix and the engineering change is entered into the MAPICS MRP system. At the end of the ECN process, all drawing objects are approved and promoted along with the engineering change. eMatrix ensures that the ECN is fully approved before any drawings are released for manufacture. The approved change is distributed through the eMatrix/MS Outlook email system. People on the shop floor navigate the ECN in eMatrix to find and view drawings. By integrating the review, MRP, CAD, and distribution processes through eMatrix, Cherry Electrical eliminates costly errors, rework and scrap and saves anywhere from three days to a week in the ECN process. Cherry Electrical is now also putting more types of documents under the ECN process, including assembly instructions and artwork from customers.

Accurate and Timely Sales Quotes Generated in eMatrix

Cherry Electrical also built its Customer Quote system on the eMatrix platform. Beginning with the ESR process for gathering manufacturing and engineering information, a workflow was developed to manage the interaction between the various departments. Cherry Electrical next incorporated its Planning and Inventory Control (P&IC) group into the eMatrix workflow. Prior to that, the P&IC group needed two to three weeks to give the sales force a quote on the lead time required to deliver a product based on the availability of a component. With eMatrix, a quote can be turned around in as little as 24 hours.

The company's Access database for tracking quotes did not provide enough visibility into the status of quotes or why quotes were not turning into closed deals. In addition to visibility into the status of quotes, Cherry Electrical needed an automatic system to follow up with sales representatives in the field as quotes became dated. Using eMatrix to track customer quotes gives Cherry Electrical much deeper visibility into all quotes to push deals to completion. Customer service and sales representatives receive automatic notices within 30 days of an initial quote to determine the current status. "With eMatrix, we've been able to use quote information to point out business opportunities. We are able to evaluate our methods and procedures to initiate more effective practices. The ability to produce the finished quote document in eMatrix is also a big benefit," comments Bob Herscher, manager of PDM systems for Cherry Electrical.

Document Management to Enhance Customer Collaboration

Rather than tracking down printed versions of drawings and part specifications, engineers and staff on the manufacturing floor can easily access part information and the associated drawings through a simple point-and-click interface in eMatrix.

Cherry Electrical continues to add new attributes and features in eMatrix. To eliminate paper-based processes, Cherry Electrical now shares its Operational Method Sheets using eMatrix. These sheets describe how to assemble a product or operate a piece of equipment on the assembly line. With eMatrix, manufacturing staff can easily locate and view assemblies and their procedures. Easy-to-use pop-up windows show design and manufacturing engineers at a glance the attributes and drawings associated with a given part. Customer drawings, which are generated by the customer to detail specifications for Cherry Electrical to meet, are also located in eMatrix.

The Bottom Line

"When we originally selected eMatrix several years ago, we simply wanted an easy-to-use front-end for a portion of our MRP system," says Herscher. "Instead, we examined our engineering change notice process in depth and found that it was far more important to re-engineer that process and manage it in eMatrix. We have found many more processes to manage with eMatrix than we initially expected."

About MatrixOne

MatrixOne, Inc. (NASDAQ: MONE) is a recognized leader in delivering collaborative Product Lifecycle Management (PLM) solutions. Together with our partners, we provide flexible solutions that unleash the creative power of global value chains to inspire innovations and speed them to market. MatrixOne's more than 625 global customers represent the aerospace/defense, automotive, consumer products, general machinery, high technology, and life sciences industries, and include GE, Procter & Gamble, Philips, Siemens, Agilent Technologies, Johnson Controls, and Honda. MatrixOne is headquartered in Westford, Massachusetts with locations throughout the world.

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