

## CASE STUDY

### SENTINEL Print Automation Drives Global Labeling for Eaton Corporation

Solution: SENTINEL

Industry: Manufacturing

## Background

Eaton Corporation is a global technology leader in electrical components and systems for power quality, distribution, and control; hydraulics components, systems, and services for industrial and mobile equipment; aerospace fuel, hydraulics, and pneumatic systems for commercial and military use; and truck and automotive drivetrain and powertrain systems.

Eaton's Electrical Sector provides electrical power distribution, power quality systems, industrial automation, and control products and services for industrial, utility, commercial, residential, and information technology markets. Eaton's Electrical Sector consolidated its worldwide label printing using SENTINEL print automation software to interface with its enterprise systems, and CODESOFT barcode label design software to manage worldwide formatting and printing.

Eaton's Electrical Sector is a global power management leader that manufactures circuit breakers, panel boxes, switchboards, tap boxes, Uninterruptible Power Supply (UPS) systems, and other electrical equipment.

## Challenges

- ✓ Find a labeling application that could efficiently accept data from any of the corporate data systems in Cleveland, Ohio, translate it into the appropriate label format and instantly send the required data to local barcode label printers
- ✓ Standalone product and shipping labeling operations, using various data access techniques, label software programs, and printers

## Results

- ✓ Labels are printed in batches, some up to 1,500 labels, and sent over the company's secure Wide Area Network (WAN)
- ✓ Enables 3-second label printing across the globe
- ✓ Print jobs are configured by the SENTINEL server and sent to the correct CODESOFT label printer
- ✓ More than 250 label designs and multiple languages are supported

# Solution

Standalone product and shipping label operations, using various data access techniques, label software programs, and printers, created challenges. Eaton sought a centralized product and shipping label solution that would support all of its operations from the data center at corporate headquarters in Cleveland, Ohio. After an extensive competitive review, Eaton's Electrical Sector turned to TEKLYNX, with its SENTINEL print automation software paired with CODESOFT barcode label design and integration software. The rollout has been successful with the TEKLYNX labeling system currently supporting operations in five plants, six service centers, and 16 satellite operations in Australia, China, Costa Rica, Finland, Mexico, New Zealand, and the U.S.

In the past, barcode and shipping labeling were handled on a local level. There were several software programs from various vendors, as well as in-house developed systems, which drove local label printers. There was no standardization across the group and there was inconsistent integration with the corporate Enterprise Resource Planning (ERP) systems.

The challenge was to find a labeling application that could efficiently accept data from any of the corporate data systems in Cleveland, translate it into the appropriate label format, and instantly send the required data to local barcode label printers.

Eaton's ERP systems run on multiple platforms, including IBM AS/400 systems with packaged and in-house developed applications, and Oracle running on HP Superdome Linux platforms. The company is gradually replacing the legacy systems with the Oracle E-Business suite.

TEKLYNX was a natural fit since it accepts Extensible Markup Language (XML) files from any system. SENTINEL monitors "mapper" folders, which can process compact and efficient XML label data as well as format information outputted by the ERP systems.

The XML file sent to the mapper folder contains all the required fields, including barcode and human readable information, as well as network routing and printer information. If label data is written to a mapper folder, SENTINEL harvests and interprets the data and using CODESOFT formats and prints the label on the designated printer.

Eaton standardized Brady and Zebra printers to ensure programming and hardware consistency across geographies. Many of the Brady or Zebra printers run continuous feed stock since SENTINEL includes cutoff instructions to accommodate different length labels based on the label design.

SENTINEL print automation software eliminates the need for manual data entry, reduces labeling errors, and simplifies the labeling process. Create your labels in CODESOFT barcode label design software, while automating your label printing process with SENTINEL.

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At first, the TEKLYNX labeling system was installed in a few Eaton locations. After the installation, Eaton IT analyst David Evans realized the additional global potential the system could have. Evans commented that the TEKLYNX approach “would give us the opportunity to develop a standardized labeling system throughout the whole business and allow us to go forward without having to change much. So, if an application moves from the AS/400 to Oracle, the XML folder will stay essentially the same and the label probably won’t change at all. It’s simpler and much less work.”

Learn more about TEKLYNX automated label printing to see how you can replace manual tasks with an automated printing process that is faster and more efficient.

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Working with Vince Manuppelli, Eaton manager of ERP applications, the TEKLYNX approach was extended across the Electrical Sector’s international operations.

Taking the labeling system to the enterprise level meant that they had to think about several operational issues, including label development processes, change management, printer standardization, languages, training, and redundancy.

Said Manuppelli, “We’ve designed a scalable labeling system that can support all our international operations from a single location. We’ve built in the backup and the reliability that’s needed for this type of large production system.” He appreciates that, “We don’t have a nightmare trying to upgrade 58 instances of the data conversion software at every location. We’ve got what we call a ‘global single instance’ of SENTINEL that is fully controlled by corporate IT staff.”

Labels are printed in batches, some up to 1,500 labels, and sent out over the company’s secure Wide Area Network (WAN). The print jobs are configured by the SENTINEL server and sent to the appropriate CODESOFT-driven label printer. Currently more than 250 label designs and multiple languages are supported.

Detailed Evans, “For instance, our Greenwood facility is served by an AS/400 application at the corporate data center in Cleveland. Our system will send a File Transfer Protocol (FTP) request to the file server, which accesses the Network Attached Storage (NAS). The AS/400 will put the data into an XML format and drop it into the ‘Greenwood’ folder. The labels begin printing in Greenwood within three seconds.”

In some cases, SENTINEL is directed to print a report as well. The report prints on a standard printer while the labels are printed on the local label printer beside it.

Plant personnel doesn’t see any of the complexity; they just see the proper label being printed locally in the designated format and language. Since the output is standardized, the label programming process at the SENTINEL end is also greatly simplified.

## Results

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Labeling applications are piloted during development and before deployment. Explained Manuppelli, "We run a series of conference room pilot tests evolving the system over time to its end state. All the while, we're debugging and testing. We use Oracle BI Publisher reports with SENTINEL. We've developed a standard Oracle XML report that looks like a label, including a barcode that could be scanned in the conference room test. It's not fully formatted but has all of the name-value pairs to simulate the label. We view them in Adobe PDF print to-file format so that we can see the results without wasting paper."

The development takes place while the plant is ordering the required printers and other equipment. When the labeling application is ready for user acceptance testing, which usually involves live equipment and testing on the plant floor, the CODESOFT designs are added.

The designs are created simultaneously on a development server. Evans administers user rights and authorizations and coordinates the label designers. He moves the design from the development server to the production server once tests have been completed and approvals received.

An enterprise system requires enterprise-level backup and security. "If you're going to do this type of solution, you have to back it up and build in redundancy," said Evans. Eaton uses a SENTINEL Backup Server, which is a mirror backup of the SENTINEL production server. The mapper folder data is stored on a separate server. All three are in Cleveland with the production and the backup servers are in two separate buildings behind full data center security.

Eaton's Electrical Sector is pleased with the results. Commented Manuppelli, "Our Oracle program, which is massive, did not have to use this product. We could've picked anything. Based on a competitive review, CODESOFT and SENTINEL labeling solutions did the most with a rich set of features. The licensing model was flexible and affordable - we can add licenses as we need them. Over the long term, we found that CODESOFT and SENTINEL was the total cost-of-ownership winner."

The installation, already large, is expanding rapidly. Concluded Manuppelli, "We're now expanding to different locations all over the globe. As we deploy Oracle, we will also deploy the SENTINEL solution. We expect to add probably 27 locations a year."



TEKLYNX International helps supply chains work better. Today, more than 750,000 companies in over 170 countries trust TEKLYNX integrated barcode and RFID label design products and the people behind its solutions to make barcode labeling operations efficient, accurate, secure and industry compliant. With over 30 years of experience, TEKLYNX is the global leader because of its reliable software and superior customer support. To learn more about how the TEKLYNX community helps companies across industries worldwide, visit [teklynx.com](http://teklynx.com) or call TEKLYNX in your region. Barcode Better™ with TEKLYNX.