Case Study – Wix Filters

Wix/Dana Experiences Significant Improvement in Finished-Goods Labeling with Solution from Inovity

Wix Filtration, a manufacturer of oil, air, fuel, cabin interior and hydraulic filters for the automotive, heavy duty, agricultural, industrial, and specialty filter markets, needed solutions. As part of the Dana Corporation, one of the world's largest independent suppliers to vehicular manufacturers and related aftermarkets, Wix's finished goods labeling system was cumbersome and inefficient at their Gastonia, NC plant.

The Challenge:
Despite modern equipment for their finished labeling operation (up to two Label-Aire print and apply units on multiple lines, Zebra and/or Sato desktop backup printers on each line, and Accusort fixed-mount scanners), Wix's software was unstable, difficult to administer, and could not perform consistently at the necessary production line volume of 70 boxes per minute. Daily system lock-ups were commonplace, causing damaging down time in a plant running multiple shifts, 24 hours per day, 7 days per week. Workstations were not connected and operators experienced difficulty in locating the precise label formats needed for their line from the hundreds of formats available. Additionally, Wix's line performance was slow and their fixed mount scanners could only verify one symbology. Customers required additional symbologies to be printed on cartons, and management required faster processing times for increased productivity and throughput. Wix also needed flexibility in their system as they were converting to Baan ERP. The VAR who installed Wix's existing software worked on solving these problems for over a year with no success. Wix felt it was time for a change.

Wix wanted a solution from one single company who could supply and take responsibility for all aspects of their entire project, (including the software, scanners, printers, service, media and supplies). If successful, the solution would be installed in seven plants across the country. Wix had a vested interest in their existing equipment, so any solution would have to use that machinery. After reviewing bids from three VARs (including their existing supplier), Wix awarded the project to Atlanta-based Inovity, formerly BarCode ID Systems, who produced and presented a working prototype of the software before the contract was even awarded. According to Inovity' President Jack Tinsley, "We knew it would be vital to prove to Wix that we could accomplish what they required when it was our turn to present the project bid. What better way to show them than with a working prototype that could outperform their existing system, even at the development stage!"

Wix's software specifications were demanding and required the following from their new system:
- Multi-platform integration. System must work with PC, AS/400 and Mainframe platforms including an HP9000.
- Stable, fully redundant and fault tolerant. System must function seamlessly, even if the local area network went down.

- Database-driven. Minimal number of user actions required to extract and validate all product and label information.
- Redirectional system output capabilities. Operators must be able to direct output from within the software to different print & apply units and scanners. Their existing system relied upon the use of two A/B switchboxes (one for the printers and one for the scanners), which also caused system crashes.
- Job queuing capabilities. Users must be able to save and release jobs to print at a later time.
- Immediate data validation and input restriction.
- Centralized administration of database and label formats. Relationship controls must be in place between any given label format and the manufacturing line that uses it.
- Verification of multiple symbologies (Code 39, UCC 128, UPC-A) based on database values. Old system could only verify one symbology (Code 39).
- Improve system performance to < 10 seconds to print each label. Existing system took up to 45 seconds to load the label format and scanner.

The Solution:
In response to the above requirements, Inovity proposed a two-tier architecture approach, which was comprised of a front-end interface and an intelligent, data-driven and fully automated print engine. Inovity wrote a custom Windows interface for the PC/LAN platform that would support data from AS-400 and Mainframe platforms. The print engine would constantly check for the existence of the data file created by the interface application, and based on the information in the file, the system intelligence could automatically create the associations between the data fields and the label design fields, use the appropriate label format, and direct output to the appropriate device.

Using Wix's existing data, Inovity created a new model and structure to dynamically find the proper label format when directed by an operator. Operators would simply select a format name and print destination, and labels would be printed and verified online within 4 to 5 seconds, not 45 seconds as with their previous system. By making the entire solution database driven, Inovity brought operating simplicity to all levels. Rather than searching through hundreds of label formats used throughout the plant, line operators would only see the label formats required by their line. Label format management, a key component to the solution, was now intelligent, not disconnected.

The Results:
The results of this project have been phenomenal. Wix has gone from experiencing daily downtime and system lock-ups to a stable, intuitive, easy-to-use system that performs as promised. Label production and verification times have dropped significantly from 45 seconds for the first label out to 4 to 5 seconds, surpassing Wix's requirement of 10 to 15 second print times by 300%. The project has now been installed in seven of Wix's manufacturing facilities throughout the country. "We are at least 200% of the original system from a functionality and performance standpoint," boasts Tinsley. "We came into this situation faced with very high system requirements, poor previous system performance, and minimal—if any—existing system documentation. I am proud to say that we have met, exceeded, and expanded upon every aspect of this system, to the delight of Wix."

Formerly BarCode ID Systems, Inovity is a business process improvement company that transforms technology into powerful, integrated solutions that drive efficiency and reduce costs. As a specialty IT systems integrator, Inovity designs and delivers innovative solutions that connect and relay crucial business information between all points of operational activity, in real time. By emphasizing workforce mobility, ERP data mobilization and business process intelligence, Inovity provides automated technology solutions for manufacturing, distribution, healthcare, retail and field service environments.

The company was established in 1993, is privately owned with headquarters in Atlanta and maintains sales and engineering offices in Atlanta, Chicago, Boston, Greenville, SC, Greensboro, NC, Columbus, OH, Huntsville, AL and Ft. Lauderdale. With innovation at its core, combined with solutions for productivity, agility, efficiency, connectivity, and visibility, BarCode ID Systems has become Inovity. Contact Julie A. Leonard, Marketing Director, 800-452-7418, ext. 9045, jleonard@inovity.com, www.inovity.com.