Quality
MAGAZINE

Quality Software & Analysis: Software Takes on ISO

June 1, 2007

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This GageTrak main menu screen is the introduction to the gage management software. Source: CyberMetrics

Today's software reflects the fact that ISO compliance is ingrained in the manufacturing world. Often manufacturers use software built around common quality standards-such as ISO 9001, AS 9100 and TS 16949-for calibration, gage management and document control, each of which plays a part in ISO compliance.

Because not all ISO customers are the same, CyberMetrics develops their software by focusing on specific elements pertaining to calibration. Source: CyberMetrics

Calibration

Because ISO standards affect calibration, the software must allow operators to improve the business and receive or maintain compliance.

US Calibration (Irvine, CA) understands quality and compliance: the company grew from a calibration lab and employs experts on calibration management who developed the software during the past eight years. Previously used in-house only, the software was released to the public last year. "We're not software people that decided to do calibration-we're calibration people that decided to do software," says Jim Simmons, CEO and technical project manager.

Simmons also emphasizes that the software must be easy to use, and should give control to the operators. US Calibration offers workflow automation software, which prompts operators to do processes and procedures in the correct order, says Simmons.

Often, people running the calibration program are not necessarily calibration management experts-they may simply be the person available for the job. Although they may be hard-working, intelligent people, they may not understand calibration compliance, Simmons says.

Simmons says US Calibration's online xTrak software aims to spearhead a change in thinking in terms of calibration management software. The software should prompt operators to do the right thing the right way, rather than just provide forms to fill in, and it should be designed with a process in mind, rather than compliance only. "Compliance is one thing," Simmons says. "Helping people know what steps to take is a whole other level."

Tools such as drop-down boxes force the operator to do things properly. "Workflow automation is one of the key benefits of quality management software, if the software is designed by people who understand quality," Simmons says.

xTrak helps with efficiency and decentralization of control. Operators can use it themselves without having to coordinate with the calibration manager. By cutting out the middleman, companies can avoid delays caused by going through a single person; the person who uses the equipment controls the status.

Because it is an online system, companies do not need to install any software. The Web-based system provides customers and vendors with options on how it can be used.

Some companies even give vendors a user ID and password so vendors can input data themselves when they service equipment. Manufacturers can review the work online and inspect it, but they do not have to re-enter the data.

This may be a little disorienting at first, as manufacturers may not be used to vendors entering data into their database, thereby decentralizing control. However, this method allows companies to better control their business, and in turn, compliance.

With increasing numbers of computer-savvy operators, Simmons sees a trend toward "user empowerment." The goal is to empower the operators, not just subject them to the program. They can actually provide input in how things work. For example, the software allows people to upload as many

documents as they like, in formats from video to Word documents.

xTrak software has become more sophisticated over the years, growing from software that tracked gages to software that now tracks an entire system. Source: US Calibration

Gage Management

CyberMetrics (Scottsdale, AZ) focuses on gage management, a crucial piece of the quality puzzle. CyberMetrics' flagship GageTrak software has been around for about 18 years, and offers all-around gage management-not just

monitoring-so customers can track gages, as well as trace results. If gages are failing, the software can determine why and when the failure started.

Though some companies still use index cards or spreadsheets to track gages, auditors prefer to see software that helps with ISO and TS-even a basic program-to ensure that the companies are doing what they say they do, says Devin Ellis, director of client solutions at CyberMetrics. When customers put forth policies, software helps monitor those. Without software, it is akin to shooting baskets blindfolded, says Ellis. "You don't know if you are succeeding, if it's going through the hoop or not."

Because not all ISO customers are the same, CyberMetrics develops their software by focusing on specific elements pertaining to calibration. "Everybody's software focuses on specific areas of ISO," Ellis says. "Gaging is a very, very small niche. It's a very small part of ISO, but has a huge effect if they're not doing proper gage surveillance or calibration monitoring. Ultimately your product is affected."

Over the years, GageTrak has changed a great deal. Originally the software did calibration surveillance and tracked measurement points. As computers became readily available, software became more sophisticated; operators were no longer just tracking due dates, but tracking entire systems. Software changed greatly in answer to an ever-growing marketplace. "Our software was relevant in more places than we've ever intended," Ellis says.

The software industry is now poised for another technology change. As customers become more global, software must work in a international environment. For example, the Beijing facility must be able to communicate gage information to the Michigan facility. The software is moving from the desktop to the network.

“As standards and compliance requirements change, obviously we will change our software to those needs and make sure customers are in compliance,” Ellis says.

Not only is software evolving, but so too are traditional software providers. CyberMetrics is evolving from a software seller to a solutions provider. This shortens implementation time and provides a faster return on investment, and it affects how the company deploys software and sells it. “For us, it is a much closer relationship with our customers. We walk away from some deals where we don’t think we’re a good fit,” Ellis says.

When looking at industry trends, Ellis says it is not about features, but about recognizing the changing marketplace. Software companies that have survived are focused more on solutions than just selling software. Today’s customers are more sophisticated: they have been using computers for a decade, and they have seen their share of bad software. They know what they want, and what they do not.

Of course, customers want software that will adapt to upcoming ISO changes. If the software is not flexible and adaptable, it will not last.

“We make sure that we follow and make the changes,” Ellis says. “The software helps them document their successes. Our software is not going to give them ISO compliance. It’s not going to stop tires from blowing up-the bulk of the responsibility is still on the manufacturer. Software fills a pretty straightforward role-it is going to give them knowledge of results. Companies should have a healthy understanding of what software will do to help them succeed.”

ISO Success

Wolverine Carbide Die Co. (Troy, MI) designs and manufactures high- precision tools and dies for the hot, warm and cold metal forming industry. The company uses Plexus software, and became ISO-certified after implementing it. ISO certification was not a top priority, but their customers demanded it and with the software, certification was possible.

Wolverine saw the software in action at another company and then asked Plexus Systems (Auburn Hills, MI) to design a system for them in 1996. “The system was very effective in helping our company,” says Nicholas Stavropoulos, vice president of Wolverine Carbide Die Co.

Later Wolverine switched to the Plexus Online Web-based system, and used it to maintain and enhance their ISO certification. Because it is Web-based, Stavropoulos likes how his staff can access it anywhere in the world. “I like how logical it is,” Stavropoulos says. “There’s still a great deal of customization you can do.”

Several other key modules stood out for him. “The document control system was awesome,” Stavropoulos says. “It’s one of the key things.” Previously, the company had used only paper for their document control, and they enjoyed benefits by switching to the online system. Wolverine says inventory management, drawing management and the part list were other key modules. He appreciates the ability to track labor time against production.

Like most companies, Wolverine’s staff initially feared the change, but later gained confidence working with the system as they discovered what it could do. Overall, Stavropoulos says it was a smooth transition.

“Our software covers all aspects of the company,” says John Ransford, Plexus Systems project manager. “Quality is just one aspect of our system.” During an audit, running the whole system helps customers demonstrate their ISO work to the auditors.

The software has changed over time to adapt to changing standards and business needs. Originally, the software was strictly hierarchical, but that has evolved. Instead of auditing the whole company, today companies can create one section audits and audit the gage control system. Later, customers asked Plexus for drill-down capabilities, which were then added.

The software also offers business process flowcharts, which show an entire process. These customer-driven features allow the companies to use the software as it best fits them. As a result, audits take less time, down from several days to one afternoon. Auditors can sit at a terminal and check business processes.

“A big change in ISO software is that companies don’t sit down with a checklist,” says Plexus’s Patrick Fetterman, vice president of marketing. “Instead they use workflow-type audits, as the audit is looking for qualifications all along the way.”

An integrated system can make the audit process smoother and more importantly, improve business processes. Previously, companies could become certified without having good business processes in place, but that is becoming harder to do. Audits now look at a range of factors and can keep drilling down and asking questions.

“The layered process audit is the most dynamic area right now,” says Ransford. “The old audit used a single checklist, but the layered process audit requires different levels of control, management, different checklists and schedules.”

With the layered process audit, companies on the leading edge of quality are often ahead of the standard. When the external auditor comes in, they will take these ideas with them and try to incorporate it into the

standard later.

Auditors today have less and less tolerance for disparate flat files, such as PowerPoint and Microsoft Word; they want to see integrated database solutions that emphasize quality, Ransford says.

Computer-savvy customers know that their processes are only as good as their software. Therefore, manufacturers would be wise to choose a system that complies with the standards while maximizing results.

For more information about the companies mention in this article, visit their Web sites:

CyberMetrics, www.cybermetrics.com
Plexus Online, www.plex.com
US Calibration, www.uscalibration.com
Wolverine Carbide Die Co., www.wolverinecarbide.com

Sidebar: Software Selection

When selecting software, consider these questions:

- First, do I know what I need? What standards do I need to comply with? Be familiar with your requirements before you start shopping.
- Consider how much you have to spend, and what type of technology is needed. If you have plants in Beijing, you will need a widely deployable, wide area network, which knocks out some options. If you just need it on a desktop, this greatly increases options.
- Look for vendors that ask questions about what you do. Companies that ask questions recognize that most business is long-term.

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