

Making Sense of Sarbanes-Oxley Tools

by

Richard B. Lanza, CPA, PMP
Founder of Audit Software.net

February 2004 issue of Internal Auditor

Lanza's opinion of CARD[®]map software

"Of all the software products reviewed for the article, CARD[®]map software demonstrated the best overall understanding of the key elements necessary for an effective enterprise risk and control governance system"

Richard Lanza February 29, 2004

Making Sense of Sarbanes-Oxley Tools

By Richard B. Lanza, CPA, PMP
Manager of internal audit at a *Fortune* 200 retailer
Founder of AuditSoftware.Net

Auditors looking to automate Sarbanes-Oxley compliance tasks face an abundance of software options. Understanding how the tools break down by category may help shed light on this rapidly growing product niche.

NEW TOOLS DESIGNED TO FACILITATE compliance with the U.S. Sarbanes-Oxley Act of 2002 are arriving on the market with increasing regularity. Software vendors have been flooding potential buyers, including internal auditors, with a flurry of advertisements, many of which claim to have the definitive solution for meeting the act's requirements. In fact, many vendors are likely ramping up their marketing efforts in light of the upcoming June 15 deadline for compliance with Section 404 of the act.

To many auditors, the onslaught of new product offerings is no doubt a source of some confusion. The sheer number of options can be overwhelming, making it difficult to sort through this relatively new category of tools. The products become easier to discern, however, when examined along commonalities and grouped accordingly.

Essentially, Sarbanes-Oxley tools can be divided into five distinct categories: risk and control management, audit management, data analysis, employee training, and Sarbanes-Oxley section compliance. The following descriptions of these categories, as well as the [matrix of product offerings](#), may help auditors better understand the current playing field and make sense of the growing array of products.

Sarbanes-Oxley Compliance Tools							
Vendor	Product(s)	Web site	Risk & Control Management	Audit Management	Data Analysis	Employee Training	Section Compliance
ACL Services Ltd.	ACL	www.acl.com			X		
Proquis Ltd., Proquis Inc.	allCLEAR Flowcharter	www.allclearonline.com	X				
ANGOSS Software Corp.	KnowledgeSTUDIO	www.angoss.com			X		
Applimation	Change Management Suite, Corporate Governance Suite, and Data Management Suite	www.applimation.com	X				
Approva Corp.	BizRights	www.approva.net	X				
IAD Solutions	Audit Leverage and Project Plus	www.auditleverage.com		X			
Automated Audit Flows	Automated Audit Flows	www.aafaudit.com	X	X			
BI3.net	Audit Intelligence	www.bi3.net			X		
CARDdecisions Inc.	CARDmap	www.carddecisions.com	X				
CaseWare Inc.	IDEA	www.caseware.com	X				
	Greenware	www.caseware.com			X		
	Caseware Working Papers	www.caseware.com		X			
CashFlow Guardian	CashFlow Guardian	www.cashflowguardian.com			X		
Control Solutions International Inc.	SOCET	www.controlsolutions.com	X				
D'Arcangelo & Co. LLP	Magique	www.darcangelosoftwareservices.com	X				
	Galileo	www.darcangelosoftwareservices.com		X			
DATAS	DATAS	www.nigrini.com			X		
	DATAS Sarbanes-Oxley for Access	www.nigrini.com					X
DMH Solutions Ltd.	CASA, CSQ, and TORRE	www.dmholutions.com	X				
Idea Sciences Inc.	CoNexus	www.ideasciences.com	X				
Jefferson Wells International	Risk Assessment Tool	www.jeffersonwells.com	X				
Methodware	Enterprise Risk Assessor, Operational Risk Co-Assessor, Risk Advisor, and Questionnaire Builder	www.methodware.com	X				
	Audit Builder and PRO Audit Advisor	www.methodware.com		X			
Microsoft Corp.	Visio	www.microsoft.com	X				
	MS Access	www.microsoft.com			X		
	MS Excel	www.microsoft.com			X		
	MS Powerpoint	www.microsoft.com				X	
	MS Project	www.microsoft.com		X			
Movaris	Certainty	www.movaris.com	X				
NetMap Analytics Pty Ltd.	NetMap Analytics	www.netmap.com			X		
Nth Orbit Inc.	Certus	www.nthorbit.com	X				
onProject Inc	S-O Comply	www.onproject.com	X				
Option Technologies Interactive LLC	OptionFinder	www.optionfinder.com	X				
Paisley Consulting	Risk Navigator and Focus	www.paisleyconsulting.com	X				
	AutoAudit and Magnum.	www.paisleyconsulting.com		X			
Patton & Patton Software Corporation	Flowcharting 5	www.patton-patton.com	X				
Pentana	Pentana Audit Work System	www.pentana.com	X	X			
PeopleView Compliance Group LLC	ComplianceSight Survey Tool and SkillSight Competency Assessment Tool	www.pcg-sox2002.com	X				
PricewaterhouseCoopers	TeamMate	www.pwcglobal.com		X			
	Internal Controls Workbench	www.pwcglobal.com	X				
Protiviti Inc.	SarbOx Portal	www.protiviti.com	X				
Resources Connection Inc.	Resources Audit Solutions	www.resources-us.com	X				
Risk Wizard Pty Ltd.	Risk Wizard	www.riskwizard.com	X				
Serious Magic	Visual Communicator	www.seriousmagic.com				X	
Sirius Solutions LLP	Sirius Online Surveys	www.sirsol.com	X				
Stellent Inc.	Stellent Sarbanes-Oxley Solution	www.stellent.com	X				
TechSmith Corp.	Camtasia Studio and SnagIt	www.techsmith.com				X	
WizSoft Inc.	WizRule, WizWhy, and WizSame	www.wizsoft.com			X		

Note: Product listing represents only a sample of tools currently available and is not meant to be all-inclusive.

RISK AND CONTROL MANAGEMENT

Risk and control management software assists in the documentation of risks, potential risk-related losses, controls, issues, recommendations, and action plans for risk mitigation, and facilitates and documents controls testing as well. This category of tools consists of three main components: flowcharting tools, risk databases, and employee survey software.

Flowcharting Software Given the complexity of Sarbanes-Oxley compliance efforts, effective workflow management is critical to project success. Organizations need to ensure that process owners receive appropriate business information, control owners are notified of risks that require mitigation, exceptions are identified, and management understands key compliance priorities.

Flowcharting software can be used to draw business processes so that risks and controls affecting the compliance process can be identified more easily. The software can also be used to map financial statement accounts, risk probabilities, loss impacts, testing procedures, control gaps, and action plans.

Users of flowcharting tools may be able to identify risks that would not be apparent when preparing a walk-through memo of the process. By looking at a visual representation of processes — versus long text descriptions — inefficiencies and segregation of duties issues may be easier to spot, especially when working with higher management levels that are accustomed to seeing data "boiled down" to its essence.

Risk Databases Preloaded knowledge-bases of common risks and controls enable users to plug in the appropriate information for their given process quickly. These resource tools are often organized by both process and alphabetical sequence and aligned with established control models such as The Committee of Sponsoring Organizations of the Treadway Commission's *Internal Control—Integrated Framework*, the Canadian Institute of Chartered Accountants' *Guidance on Control*, or the Basel Committee on Banking Supervision's *New Basel Capital Accord* (Basel II).

The database tools facilitate identification of potential risks and help provide solutions for risk management. For example, a database containing common risks associated with improper reporting of period-end balances would likely include information on fixed asset accounts. Under this heading, the database might list the potential risk that fixed asset additions are not completely processed in the financial statements. For this risk, the software would then present a set of mitigating controls such as fixed asset subledger to general ledger reconciliations or an integrated accounts payable system that automatically updates the subledger with any purchases of assets.

Although preloaded databases can serve as a useful guide for risk assessment, they do not necessarily represent a comprehensive solution. When documenting risks and controls, process owners using the software will still need to take their organization's unique characteristics into account, rather than simply checking off listed items on screen.

Employee Surveys Several types of survey tools are available for Sarbanes-Oxley projects. One form of survey enables participants of group sessions to answer questions through the use of electronic voting devices. This method ensures an anonymous, democratic, and quantified assessment of controls through facilitated sessions and helps save time by enabling users to assess process owners' collective understanding of the control environment quickly. Another survey type allows users to complete manual tasks more efficiently by gathering data — such as code-of-conduct signatures and business process control sign-offs — online rather than in written form.

A third form of survey tool facilitates assessment of the organizational control environment by asking anonymous questions using Web forms. These tools use a Web-based platform to launch the survey and disseminate results and can be managed internally or through an outside party. Some products can automatically generate reports as data is collected. The software capitalizes on the fact that people, not financial statements and computers, commit fraud and that many employees want to share what they know about organizational control issues. For example, according to the Association of Certified Fraud Examiners' 2002 *Report to the Nation*, roughly 45 percent of fraud is detected through employee and business-partner tips. Therefore, the tools help tap into the valuable information on fraud detection that often comes from workers, not databases, extending data analysis beyond lifeless financial and transactional data and into the vibrant data stores in employees' and business partners' minds. Not only

does this form of analysis broaden the organization's risk and control awareness, but gathering information from a large number of people can also increase the predictability and confidence levels of the assessment.

AUDIT MANAGEMENT

Audit management tools can help auditors meet the extensive documentation requirements associated with Sarbanes-Oxley projects by facilitating collaboration and enabling consistent documentation of controls testing. Specifically, these tools are designed to assist with processes such as generating workpapers and issuing reports to management. By automating administrative tasks, the software allows auditors to spend more time on investigation and problem solving.

Features offered with these products often include:

- Templates for collecting consistent audit testing data, such as when tests were completed and by whom.
- An automated workflow system for testing review and approval. As work is completed and approved in the field, auto-alerts can be sent to management to complete the review process. Upon management approval, a similar alert can be sent back to the work team.
- Web capability for communicating with mobile auditors.

Many tools in this category also provide project management capabilities and are designed to facilitate work scheduling and resource allocation

processes. The products aim to help practitioners plan and coordinate the audit team's Sarbanes-Oxley efforts, in light of the potential complexity and scope of projects geared toward compliance with the act.

DATA ANALYSIS

Analysis products that can assist with Sarbanes-Oxley compliance consist of querying, data mining, and financial statement examination tools. Each of these tools is designed to facilitate analysis of organizational data to identify risks that may not be apparent on the surface and can be used to validate that controls are effective.

Query Tools Query tools enable users to ask questions of their data. Querying can be applied to the organization's risk and control repositories to identify areas that may require increased testing focus or process improvements. As Sarbanes-Oxley efforts become part of the organizational fabric, this type of assessment could also evolve into a continuous monitoring program, facilitating compliance with the Section 409 requirement that companies publicly disclose material changes to financial condition or results of operations on a "rapid and current basis." To that end, query tools could be applied, for example, to accounts payable transaction data posted to repairs and maintenance accounts. The tools could be set to run weekly and identify postings to repairs that exceed a certain dollar amount or that are associated with a particular vendor, increasing the likelihood that these items should be capitalized as a fixed asset rather than expensed.

Querying can also be applied to the testing phase of the project, providing increased assurance by covering 100 percent of company business transactions. Comprehensive testing can help ensure that critical controls are operating effectively. For example, an accounts receivable aging report that is primarily used in the calculation of bad debt expense could be simply recalculated based on invoice date to ensure it is providing accurate results.

Some query tools can be configured to run alongside enterprise resource planning (ERP) systems, thereby supplying an additional control layer by providing exception reports. These tools are normally written specifically for market-leading ERP packages and are tailored to the package's subtle nuances. Examples of exceptions that might be identified by ERP-specific tools include transaction data that doesn't meet specified requirements, inadequate user segregation, and unauthorized changes to system configuration/application controls.

Data Mining Software One key requirement of query tools is that users must know in advance what questions to ask. By contrast, data mining tools look for trends or anomalies without knowledge of the meaning of the data, which provides a level of control testing beyond what is typically completed as part of a standard test plan.

Given that audit findings are often discovered accidentally, data mining tools actually emulate the process by which most successful investigations are conducted by performing expansive reviews without restricting the investigation to predefined assumptions.

Using statistical formulas, for example, the tools could automatically look for relationships among sales, accounts receivable, and bad-debt information. The software would attempt to postulate the key factors driving bad-debt expense based on the associated sales and receivable data and identify anomalies or trends. The user, however, would not be required to define criteria for the search beyond the general areas to be investigated.

Some data mining products display exceptions as lists for further investigation, whereas others create a pictorial representation that can be analyzed by using drill-down capabilities. The auditor can then see any new trends and investigate further as needed.

Financial Statement Analysis Tools

Akin to data mining software, financial statement analysis tools can provide quick views of financial data relationships. Through automatic feeds to ERP systems, these tools can calculate a range of vertical, horizontal, and ratio analysis tests. The tools can also derive trends by month or division and display results in both tabular and graphical form. Using simple drill-down technology, the tools can identify significant findings, or "shockers," that management should have seen but did not because they neglected to examine relevant trends. This type of analysis can open up new areas of risk and control assessment, highlighting potential problems that auditors may not have originally thought to investigate. Furthermore, some of these tools provide fraud-specific views that list only those indicators that are most likely to highlight fraudulent transactions. For

example, if an auditor is particularly concerned about inflated revenues, he or she can display all ratios and indicators — derived from past research of financial statement failures and pre-loaded into the software — that are associated with this type of activity.

EMPLOYEE TRAINING

To carry out Sarbanes-Oxley compliance efforts effectively, employees need to be competent in areas such as control and risk assessment, general Sarbanes-Oxley requirements, and fraud awareness and prevention. For many organizations, these areas represent new skills that must be taught to those involved in the compliance process. Software-based training tools can help companies deliver this information to their employees.

Training software can be used to capture audio/video information — using a standard microphone or PC video camera — for slide-show presentations. The tools can also be used to record audio, video, and screen-capture data to facilitate production of in-house training videos. In addition, the software includes tools that enable users to package all of the audio/video components into a menu system for placement on a CD-ROM or the Web.

Some training tools enable users to maintain a document repository not only of training resources, such as online audio/video content, but also of training guides, key articles, and other company-specific documentation. For example, the document repository could maintain an online and real-time updated set of company policies and procedures. The

repository could also house best practice documents for key processes.

SECTION COMPLIANCE

Although the audit community has focused most of its attention on Sarbanes-Oxley Sections 302 and 404, the act actually contains more than 50 sections that require an internal compliance assessment. Internal auditors can use database software to store pertinent information on the steps taken by management to ensure overall compliance with each of the sections.

Auditors can either develop compliance databases internally, using simple database tools, or purchase pre-developed vendor packages. The tools can be used to facilitate access to key information on section compliance by consolidating it in one central location. Examples of sections that might warrant compliance documentation include those that cover board membership, external audit services, and conflicts of interest.

GENERAL SELECTION CONSIDERATIONS

Although software needs will vary from one company to the next, some general guidelines for selection might help to narrow the field. Auditors may want to consider the following criteria before making a purchase decision.

Vendor Stability Given the multitude of Sarbanes-Oxley products currently offered, vendor risk may be high, as some competitors could be forced out of the market. Auditors can mitigate this risk by seeking vendors with a large user base and a long track record of serving the audit community.

Time-honored tools, however, may not be the best choice for every company. Especially given that newcomers may offer innovative approaches, auditors should not necessarily limit their search only to well-established products.

Flexibility Because Sarbanes-Oxley's underlying requirements are dynamically changing, software should be flexible to allow for growth. For example, Section 409 requirements on what constitutes "rapid and current reporting" have not yet been defined, and forthcoming clarifications could affect any tool that facilitates reporting in this context. Auditors should determine the extent to which prospective vendors have considered the possibility of changes to the act's provisions and find out whether their software will be able to meet future needs.

To further maximize their investment, internal auditors may want to consider software that can facilitate audit activities beyond Sarbanes-Oxley requirements, such as performing entity-wide risk assessments and assessing the overall control environment. Auditors should also keep in mind that some vendors are starting to create "control portals" that allow organizations to summarize all of their risk, control, and data analysis in one unified location.

Operating Platform One of the easiest ways to ensure cross-platform compatibility is to work with tools that operate via a Web browser. This way, the end-user machine needs only a browser to access the application.

When evaluating platform-specific products, auditors should check with their information systems department to

ensure the platform is fully supported by the company's existing infrastructure. Auditors may also want to consider working with an open-source software code to allow for in-house product maintenance.

Language Independence Given that Sarbanes-Oxley applies to countries outside North America, some firms may require their software to operate in foreign languages to accommodate non-English speaking users. Some tools offer multiple language support "out of the box," thereby side-stepping the expense of translation.

LOOKING AHEAD

The application of automated tools to the Sarbanes-Oxley effort has several implications for company processes beyond compliance with the act. In many companies, for example, Sarbanes-Oxley projects represent the first time business process owners have been required to take genuine accountability for their controls. Increased attention to control issues, combined with the technology's information gathering and data management capabilities, may lead to overall improved business processes and facilitate sharing of best practices throughout the organization. Furthermore, companies may use Sarbanes-Oxley as the impetus for an enterprise risk management program, rather than only focusing on financial reporting risks.

The new software tools may also encourage companies to conduct more robust analyses of their processes than ever before. The data collected on risk and controls can be analyzed for trends, best practices, and areas that may merit increased organizational focus. Furthermore, application-controls testing will be under additional scrutiny, potentially leading to improved analysis of company databases. This, in turn, could result in improved organizational business intelligence, cost recovery, and fraud detection savings.

For the short term, however, many firms are turning to the technology for its immediate ability to help manage Sarbanes-Oxley projects, which, by itself, can be a formidable task. Prospective buyers can easily become overwhelmed by the vast number of products currently offered and, in the confusion, focus only on near-term objectives. The best purchase decisions, however, will likely result from keeping both immediate and long-term goals in mind and considering what the tools may be able to accomplish beyond compliance with Sarbanes-Oxley.

The author's opinions are solely his own and do not necessarily represent the policies or positions of his employer.

To comment on this article, e-mail the author at rlanza@theiia.org.