magnetic-stripe card, the company is able to collect detailed data about their activities at its 40,000 slot machines and hundreds of gaming tables and betting counters. Then, using software called SeePower provided by locally based Compudigm International, tens of thousands of data points are displayed in the form of a contoured, color-coded "heat map" that appears translucently over the appropriate casino floor plans. Red may indicate high spending, while blue may show the cooler, less-active parts of a casino. Time-coded sequences of such data can even be shown in animated form to reveal the paths that certain visitors tend to follow during the course of their stays.

What's driving the use of data visualization is not simply speedier computers or better display screens, it's the enormous volume of data now available for analysis. What's more, the volatility of the current business environment is making visualization a vital element in such management tools as executive dashboards, balanced scorecards, and enterprise portals. While rarely flashy, dashboards are the current mainstream in data visualization at most businesses and can be tailored by job function to provide a quick glimpse at key performance indicators.

New visualization algorithms and techniques are being developed with corporate users in mind. With its VisualMiner software, for instance, Fujitsu has come up with a way to show the relationships between many different dimensions of data in a single diagram. Users can drag and drop the variables they're interested in and immediately see any correlations that may exist. Actuality Systems has developed a device that displays data as a remarkably realistic-looking, three-dimensional object within a sort of crystal ball. And Infommersion's new software enables Excel spreadsheet models to be converted into "live," interactive PowerPoint slides: pull on a slider bar indicating SG&A costs, for instance, and a gauge showing net profits will move accordingly. If that doesn't keep a finance audience attentive, what will? *—J.V.*

18 RISK MANAGEMENT

Although the term itself risks overuse and confusion, "risk management" may provide a way to improve internal controls.

CFOs and thrill-seekers may be the only people whose ears actually perk up at the word *risk*. Understanding, preparing for, and responding to risk are key elements of the job, and now, thanks largely to current events, technology is being brought to bear in the still rather hazily defined area of risk management.

"There's a mad scramble going on," says John Van Decker, a vice president at Meta Group. "Sarbanes-Oxley is going to be with us for the long haul, and you have to show you have the right internal controls in place. Spreadsheets and rudimentary databases will ultimately need to be replaced by industrial-strength software to show how documents move from A to B and how workflows move through the maze of homegrown systems you have today."

That is, while risk can mean many things—and even a more-focused term like enterprise risk management (ERM) can be applied to everything from computer security to financial modeling—thanks to the Sarbanes-Oxley Act of 2002, risk management has become nearly synonymous with compliance, or, more accurately, the internal controls that satisfy compliance requirements.

Sarbanes-Oxley has had the sort of catalytic effect normally associated with cries of "Fire!" in a crowded theater, and the stampede of vendors claiming to help corporate clients install various forms of "internal controls" smacks of desperation. And yet there are new requirements to be met, and IT seems likely to play some role. As with Y2K, which (if any) of these newer technologies companies buy may depend on whether they opt for a quick fix or decide to overhaul systems and processes beyond what the letter of the law requires.

Take Compli, for instance, a company that provides a Web-based system for managing employee awareness regarding workplace policies. Until recently, the form of risk most relevant to Compli's sales pitch was that of lawsuits stemming from, say, sexual harassment or workplace discrimina-

ENTERPRISE RISK MANAGEMENT: TOWARD A DEFINITION

- **Makes each area manager** responsible for documenting and evaluating financial controls in his or her own area. People closest to each business unit manage the data, which improves accuracy and completeness.
- **Identifies areas with inadequate** control measures so action plans can be initiated to resolve problems.
- **Tracks the progress of outstanding action plans**, describes who is responsible for those actions, and sets the expected time for resolution.
- **Protects against fraud** with systematic data management that ensures multiple reviews and verification.
- **Raises the level** and precision of reporting to management.
- **Puts "localized knowledge" to work.** Area managers become empowered to understand the impact of their roles on corporate results.

SOURCE: PAISLEY CONSULTING

tion. Its training and accompanying audit trail offer proof of good-faith efforts in these matters, something companies could bring to court. But now, Compli says its services are just as useful in bringing something to the Securities and Exchange Commission or to boards that want to make sure audit processes are in place, understood, and being followed scrupulously.

In a similar vein, Movaris provides a Web-based system that documents, monitors, tests, and reports on all internal financial controls and control activities, and can proactively remind individuals of every regulatory task they're required to perform and alert them to any time schedules they must adhere to. Nth Orbit is another firm providing software that monitors compliance activities in real time, enforcing corporate procedures and recording evidence that they've been followed.

A BIGGER PICTURE

But companies should be careful not to let *risk* and *compliance* become synonymous—or, more to the point, to allow IT products and services companies to co-opt the term for a narrow set of applications. Next year the Enterprise Risk Management Framework being developed by the Committee of Sponsoring Organizations (COSO) of the Treadway Commission, which is a private-sector initiative to improve financial reporting, will be released, having completed a public-comments phase last month. The framework is an ambitious attempt to clarify a process by which a company's board, senior executives, and other stakeholders can identify and manage *all* types of risks in the context of a company's risk appetite and overall business objectives.

While COSO stresses that in this regard ERM is much broader than regulatory compliance, it does acknowledge the critical role that effective internal controls will play. That will no doubt inspire IT companies to emphasize the efficacy of their products in assessing risks beyond noncompliance. Watch for ERM, therefore, to generate even more buzz—and confusion. *—J.V.*

19 ELECTRONIC PAYMENTS

Moving money over the Internet has proven more evolutionary than revolutionary, but a shift in focus may spell the end for "the float." By Julie Sturgeon

Moving money by wire must qualify as the original form of E-business: its roots can be traced back more than 100 years. But the relatively new field of E-invoicing, plagued by the clunky terms electronic bill presentation and payment (EBPP) and electronic invoice presentment and payment (EIPP), has been slow to take hold. However, it may get a boost next year, thanks to the rise of yet one more abbreviation, FSC, or financial supply chain. While FCSs can encompass many technologies, from E-procurement to enterprise spend management (see *CFO IT*, Fall, page 23), the ability to send bills and make payments electronically is key.

Philip Philliou, vice president of E-business and emerging technologies at MasterCard International, says, "Financial supply-chain management keeps capital and information flowing, and given the demands of Sarbanes-Oxley and the overall state of the economy, it's critical companies make it work for them."

Some companies saw the appeal of EIPP (the term generally applied to business-to-business transactions, while EBPP is more often used to describe consumer-targeted E-billing and payments but is often used interchangeably to apply to both B2B and B2C markets) early, and a number of technology firms have sought to meet their needs. But to date, this has involved cobbling together a system of "point solutions." As Joe Squeri, CFO at Choice Hotels International, notes, "We've been working on this since 1996 and still have disparate systems that don't do everything we need as far as invoicing and billing. Everybody