



# EMTEC ADVISER

INFORMATION TECHNOLOGY SOLUTIONS AND STRATEGIES

Vol. 13 No. 3 July/August 2010

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## Transforming IT

*Recent acquisitions boost Emtec's ability to provide clients with game-changing technology solutions.*

For years, an organization's IT infrastructure consisted of a series of fairly rigid solutions designed to address individual business needs. Web, application and database servers hosted multiple applications that were largely isolated from each other, delivering very specific functions. As a result, IT organizations focused primarily on supporting users and keeping infrastructure up and running in a reactive role.

IT advances are now driving a fundamental shift in the role of the IT organization. Organizations are looking to more closely align their IT infrastructure with business objectives —making an investment where there is the best chance for growth. This overarching strategy is rapidly transforming IT from a support division to one that proactively drives and facilitates business innovation.

Emtec is uniquely qualified to help organizations and IT divisions make this



critical transition. Widely respected for its value-based management methods, best-in-class technology, application development services and strategic IT consulting, Emtec has broadened its ability to support IT transformation initiatives with a series of recent acquisitions that have expanded its services portfolio and increased the depth of its engineering bench.

### Expanded Portfolio

The June acquisitions of Secure Data, Inc. (SDI) and Xcellor both enhance Emtec's services portfolio with the addition of a unique set of services and expansion of one of the firm's existing offerings. The acquisition of Xcellor, a leader in high-performance business intelligence and data warehousing solutions and consulting services, allows Emtec to now offer a new Information Management practice. The SDI acquisition, meanwhile, adds scale to Emtec's existing application-development prac-

tice. SDI specializes in developing financial and Web business applications for both federal government agencies and commercial clients.

"The world is changing, and the IT department can no longer just be a 'technology provider' delivering PCs or support and primarily concerned with minimizing business disruption," said Sunil Misra, Chief Strategy and Delivery Officer, Emtec. "IT management is moving away from infrastructure support toward more of a strategic role — focusing efforts on technology that will directly contribute to growing the business.

"Simply put, our job is to help you make IT work for maximum return and value to your organization. The services and the talent we've added to our portfolio through these acquisitions enhance our ability to help clients transform IT into an investment that returns true value to their organizations."

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The Adviser

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## IT THE WAY IT'S MEANT TO BE

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## Bluetooth 4.0 Approved

A new low-power wireless networking specification for Bluetooth has been approved, and the technology will start appearing in devices later this year, the Bluetooth Special Interest Group (SIG) has announced.

Devices based on the Bluetooth 4.0 specification are expected to consume nearly 90 percent less energy than current electronic items, allowing future wireless devices to operate for years on just a tiny, button-sized battery.

"Bluetooth low energy will be a significant contributor to the overall wireless sensor network market, representing nearly half of all shipments in 2015," said Kirsten West, principal analyst with West Technology Research Solutions. "The advantage to this new protocol is that it is totally optimized for low-power battery operation."

As with previous versions of the specification, the range of the Bluetooth 4.0 radio may be optimized according to application. The majority of Bluetooth devices on the market today include the basic 30-foot range of the Classic Bluetooth radio, but there is no limit imposed by the specification. With Bluetooth 4.0, manufacturers may choose to optimize range to 200 feet and beyond, particularly for in-home sensor applications where longer range is a necessity.

## Data Center Efficiency Standard Set

A collective of organizations from the U.S., the U.K., Europe and Japan have collectively reached an agreement on the guiding principles of data center energy efficiency and the metrics for measuring and reporting the effectiveness of "green IT" initiatives at the global level.

Measuring data center energy consumption has previously been tricky because corporations use their own methods for collecting such data, and units of measure vary from country to country. However, the Green Grid, an industry consortium that includes such notables as Dell, Intel and Microsoft, announced that "power-usage effectiveness" (PUE) would become the standard metric for measurement. It will be able to show how much power is being used by IT equipment in server racks and also identify the amounts being wasted through cooling and lighting.

The U.S. Environmental Protection Agency, the European Commission Joint Research Centre, the Japan Ministry of Economy, Trade and Industry, and the Green IT Promotion Council (a Japan-based industry group) have agreed to use the metric.

"The ultimate goal is to create a set of globally accepted metrics for data center energy efficiency. One of the first, and perhaps most important factors to successfully achieving this aim is establishing a unity of communication," said Tom Brey, IBM representative and Secretary of The Green Grid. "The Green Grid is working with organizations around the world to develop a clear and well-defined language for the way we communicate about energy efficiency metrics, which will give us a common measuring stick for all data centers regardless of their location. With that type of consistency, we can start driving behavioral changes in the industry."

## Cybercriminals Using Blended Attacks

Sophisticated multi-stage ("blended") attacks combining messaging and Web elements are allowing cybercriminals to improve the effectiveness of their attacks, according to Web security firm Commtouch. The firm's Threats Trend Report for Q2 2010 finds that fraudsters, malware distributors and spammers used messaging and search results tied to trusted brands such as Apple and Google, holidays such as Mother's Day, or current events such as World Cup soccer to lure victims to sites hosting spam advertising, malware or phishing.

"Cybercriminals have been forced to change their techniques to evade improved detection technology," said Asaf Greiner, Commtouch vice president, products. "Complex multi-stage attacks with improved social engineering are proving to be the preferred technique."

During Q2 2010, Gmail and Yahoo kept the top spots as far as spoofed domains for e-mail distribution, but they have been joined in the top six by Twitter. The Twitter domain was faked in a widespread mailing designed to lure users to a "password reset" Web page that contained malware.

Commtouch's quarterly trend report is based on the analysis of more than 2 billion e-mail messages daily. The Q2 2010 report notes that spam levels averaged 82 percent of all e-mail traffic throughout the quarter, bottoming out at 71 percent at the start of May and peaking at nearly 92 percent near the end of June. These numbers are slightly lower than those detected in Q1 and equate to an average of 179 billion spam messages per day.

## Cover Story

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### Making Data Useful

Emtec's new information management practice will create business value by allowing clients to gather and correlate data in order to monitor business performance, analyze trends and measure results. Unlike previous business intelligence platforms that generated byzantine technical analysis of little help to most business users, Emtec's focus will be on presenting information via an easy-to-use graphical "dashboard" that gives users an understandable view of real-time data from accounting, enterprise resource management (ERM), customer relationship management (CRM) and other systems.

Best of all, today's information management tools can deliver relevant information to different audiences in ways that are most meaningful to them. Casual users, such as sales staff and some operations managers, can get dashboard views and reports that provide an uncluttered display of just the information that is relevant to them. Executives can get dashboards and scorecards that provide a summary of key metrics describing organizational health across lines of business. Power users, such as business and financial analysts, can access more sophisticated reports with the freedom to explore and analyze data from many sources.

Xcellor founders Peter LePine and Saj Patel, who will manage Emtec's information management practice, bring proven experience with most major data integration products, database management technologies, and business intelligence platforms. They have particular expertise using Agile project management methodology coupled with IBM's Unified Information Management portfolio of products to deliver a complete, integrated solution for managing, integrating and leveraging information.

"The capabilities from Xcellor provide a vast number of new opportunities for Emtec clients," said Dinesh Desai, Emtec Chairman, CEO and President. "Emtec is continually focused on further enhancing our services and solutions, and this acquisition demonstrates our ability to align our offerings with client demands. We look forward to providing best-in-class offerings in the information management area across our verticals."

### An App for That

The SDI acquisition adds critical project-based application development capabilities for Emtec and will be a cornerstone of the company's application-services practice in North America. It is the second application-development acquisition made by Emtec this year. The previous acquisition of SARK Infotech provided Emtec with a strong platform for the development of embedded software, Web applications and more. The SDI portfolio provides additional application development and consulting expertise, as well as proficiency with the Microsoft SharePoint platform.

SDI is a leader in leveraging SharePoint as an application development platform for building rich, collaborative Web applications and integrating with other line-of-business systems. SDI has helped both public- and private-sector organizations use SharePoint to develop sophisticated applications such as business intelligence, content archival, project management and more. The platform has robust application and data integration capabilities, making it easier to pull information from databases and other applications and integrate it directly into Web services.

SDI also has extensive experience creating business intelligence solutions using SQL Server, Performance Point and SQL Reporting Services. In addition to providing custom application development and collaboration tools, SDI has a strong background in solutions such as business process redesign, network management, security and messaging platforms — all of which complement Emtec's existing portfolio.

The SDI acquisition will enhance Emtec's already robust capabilities and experience in the federal government vertical. SDI (based in O'Fallon, Ill.) has a long history of working with federal government agencies, particularly the Department of Defense (DoD).

"SDI is an extraordinary firm with exceptional individuals providing professional services to the DoD community," said Brian Mandel, Executive Vice President, Public Sector, Emtec. "Adding this to our federal portfolio is significant as it continues to enhance our services offerings."

Ultimately, the two acquisitions add to Emtec's ability to draw upon practical experience across a wide range of industries and technologies to help clients apply proven solutions to key business challenges. As organizations seek to more closely align their IT infrastructure with business objectives, Emtec is committed to investing in the tools and the people needed to help clients leverage technology to reduce operating expenses, increase customer satisfaction, drive top-line growth and deliver competitive advantage.

# Benefits in the Cloud

*Technology innovations converge in the cloud to transform IT and deliver business value.*

**B**usiness leaders and IT executives have their heads in the cloud these days — and with good reason. Rapidly evolving cloud computing platforms appear capable of delivering the kind of business benefits and technology efficiencies that organizations have been daydreaming about for years. Ideas such as Software as a Service, Web 2.0, service-oriented architectures, grid computing and utility computing are synthesized in the cloud, creating an overarching platform that represents a profound shift in how we think about computers, networks and data centers.

Gartner analysts say cloud computing heralds an evolution of business that is “no less influential than e-business.” It is widely believed that cloud-based services will finally deliver on some of IT’s most elusive goals — aligning IT with business, decoupling services from underlying technology, data center automation and “green” computing. It is seen as a viable way to reduce capital expenditures and operational costs, thus freeing up resources and money that can be diverted to achieving core business objectives.

## Cutting Costs

While formal definitions are still being debated, cloud computing fundamentally describes a computing model in which data, applications and storage are hosted in massive data centers by third-party providers and accessed remotely over the Internet via various clients and platforms. The cloud thus delivers enormous amounts of computing power and storage while offering practically limitless scalability and elasticity. Moreover, customers do not own the physical infrastructure — they leverage the efficiency and economies of scale of providers to build and deploy IT services faster and cheaper than ever before. Thus the cloud shifts the focus from infrastructure implementations onto the services and capabilities that can be achieved. Although many companies will argue about how to best implement cloud services, the ultimate measure of success will be how the services are consumed and whether that creates business value.

One of the obvious business benefits is reduced acquisition and deployment costs. Paying for service on demand requires less upfront capital and allows businesses to efficiently ramp up and power down based on current needs, as well as providing the flexibility to introduce new IT services.

“One way of describing cloud computing is to compare it to a utility,” said Jeff Spivey, trustee for the IT Governance Institute. “In the same way businesses pay for the amount of electricity, gas and water that they use, there is now the ability to pay for IT services based on how much is consumed.”

## Enabling Innovation

Cloud computing fosters business innovation by enabling organizations to take on tasks or services that might be cost prohibitive if onsite hardware and software purchases were required. For example, the New York

Times leveraged the computing power and scalability of a third-party cloud provider to create TimesMachine, a Flash-based archive of back issues of the paper from the 1850s to 1920s. In less than a day, the Times was able to convert 4TB of raw-image TIFF data into 1.1 million finished PDFs — at a computation cost of just \$240.

Architecturally, cloud computing provides business value by masking complexity. The technology behind the user interface is essentially invisible to the user, making cloud computing very user-friendly. This means end-users can be less tech-savvy and more focused on their particular expertise and business function. What’s more, anywhere/anytime access from any device improves user mobility and enables collaboration regardless of geographic location.

## Transforming the Data Center

With the ability to provide convenient, on-demand access to a shared pool of resources that can be rapidly provisioned with minimal management effort, cloud computing also presents extraordinary possibilities for data center transformation. Frequently based on decades-old technology, many of today’s data centers have become too complex, too costly and too difficult to manage. Gartner reports that more than 70 percent of Global 1,000 organizations expect that they will need to significantly modify their data center facilities by 2012.

Environmental issues have become increasingly worrisome. Power costs for data centers have skyrocketed by 800 percent since 1996. But even if power wasn’t an issue, it is becoming almost impossible to cool the data center space. Traditional cooling systems simply weren’t built for today’s high-density computing environment.

The hidden cost of such data center pain is the loss of business innovation. The time and money being spent on server administration could be better used to promote initiatives that drive the organization forward.

Cloud computing addresses these pain point by reducing data center real estate requirements, driving down power and cooling costs in the process. In essence, organizations transfer power, cooling and space burdens to the cloud service provider. The U.S. General Services Administration provides an illustrative case study. In the first year after moving its USA.gov Web site to the cloud, the GSA saved \$1.7 million in energy and systems maintenance costs and reduced the number of servers required to run the site from 45 to three.

As with any new technology, cloud computing is not without risks and challenges. Application integration and security are the concerns most frequently cited by organizations exploring cloud adoption. Planning and preparation are essential. However, organizations that keep their feet on the ground by doing their homework, establishing a clear strategy and determining an end goal are likely to find that moving into the cloud will deliver positively dreamy results.

## Worldwide Cloud Services Market to Surpass \$68 Billion in 2010

**W**orldwide cloud services revenue is forecast to reach \$68.3 billion in 2010, a 16.6 percent increase from 2009 revenue of \$58.6 billion, according to Gartner, Inc. The industry is poised for strong growth through 2014, when worldwide cloud services revenue is projected to reach \$148.8 billion.

“We are seeing an acceleration of adoption of cloud computing and cloud services among enterprises and an explosion of supply-side activity as technology providers maneuver to exploit the growing commercial opportunity,” said Ben Pring, research vice president at Gartner. “The scale of application deployments is growing; multi-thousand-seat deals are increasingly common. IT managers are thinking strategically about cloud service deployments; more-progressive enterprises are thinking through what their IT operations will look like in a world of increasing cloud service leverage. This was highly unusual a year ago.”

Gartner estimates that, over the course of the next five years, enterprises will spend \$112 billion cumulatively on software as a service (SaaS), plat-

form as a service (PaaS), and infrastructure as a service (IaaS), combined.

“After many years of germination, most notably in the SaaS arena, the core ideas at the heart of cloud computing — such as pay for use, multi-tenancy and external services — appear to be resonating more strongly,” Pring said. “In part, this can be explained by macroeconomic factors. The financial turbulence of the last 18 months has meant every organization has been scrutinizing every expenditure. An IT solution that can deliver functionality less expensively and with more agility (remembering that time is money) is hard to ignore against this backdrop.”

“More fundamentally, cloud computing has become more material, because the challenges inherent in managing technology based on the principles of previous eras — complex, custom, expensive solutions managed by large in-house IT teams — have become greater, and the benefits of cloud computing in addressing these challenges have matured to become more appropriate and attractive to all types of enterprises.”



## IBM InfoSphere

### Turning information into understanding

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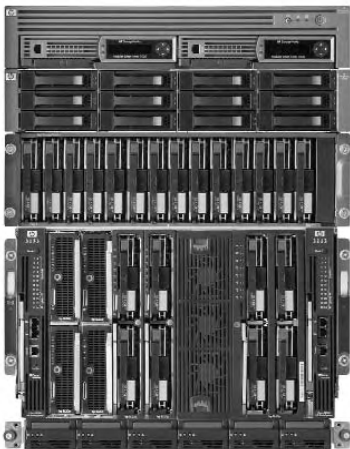


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Blades are widely viewed as compact and efficient servers that primarily save space and power. However, HP believes the power of the blade concept is about more — simplification of the entire infrastructure — through consolidation, integration, and unified management.



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# All Together Now

*Unified communications tools help improve collaboration, productivity and customer service.*

In the beginning there was an inbox, and it was good.

Soon, however, there were multiple e-mail inboxes, voice mail inboxes, cell phone inboxes, PDAs with both e-mail and voice mail — not to mention the old-fashioned, cubby-hole-style inboxes next to fax machines. Not so good.

Luckily, the concept of voice, video and data as distinct elements of business communications is rapidly fading as organizations utilize existing fixed and wireless data networks to provision a wide range of IP-based communications services, including voice, data and video. The integration of these services within a single user interface is known as unified communications, and it is fundamentally changing workplace interactions by seamlessly blending a host of formerly independent communication applications. Indeed, the benefits of unified communications solutions are so profound that the market for these technologies is set to top \$1 billion by 2013, according to Infonetics Research.

“Against the backdrop of significant enterprise spending reductions on all kinds of products, the unified communication market is holding up remarkably well. Perhaps it shouldn’t come as a surprise, as these tools are designed to allow users to communicate and collaborate more effectively,” said Matthias Machowinski, directing analyst for enterprise voice and data, Infonetics Research.

## Communications Toolkit

By integrating a wide range of common communications applications, unified communications can improve employee collaboration, productivity and customer service, as well as reduce total cost of ownership (TCO) and equipment costs. The latest unified communications systems also integrate features such as instant messaging (IM), click-to-call, Web and voice conferencing, multimedia chat, and document collaboration to further enhance the communications paradigm.

Presence technology is another key element of today’s unified communications platforms. Presence allows users to see whether someone is available, busy, away from their computer or offline, while so-called contextual presence also includes real-time information about the communications channels and devices available to the end-user. As a result, presence-based applications can determine an intended recipient’s location and

route information to the appropriate computer or device, guaranteeing that the user receives critical information in a timely manner.

Unified communications also boosts the efficiency of the IT infrastructure. Because key communications channels are merged onto the data network, unified communications enables organizations to reduce the amount of infrastructure equipment and devices they must support and maintain. It also reduces or eliminates the telephony wiring infrastructure, and decreases energy consumption and the amount of ‘e-waste’ generated by enterprises.

## How It Works

Unified communications is a key application of today’s IP telephony systems. Once voice calls, e-mail, instant messaging and all forms of conferencing are carried over a common IP network, it is possible to manage them from a single point and use them with common devices. This enables organizations to transform key business processes with improved communication flows.

Session Initiation Protocol (SIP) is the key to unified communications applications. SIP is a signaling-type protocol that enables different types of devices such as computers, handheld gadgets and telephones to “talk” with each other seam-

lessly in an IP network. Because SIP is an Internet Engineering Task Force (IETF) protocol, it is inherently an open architecture, which is a big reason most major communications equipment manufacturers and software companies are embracing it.

Although SIP is used to enable IP telephony, it is not merely a software-based telephony switch — it is capable of much more than that. SIP treats voice as just another medium, albeit a very important one. It can also be used to send files such as video images between two points, opening the door for a variety of multimedia applications. It is quickly becoming the backbone protocol for numerous personal and enterprise communications such as rich-media conferencing, push-to-talk and location-based services.

## Getting Results

In order to derive maximum value from unified communications, organizations should begin by identifying potential productivity gains that can be realized through improved communications as well as tasks that can be streamlined. Stakeholders representing both business and IT should identify groups of who users can benefit most from improved collaboration. After the implementation project is complete, this team should ensure that those users are taking advantage of the new

technologies and that productivity benefits are being realized.

Organizations should also take steps to ensure the effective management of the unified communications environment. End-to-end Quality of Service (QoS) supporting data, voice and video becomes critical as the emphasis shifts from individual communications solutions to the overarching network environment. The networking team should be involved from the outset of any unified communications implementation project, to ensure that the system meets performance expectations.

Phone, fax, e-mail, instant messaging, teleconferencing, videoconferencing, Web conferencing — in many organizations these remain separate, discrete functions. However, this “siloes” communications infrastructures no longer meets the business requirements of today’s extended enterprise.

As the reach and range of business processes continues to increase, involving interactions with partners, suppliers, customers and geographically dispersed teams, organizations should re-examine their corporate communication and collaboration strategies in order to better support today’s business activities and objectives. Unified communication services can help organizations improve employee productivity, augment business processes and foster innovation.

## Forum Seeks to Advance UC Interoperability

Five global technology companies have joined to form the Unified Communications Interoperability Forum (UCIF), a non-profit alliance dedicated to enabling standards-based, cross-vendor unified communications interoperability. Founding members HP, Juniper Networks, Microsoft, Logitech/LifeSize and Polycom are joined by a growing roster of member companies including Acme Packet, Aspect, AudioCodes, Broadcom, BroadSoft, Brocade, ClearOne, Jabra, Plantronics, RADVISION, Siemens Enterprise Communications and Teliris.

Many enterprises are ready to deploy unified communications solutions but interoperability concerns have slowed implementation. The UCIF will create and test interoperability profiles, implementation guidelines and best practices for interoperability between unified communications products and existing communications and business applications. UCIF-certified products will help reduce implementation risk and complexity and, as a result, grow the worldwide unified communications market to meet its potential.

“Interoperability is not only critical to customer success for deploying unified communications but intrinsic to the delivery of legacy, current and next-generation UC tools, services and infrastructure from multiple vendors,” said Jonathan Edwards, research analyst, Unified Communications, IDC. “Until now, efforts to achieve interoperability have appeared ad hoc, which has given customers little assurance that their existing and planned investments are protected and will deliver the value promised. Together, these companies will help drive industry-wide adoption of open standards and develop programs that put accountability on the vendors and provide peace of mind and investment protection for end customers — something that will surely accelerate adoption of UC technologies.”

The UCIF will work with existing industry standards, identifying and filling the gaps between current protocols and interoperability issues that have stalled broad adoption and deployment of valuable communications methods. The UCIF will focus its initial interoperability efforts on managing the escalating diversity of video and tele-presence solutions.

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# Discovering E-Discovery

*E-discovery doesn't always involve litigation. Organizations are using e-discovery processes to aid internal investigations and reduce risk.*

**E**-discovery conventionally refers to the identification, preservation, collection, preparation, review and production of electronically stored information (ESI) in legal and regulatory proceedings. Nearly 90 percent of attorneys expect law firms to engage in e-discovery processes more frequently, according to a recent study by IT industry trade association CompTIA. That fact is hardly surprising since more and more cases involve ESI.

However, many organizations are planning to increase their use of electronic discovery in ways one might not expect. A growing number of firms routinely engage in data collection and informal investigations related to personnel matters, violations of company policies and security breaches. Although these practices do not involve the legal system, they may nevertheless fall under the umbrella of e-discovery.

In fact, 53 percent of the more than 650 IT professionals surveyed by CompTIA expect the use of e-discovery within their organizations to increase over the next few years. Situations that most often trigger the use of e-discovery include the investigation of an employee suspected of violating company rules (cited by 66 percent of survey respondents), a security breach stemming from an outside threat (cited by 62 percent), a pending lawsuit (cited by 60 percent), an intentional internal security breach (cited by 53 percent), and an unintentional internal security breach (cited by 44 percent).

## Reducing Risk

These survey results points to the broader context in which organizations are looking to utilizing e-discovery processes to manage both business and IT risks. According to Tom Eid, research vice president at Gartner, e-discovery helps link business performance with governance, risk and regulatory compliance through data accessibility and transparency. The use of real-time, continuous monitoring and controls for transactions, segregation of duties, application configuration and master data mitigates IT risk, while fraud detection and improved user- and application-level security reduce exposure to legal and regulatory risks.

"Increasingly, more organizations are being confronted with litigation regarding bribery and corruption, foreign corrupt practices, securities and financial fraud, government contracting abuses, and healthcare fraud," said Eid. "Such unplanned events underscore the need for a more effective enterprise information strategy and information governance policies."

Fifty percent of organizations surveyed by CompTIA say they have already developed an e-discovery strategy, either partial or comprehensive. Another 26 percent indicate that their organization has no official e-discovery strategy but have engaged in e-discovery processes informally. Among organizations that have yet to develop an e-discovery strategy, cost and expertise are cited as the primary reasons.

"Many organizations lack expertise in this emerging area," said Tim Herbert, vice president, research, CompTIA. "That's significant because the increasingly con-

nected and digital world in which companies operate means the number of situations calling for e-discovery will only grow."

## See You in Court

Of course, litigation is also on the rise, according to the Sixth Annual Litigation Trends Survey released by international law firm Fulbright & Jaworski. Corporate counsel anticipate a big year of litigation, with 42 percent of U.S. respondents anticipating an increase in legal disputes. Sixteen percent of respondents also expect regulatory investigations and whistleblower allegations to increase in 2010.

E-discovery accounts for 30 percent to 50 percent of litigation costs, and 16 percent of those surveyed are planning to spend more on e-discovery this year. However, in-house counsel are also looking at ways to reduce those costs. About a quarter of all companies are using law firms that specialize in e-discovery services. Nearly half of all survey respondents are keeping at least some e-discovery activities in-house, while 22 percent of U.S. companies are outsourcing their main e-discovery func-

tions. Stricter document retention policies, such as systematic destruction, also help keep e-discovery costs down.

Until recently, the market for e-discovery products and services has focused on the U.S., which accounted for approximately 90 percent of revenue in 2008, according to Gartner. Going forward, however, market growth is also expected in common-law jurisdictions, such as Australia, Canada, South Africa and the U.K., as new civil litigation regulations are passed regarding privacy and disclosure. In addition, many organizations based in the U.S. have subsidiaries in countries around the world that will provide further pockets of regional growth. Gartner forecasts worldwide e-discovery software revenue to surpass \$1.2 billion in 2010, a 23 percent increase from 2009.

"The December 2006 amendments to the Federal Rules of Civil Procedures in the U.S. regarding the discovery of electronically stored information and passing of subsequent similar statutes in other countries has really spurred market interest in e-discovery," said Eid. "This is prompting many companies to rethink their overall information management strategies, from the policy level to the implementation level."

## Legal, Regulatory Requirements Drive IT Purchasing Decisions

**A** recent survey of legal, compliance and IT professionals indicates that litigation hold and automated document retention functionality are key drivers in information management purchasing decisions. The survey was conducted at LegalTech New York 2010 by Kroll Ontrack, a provider of information management, data recovery and legal technologies.

The ability to retain documents for business continuity or legal purposes was ranked as the most important factor when utilizing technology to manage electronically stored information (ESI). Survey respondents also consider early case analytics (which allows organizations to identify, classify, and sort relevant ESI prior to e-discovery), automated document destruction and storage optimization to be important factors when utilizing technology to manage data for business continuity or legal purposes.

"In addition to managing the growing volumes of electronic data, corporations must cost-effectively and defensibly respond to investigations and requests for production of electronic data," said George May, vice president of product strategy, Kroll Ontrack. "Organizations must implement defensible retention policies and adequate technology to respond effectively to investigations, litigation and regulatory matters. To stay on top of these demands, implementing

an archiving system with robust legal hold capabilities and automating an organization's document retention and disposal process is more important than ever."

More than 60 percent of respondents believe their organizations manage corporate data well in preparation for, or response to, legal and regulatory requirements. However, 63 percent claim that inadequate technology and resources are the biggest barriers to effectively managing ESI to meet evolving business needs. One-third of respondents confirm that they either do not have or do not know if they have the appropriate technology tools or an archiving platform to manage the storage and destruction of ESI.

"The most defensible litigation holds center around effective document retention policies and seamless execution. But all too often organizations rely solely on technology without considering the other part of the equation: people and process," said Jason Straight, vice president of legal technologies business development and consulting services, Kroll Ontrack. "A combination of a sound document retention program, the right tools and a team approach ensures organizations are prepared for the inevitable and can perform a credible, repeatable and defensible ESI request response process."

# EHR Rules Set

## Feds finalize 'meaningful use' requirements for electronic health records.

**T**he U.S. Department of Health and Human Services has finalized the long-awaited "meaningful use" requirements that health-care providers must meet to qualify for government reimbursements for their expanded use of electronic health records (EHR).

With definitions in place, EHR system vendors can ensure that their systems deliver the required capabilities, providers can be assured that the system they acquire will support achievement of "meaningful use" objectives, and a concentrated five-year national initiative to adopt and use electronic records in health care can begin.

"This is a turning point for electronic health records in America, and for improved quality and effectiveness in health care," said David Blumenthal, M.D., National Coordinator for Health Information Technology.

The mid-July announcement lays the groundwork for the incentive payments under the Health Information Technology for Economic and Clinical Health (HITECH) Act of 2009. As much as \$27 billion may be expended in incentive payments over 10 years. Eligible professionals may receive as much as \$44,000 under Medicare and \$63,750 under Medicaid, and hospitals may receive millions of dollars for implementation and meaningful use of certified EHRs under both Medicare and Medicaid.

### Relaxed Requirements

HHS also announced two companion rules: one from the Centers for Medicare & Medicaid Services (CMS) that defines the minimum requirements providers must meet through their use of certified EHR technology to qualify for the payments, and one from the Office of the National Coordinator for Health Information Technology that identifies the standards and certification criteria for the certification of EHR technology.

The new rules were finalized after a three-month public comment period during which more than 2,000 recommendations were received by HHS. Although the final document is 864 pages long, key changes appear to have created greater flexibility with respect to how providers meet and report certain objectives for demonstrating meaningful use.

For example, it had initially been proposed that doctors meet 25 specific

requirements (23 for hospitals) in their use of EHRs. However, the final rules only establish a "core" group of EHR requirements that must be met, plus an additional "menu" of procedures from which providers may choose. This two-track approach is designed to ensure that the most basic elements of meaningful EHR use will be met by all providers qualifying for incentive payments, while at the same time allowing latitude in other areas to reflect providers' needs and their individual path to full EHR use.

Other requirements were eased as well. Providers must only write 40 percent of their prescriptions electronically to qualify for funding, instead of the 75 percent initially proposed. And physicians now have three working days to provide patients with e-copies of health information, instead of the original 48-hour timeline.

### Phased Approach

Requirements for meaningful use incentive payments will be implemented over a multi-year period, phasing in additional requirements that will raise the bar for performance on IT and quality objectives in later years. The final CMS rule specifies initial criteria that eligible professionals (EPs) and eligible hospitals, including critical access hospitals (CAHs), must meet. The rule also includes the formula for the calculation of the incentive payment amounts; a schedule for payment adjustments under Medicare for covered professional services and inpatient hospital services provided by EPs, eligible hospitals and CAHs that fail to demonstrate meaningful use of certified EHR technology by 2015; and other program participation requirements.

As part of this process, HHS is establishing a nationwide network of Regional Extension Centers to assist providers in adopting and using certified EHR technology in order to meet the "meaningful use" requirements.

"Healthcare is finally making the technology advances that other sectors of our economy began to undertake years ago," Dr. Blumenthal said. "These changes will be challenging for clinicians and hospitals, but the time has come to act. Adoption and meaningful use of EHRs will help providers deliver better and more effective care, and the benefits for patients and providers alike will grow rapidly over time."

## Chip Sales Hit New High

**G**lobal sales of semiconductors reached an all-time high in May, jumping 4.5 percent to \$24.7 billion — a 47.6 percent year-on-year rise compared to May 2009. The Semiconductor Industry Association (SIA) attributes the growth to an increase in the sales of computers and mobile phones, as well as the gradual recovery of the automotive market.

"Global sales of semiconductors in May reached a new high and remain on pace to reach the SIA forecast of 28.4 percent growth to \$290.5 billion in 2010," said SIA President George Scalise. "Chip sales have been buoyed by strength in sales of personal computers, cell phones, corporate information technology, industrial applications and autos. Unit sales of personal computers are now expected to grow by 20 percent this year and cell phone unit sales are predicted to be up 10 percent to 12 percent over 2009 levels."

However, SIA said year-on-year and sequential growth rates are likely to continue to slow during the second half of 2010. The trade group noted that any year-on-year comparison should take into account the weak market seen in 2009, when the effects of the economic downturn were being felt.

"Growing concerns about issues such as government debt, declining consumer confidence and pressures on government spending do not appear to have affected worldwide semiconductor sales to date, but given the semiconductor industry's growing sensitivity to macroeconomic conditions, these issues bear watching in the second half of 2010," Scalise concluded.

## Federal IT Security Measures Favored

**S**eventy percent of IT security professionals believe the federal government should pass data breach/data privacy legislation that overrides the current patchwork of state legislation, according to a recent survey.

"The risk to critical infrastructure, intellectual property and personal information from data breaches is very high and continues to grow," said Abe Kleinfeld, CEO of nCircle, the security solutions provider that conducted the survey. "Unfortunately, the wide variety of state laws that have been passed in efforts to protect consumers have not proven sufficient for the increased risk environment."

In addition, 78 percent of the 257 security professionals who responded to the online survey said the level of cyber security investment in the U.S. private sector today is insufficient given the risk environment. While 81 percent said cyber security in the U.S. has increased over the last 12 months, 76 percent believe the public sector is not doing an adequate job of keeping personal data secure.

"Security professionals know that allowing private industry to 'self-regulate' on security issues hasn't worked so far, and it's unlikely to improve without some external stimulus," Kleinfeld said. "That's where regulation comes in. In other industries regulation has driven improvements that, while not perfect, have begun to turn the tide. A federal data breach law could become a catalyst for increased security investment and awareness for businesses of every size."

## Fighting Retail Crime

**T**he world's largest online marketplace is partnering with the world's largest retail trade association to tackle organized retail crime. This unique partnership between eBay and the National Retail Federation will tie in support from the Federal Bureau of Investigation, retailer participation and new technology to identify and attack organized retail crime — specifically crimes in which goods are stolen from brick-and-mortar stores and then sold online.

The partnership provides for greater information to support the investigative efforts of federal, state and local law enforcement. Organized retail crime has long been an issue plaguing both retailers and secondary marketplaces. In an NRF survey conducted in 2009, 92 percent of retailers said they were victimized by organized retail crime in the previous year, and nearly three-fourths (73 percent) also reported the level of organized retail crime activity had increased.

"NRF has done a great job of shining a spotlight on the issue of organized retail crime, but retailers cannot fight this problem alone," said Paul Jones, Global Director of Asset Protection, eBay. "Through this partnership, NRF and eBay are putting criminals on notice that they will no longer be able to steal from retailers and abuse the online marketplace for profit."



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# Safety in Numbers

*Unified threat management solutions provide comprehensive protection from security threats.*

**E**lephant calves in the wild are protected by the herd, which will circle the calf in order to fend off lions, hyenas, crocodiles and other predators. The huge size and coordinated action of the adult elephants is effective in shielding the vulnerable young.

Unified threat management (UTM) employs a similar technique to protect networks from security threats. All-in-one UTM systems combine a variety of security components in one unit that can be easily managed through a single console. These devices also offer integrated management, monitoring and logging capabilities, as well as streamlined deployment and maintenance that can be tailored to keep up with evolving security threats.

The UTM solutions market has grown recently, particularly among small to mid-size businesses (SMBs). In 2009, the SMB, remote office and small office/home office segments accounted for 53.6 percent of market revenues globally.

"The UTM concept is based on the assumption that a combination of security solutions bundled in the same appliance will create a better security umbrella for organizations," said Ariel Avitan, Frost & Sullivan's Industry Analyst for Network Security Technologies. "Another main advantage of UTM solutions is their low cost in comparison to purchasing many different security solutions. These two advantages are driving the rapid adoption of UTM solutions by SMB customers."

## Integrated Approach

Typical UTM solutions include a firewall, intrusion protection and detection, antivirus, anti-spam and a VPN. Single-console management makes it easier for administrators to enforce detailed security policies throughout the organization, and eliminates the need to investigate multiple alerts generated by various systems from a single event. Automatic security updates protect against emerging and evolving threats without administrator intervention.

With the integration of multiple security engines into a single appliance, UTM also makes it possible to detect blended threats that employ a combination of attacks — such as a mix of viruses, worms, Trojans and denial-of-service attacks — crafted to circumvent a single line of defense. With UTM solutions, the integrated security engines work together, enabling the system to inspect real-time traffic from multiple vantage points.

## Controlling Costs

The traditional approach to defending systems has been to deploy a new dedicated security point product each time a security hole opens up. Denial-of-service attacks and worms led to intrusion prevention and vulnerability management systems. Firewalls and anti-virus drove the need for virtual private networking. Soon came instant messaging, P2P file sharing, and a dramatic rise in spam. Now there is information leakage, phishing and spyware.

A patchwork approach to security is simply not sustainable, however. Operating, maintaining and coordinating multiple security products leads to runaway costs. And since point products are configured separately, conflicting or incomplete rule sets can result in significant network security gaps.

A UTM implementation can lower operating costs and standardize the security platform across even dispersed organizations. It can also achieve consolidation, reduce complexity, improve intrusion detection and provide load balancing integrated into a single system supporting multiple applications.

## Not Just for SMBs

SMBs have been among the first to adopt UTM appliances due to their all-in-one functionality, easier management and attractive price points; enterprise organizations have been slower to adopt them. With more IT staff and larger budgets, enterprises are better positioned to absorb the costs of managing multiple best-of-breed security products. Early UTMs could be bandwidth hogs, reducing network performance by 10 percent or more when the full set of security services were in use.

However, the latest generation of UTM devices addresses those concerns. Enterprise-class appliances from several vendors deliver reliable and scalable throughput for high-speed, widely distributed environments. These solutions also provide capacity for thousands of concurrent VPN connections and fully support voice over IP.

UTM can increase security, reduce costs and streamline management, but it isn't a panacea. IT security requires constant vigilance, continual assessment and continuing education. However, today's UTM appliances bring together powerful protection against a wide range of security threats.

## Coffee, Tea or Smartphone?

**E**ight in 10 business professionals rely on a smartphone as the primary business communication platform and would rather give up coffee than surrender the device, according to a new survey from RingCentral, a cloud-computing-based business phone system provider.

The survey also indicated that 34 percent of respondents use the smartphone more than a PC for business computing, and that 7 percent leave the laptop at home and rely purely on the smartphone when traveling.

According to the survey, smartphones tied with intimate relationships (40 percent) as the one thing respondents cannot live without. Only 17 percent chose morning coffee and just 2 percent chose checking social networking sites.

"This survey demonstrates the critical role smartphones play in business. The passion business professionals have for these devices reflects a major shift in the way we work, and the new reality is that businesses do not have to choose between mobility and professionalism," said Vlad Shmunis, CEO of RingCentral.

## Mobile Users Experience 'Bill Shock'

**O**ne in six U.S. mobile users has experienced "bill shock," a sudden increase in their monthly bill that is not caused by a change in service plan, according to a survey by the Federal Communications Commission. The survey also shows that nearly half of cell phone users who have plans with early termination fees (ETFs) and almost two-thirds of home broadband users with ETFs don't know the amount of the fees for which they're accountable.

The survey found that of the 30 million Americans who have experienced bill shock, 84 percent said their mobile carrier did not contact them when they were about to exceed their allowed minutes, text messages or data downloads, and 88 percent said their carrier did not contact them after their bill suddenly increased.

The amount of bill shock varies widely but is often sizeable. In the survey, more than a third of people who experienced bill shock said their bills jumped by at least \$50, and 23 percent said the increase was \$100 or more.

Of the respondents with personal cell phones, 54 percent said they would have to pay an ETF should they terminate their contracts before the expiration date, and 18 percent didn't know whether they would have to pay or not. Of those who are subject to an ETF, 43 percent said it was \$150 or more, but 47 percent didn't know how much it was. One reason for the confusion is billing practices: Only 36 percent of cell phone customers who are familiar with their bills said that they include "very clear" information on ETFs.

The survey shows that ETFs are one factor that can keep cell phone customers from switching carriers even when their service is not ideal. Forty-three percent of these customers said ETFs were a major reason they would stay with their current service, almost exactly the same number who said they would be deterred from switching by the cost of setting up a new service or by paying a deposit on a new service.

## Consumers Buy More PC Accessories

**W**hile PC prices continued to erode in 2009, the PC accessories market remained vibrant and expanding. U.S. consumers spent at least \$1.05 on PC accessories and peripherals for every \$1 spent on a PC in 2009, compared to \$0.87 per dollar the previous year, according to a survey by the tech research firm IDC. In 2010, IDC expects U.S. consumers to spend at least \$28.6 billion on acquiring a variety of products and services to enhance their PC performance and their own personal user experience.

The survey also found that U.S. small businesses (those with fewer than 100 employees) spent \$2.7 billion on "beyond-the-box" products, accounting for nearly 24 percent of their computer shopping budget.

While security and anti-spam software remained the most popular products, consumers continued to focus their spending on PC performance enhancements, such as graphic cards and additional memory and storage, as well as expanding their own user experience with media creation products and software.

In addition, the survey shows that PC users have moved en masse toward a Web-centric environment, and cloud-based activities are on the rise. In contrast, productivity-based activities have become a secondary focus among consumers. In this context, manufacturers, vendors and distributors must do a better job of understanding segmentation and user behavior in an effort to maximize their competitive position.

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# Controlling Access

*Identity management helps organizations meet security and regulatory compliance requirements.*

**A** growing number of regulations are forcing organizations to more tightly restrict information access, and to document the internal processes and IT controls in place to prevent unauthorized access to sensitive information. What's more, organizations affected by these regulations have to generate an audit trail that proves compliance to internal or external auditors.

These kinds of regulatory pressures are compelling investment in identity and access management (IAM) solutions, which provide a framework for managing users and their access privileges across the enterprise. IAM tools include user provisioning, password management, strong authentication, single sign-on and other technologies, which are increasingly bundled into comprehensive platforms.

The demand for strong identity management has led to a rash of acquisitions that have enabled vendors to rapidly expand their identity management suites. Microsoft, Oracle, Computer Associates, BMC Software and other big tech players

have acquired identity management technology firms within the past couple of years.

"Over the past 24 months we have seen a lot of consolidation in the identity and access management market resulting from customer demand for holistic, integrated solutions. The success of these acquisitions is in the execution and delivery of their integration plans, and we are closely watching the vendors in this area," said Roberta J. Witty, research vice president, Gartner, Inc. "We are also seeing a shift in how identity and access management is being used in the business. Companies are looking to incorporate IAM solutions into their business processes and add business value to assist with business-critical issues such as compliance."

## Granting Permission

Faced with growing numbers of end-users who require access to IT resources, many organizations devote significant time and effort to the task of adding, changing and deleting user information

and permissions. In many cases, user identities must be manually updated across disparate applications and resources, leading to data entry mistakes and delays that impact end-user productivity and increase the risk of internal security breaches.

Worse, delays in terminating access privileges when an employee leaves or changes positions can trigger red flags in a compliance audit. Auditors also look for instances where password policies and access controls aren't uniformly enforced — such as when rights to access the purchasing system enable access to accounts payable.

IAM systems can help relieve these problems and improve the integrity of business processes. They are designed to streamline the creation and maintenance and use of digital identities, integrating business processes with the supporting technology needed to effectively manage end-user attributes, credentials and entitlements.

IAM solutions help organizations assure that users — employees, customers, distributors or partners — have secure and seamless access to the applications and other resources that correspond to their profiles. Such solutions not only aid enterprise security and regulatory compliance but also make it easier to assign privileges to large groups of users and to manage those groups more easily.

## Many Benefits

Effective identity management can help organizations automate user management and roll out self-service solutions, potentially saving millions of dollars per year in help desk-related costs. According to Gartner, a 10,000-person enterprise can achieve savings of about \$3.5 million in a three-year period by implementing an automated end-user identity provisioning system, primarily by cutting thousands of hours of IT and help-desk time.

IAM solutions can also improve security by ensuring the confidentiality, integrity and availability of IT resources. Given that employees are responsible for more than 70 percent of unauthorized access to information systems — and more than 95 percent of intrusions that result in significant financial losses — organizations are rightfully concerned about controlling access privileges.

Growing numbers of remote and mobile users, as well as contractors, suppliers and others who need access to enterprise systems, have complicated identity management. As access needs extend beyond the trusted network, organizations must utilize federated identity solutions to

control which internal resources the external identities can access.

"Interest in identity federation continues to grow as enterprises expand the number of applications that are exposed to external business partners, suppliers and customers," said Gerry Gebel, senior analyst with Burton Group. "These enterprises should include federation as part of their broader identity management architecture and prepare to support multiple versions and protocols, if required by partners."

## Comprehensive Approach

The ultimate goal of secure identity management is the application of corporate policies onto enterprise systems to ensure that users have appropriate access to the right resources at the right times. But that goal can't be realized without a comprehensive, strategic approach that considers all aspects of the identity infrastructure.

Identity information across an organization must first be integrated — but with respect for authoritative sources of identity. For example, it's not realistic to force HR personnel to stop using their internal applications in favor of a centralized identity repository and its associated interfaces. Standards are slowly being adopted within the identity management space, but most implementations still require substantial application integration efforts.

The prospect of implementing a secure identity management solution can be an imposing challenge for many enterprise customers. Not only are there significant technological and political considerations but many identity management offerings are limited-purpose, addressing only provisioning or single sign-on instead of the greater problem. Deploying these "silos" of identity often only makes the situation worse.

On the other hand, a comprehensive approach to identity management ultimately makes the entire network infrastructure more secure and easier to manage. Whether contained internally or spreading across the extended supply chain, identity management is becoming a near necessity for organizations with ever-increasing numbers of end-users, applications and information resources. Many organizations are adopting IAM solutions because of regulatory compliance demands, but quickly realize the benefits of efficiency, security, flexibility and scalability.

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08/10

# A Matter of Time

*Disk-to-disk backup systems help speed backup and recovery processes.*

**K**eeping up with the relentless growth of data is an ongoing struggle for the vast majority of large organizations. In a recent survey of more than 400 IT professionals conducted by data storage firm Sepaton, more than 40 percent reported that their backup times exceed 24 hours. In essence, they are producing data faster than they can back it up.

As backup and recovery operations have become increasingly complex and problematic amid growing volumes of data, these organizations are coming to the realization that their old, reliable tape backup systems are simply too slow to keep pace. While a majority of respondents said they are using physical tape today, most do not expect to be using tape one year from now.

High-speed disk-based technologies such as virtual tape libraries (VTL) have simply become too appealing to ignore. When they emerged several years ago, virtual tape solutions immediately proved popular because they appear as a tape device to the network, avoiding the need for a forklift upgrade. The latest VTLs have even more to offer, however. They are faster, scale higher and offer more flexibility with built-in features such as remote replication and data de-duplication.

"Disk is increasingly being placed in the data protection path to improve upon existing backup processes," IDC analysts Laura DuBois and Robert Amatruda noted in their recent analysis of VTL vendors. Moreover, the report states that the VTL market is "quickly shifting into a broader disk-based data protection market that includes not only tape emulation and the ability to export to physical tape but also support for de-duplication, remote replication, standard network interfaces, and the ability to become a data protection platform for different backup, archive and recovery workloads."

## Closing the Window

Although virtual tape looks and acts like traditional tape systems to backup applications, it offers key benefits of disk drives, including direct random access, improved read/write efficiency and significant time savings. While enhanced functionality for de-duplication and remote replication have raised the stakes, speed remains virtual tape's greatest benefit.

Back up sessions that would ordinarily consume a full weekend often can be

completed in less than 12 hours with virtual tape. In addition, a disk-to-disk (D2D) system eliminates the need for error-prone tape-rotation processes, reduces the number of tape drives an organization must purchase, limits the physical space required for tape storage, and shrinks personnel costs associated with managing a large tape library.

"Tape-based systems are impractical, expensive and burn up too many files in the data center," said Carl Follstad, Manager of University Data Management Services for the University of Minnesota. "With [disk-based backup] we will be able to shorten our backup windows, therefore allowing us to back up more servers in a shorter amount of time and maintain the highest levels of service to thousands of students, staff and faculty."

## Faster Recovery

Disk's retrieval advantages over tape are also beyond dispute. Loading a tape to search for a single file to restore from a week-old backup could take hours, while a similar search from a disk might take only a few minutes or less. The difference becomes even more pronounced if a full server restoration is required.

Recovery speed is an essential consideration these days, given the fast-retrieval requirements of federal regulations such as Sarbanes-Oxley and HIPAA. These regulations also require that certain data be stored in a manner that ensures it cannot be altered. A number of vendors have addressed this issue with the development of disks with WORM-like (write once, read many) features that protect data from being altered.

VTLs are also increasingly integrated into tiered storage solutions, allowing organizations to utilize different types of storage media for various categories of data. Tier-1 storage might hold mission-critical or frequently accessed files on primary disk arrays; tier-2 storage might house seldom-used files on less expensive disks; and tier-3 storage might maintain archived files on tape. Because virtual tape is transparent to the host computer and associated applications, organizations can realize the benefits of a tiered storage hierarchy without re-engineering their systems.

## Shrinking Data

VTLs also enable data de-duplication solutions that dramatically reduce the amount of data that must be backed up

each night, further reducing the backup window. Also known as global compression, commonality factoring, single-instance storage and referential integrity, data de-duplication eliminates redundant copies of data to reduce storage costs and shrink backup and recovery times.

It also makes wide-area backup an operational reality. Since only de-duplicated data moves across the WAN, organizations can securely replicate their data without high bandwidth costs or physical transportation risks. VTLs with de-duplication effectively neutralize what had been tape's one major advantage — portability — by rapidly and cost-effectively moving data across the WAN to a disaster recovery site, thus eliminating tape shipping costs and risk.

Most industry analysts believe that tape and disk backup solutions will continue to coexist for the next few years. Tape still has its place in the data center — it remains an economical medium for long-term retention for both backup and archive. In the long term, however, tape will become marginalized as a frontline data protection tool as more organizations conclude that virtual tape offers significant advantages in price, performance and reliability.

## Survey Notes Poor Response to Data Loss

**S**eventy-four percent of organizations experienced a data loss incident at their workplace in the last two years, according a recent survey conducted by Kroll Ontrack, a provider of data recovery and legal technologies products and services.

In addition, 41 percent said their organization's ability to respond to data loss was "poor," 32 percent said it took several days to recover from a data loss and a further 16 percent never recovered.

"Time is of the essence when data loss occurs," said Todd Johnson, vice president of Ontrack Data Recovery operations, Kroll Ontrack. "In significant data-loss cases, hours of downtime can cost an organization millions of dollars. Consequently, a sound disaster recovery or business continuity plan with specifics on how data will be restored needs to be determined."

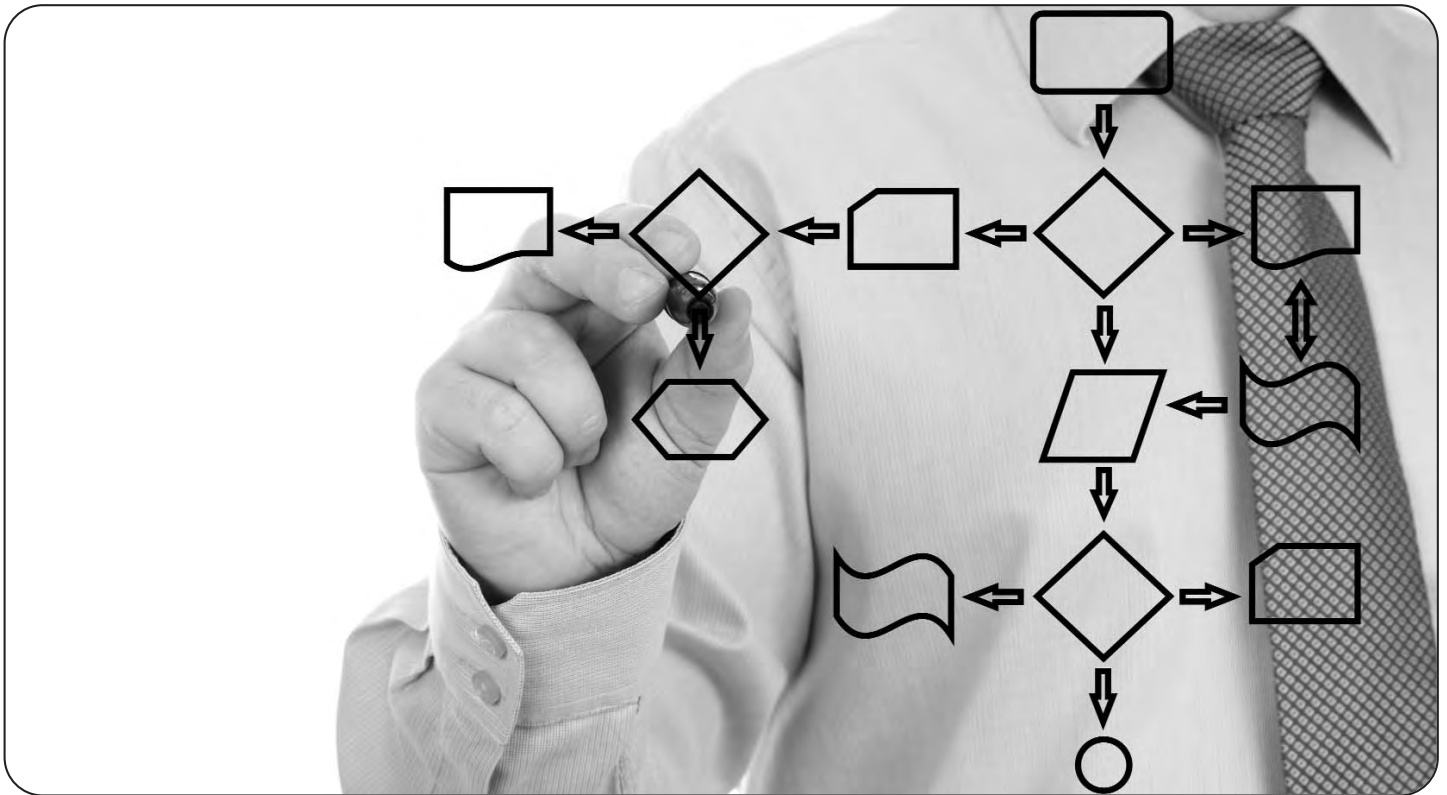
To recover from data loss, 32 percent use data recovery software and 29 percent recreate lost data manually. Only 21 percent indicated using a backup to restore lost data. This is surprising given that nearly half (44 percent) of organizations back up organization data at least once a day

and a further 50 percent are testing those backups as often as once a month.

"The way and time taken to recover from data loss not only affects customer confidence, but can also result in high, unforeseen business investments such as lost staff productivity, overtime, diverted resources and delays in responding to other issues. Furthermore, data loss may also affect a company's ability to comply with regulatory requirements regarding the security, retention and protection of important information. Failure to meet these requirements can result in heavy fines," added Johnson.

The survey also revealed that company backup procedures are not keeping pace with changes in IT management. Only 48 percent of companies reviewed their disaster recovery and business continuity plans in the last 12 months.

"New technologies, such as virtualization and cloud computing, have changed the way data is recovered," said Johnson. "If a company's backup system fails to address these changes, it may be more difficult and expensive to recover when the inevitable occurs."



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