



EMTEC ADVISER

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Expanding Expertise

Emtec further enhances its suite of transformative IT services with the acquisition of Emerging Solutions.

To stay competitive, organizations need to harness the power of information to make the right investments in people, technology and processes. They also need to employ a continuous improvement model for business practices to optimize operational performance.

With its recent acquisition of Emerging Solutions, Emtec Inc. has enhanced its ability to help organizations derive intelligence from their data and extend the value of their applications across the enterprise.

"With today's economic and market pressures, Enterprises continue to look for ways to help maximize business performance and better leverage existing operational investments.



Looking inward to adopt better business intelligence reporting and continually analyzing/improving business processes can significantly affect the bottom line," said Sunil Misra, Chief Strategy & Delivery Officer, Emtec.

significantly expands our suite of application services, business process management (BPM) and enterprise performance management (EPM) consulting offerings," said Sunil.

Strong Track Record

Based in Chicago, Emerging Solutions is an established professional services firm with expertise in business intelligence, customer relationship management (CRM), financial management, human capital management, operational management and cloud. The firm has developed broad capabilities and deep expertise with market-leading technologies from Oracle, Hyperion, PeopleSoft, Microsoft and Salesforce.com.

"Emerging Solutions is a perfect fit for Emtec because their portfolio of services and expertise integrates well into our current practice areas and sig-

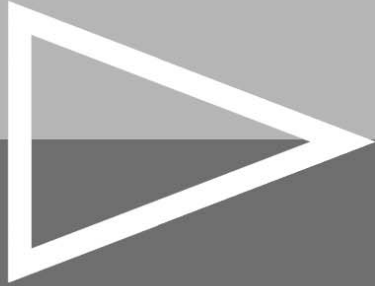
A Perfect Match

Emtec is now positioned to provide a broad and deep portfolio of IT services, including enterprise resource planning (ERP), business process management (BPM), enterprise performance management (EPM), custom application development, packaged applications and Infrastructure services to mid to large companies. Emtec is the ideal choice for organizations that need both application and infrastructure capabilities with a personal approach.

"We are extremely pleased that we have teamed up with one of the most talented and growing IT services

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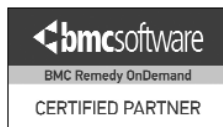
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Empowering the Enterprise

Successful businesses no longer look to their IT organizations to merely collect, process and organize data, but they expect them to provide near-real-time metrics and relevant business information that helps management pinpoint how they are doing and, more importantly, what they should be doing and why. IT organizations are also key in enabling their businesses to connect with customers and employees through social media to deliver valuable information at any location, on any device.

With the recent acquisition of Emerging Solutions (an Information Technology (IT) consulting/services company based in Chicago, IL), Emtec is better equipped than ever before to help our clients achieve such insight.

Emerging's management and consultants have carved out a unique niche, developing a rare level of expertise in the implementation, customization and fine-tuning of the market's most powerful business intelligence (BI), Enterprise Resource Planning (ERP), enterprise performance management (EPM) and customer relationship management (CRM) tools.

Among Emerging's key specializations are Enterprise Resource Planning (ERP), Customer Relationship Management (CRM) and Business Intelligence (BI) /Enterprise Performance Management (EPM). While these technologies all have demonstrable business benefits, there are a number of challenges that can dramatically hinder performance. Emerging Solutions' experienced, certified consultants get these solutions implemented on time and on budget while ensuring maximum efficiency.

Performance Management

For years, organizations used standalone spreadsheets for planning, budgeting and forecasting needs. Because they are handled manually, spreadsheets are prone to human error. No matter how well-defined and well-documented the rules for collecting data, control is lost once the data is typed, pasted or imported into a spreadsheet.

EPM solutions such as Oracle Hyperion offer a far more elegant and effective approach. Oracle's performance management applications are a modular suite of integrated applications that integrate with both Oracle and non-Oracle transactional systems. Each application can be deployed independently and delivers a high degree of value, but they work better together, integrating strategic, financial and operational management processes while delivering a low cost of deployment and ownership. From a business perspective, EPM offers a new level of visibility that streamlines financial reporting timelines, and addresses Sarbanes Oxley disclosure compliance obligations.

Spencer Stuart, one of the world's leading executive search consulting firms, called on Emerging Solutions when it sought to transition from spreadsheet-based financial management system to a web-based solution that would allow reporting to multiple users on a single, consolidated platform. Using its proven project methodology, the Emerging Solutions team structured a seven-phased project for implementing the Hyperion Financial Management (HFM) application to meet all the customer's requirements.

"The Emerging Solutions team is very professional. Without their effort, the project would not have been a success," said Steve Hunst of Spencer Stuart.



The great thing about the Emerging team is they have both advanced technical expertise and a deep understanding of the business issues that multiple industries face— including manufacturing, utilities, professional services and media.

The Social Enterprise

The Emerging Solutions team also was instrumental in helping NBC Universal deploy Salesforce CRM to help transform sales and unify its network, cable and digital business organizations. NBC Universal also integrated Salesforce CRM with its existing Business Objects business intelligence technology, creating a platform from which everyone from sales staff in the field to executives have access to the exact information they need.

What created the biggest buzz among NBC Universal's staff was Emerging Solutions' involvement in implementing the Salesforce Chatter application to realize the company's vision of becoming a "social enterprise." Chatter is a collaboration application for the enterprise to connect and share information securely with people at work in real-time.

With cloud, mobile and social collaboration applications being added to the traditional data-based software stack, organizations must find ways to seamlessly integrate both structured and unstructured data from a variety of sources. Chatter essentially enabled a private social network that employees from all of NBC Universal's 20-plus media companies to share documents, data, marketing ideas and more.

"The first week we launched this application, we had a 300 percent return on investment," said Eric Johnson, VP, Sales Force Effectiveness, NBC Universal. "Social collaboration and social networking is here to stay."

By integrating Emerging Solutions' unique expertise into an already substantial service portfolio, Emtec's suite of services is more robust than ever. The Emtec family is excited to have this great new team on board, and we are truly energized about all of the great possibilities that lay ahead.

Cover Story

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companies in the ERP/CRM/BI space," said Dinesh Desai, Chairman, CEO, and President of Emtec. "Emerging Solutions has built a very talented team of experienced professionals that deliver world-class IT expertise.

"We believe that Emerging Solutions will integrate extremely well with our existing application services and ERP practices — including the Dinero and Covelix acquisitions we made earlier this year. There is a clear strategic fit between Emtec's portfolio and growth plans and Emerging's services offerings. We have complementary cultures and very similar values, driven by a commitment to client service, creativity and execution."

"This acquisition significantly enhances Emtec's portfolio of services, commercial client-base and talent pool while strengthening Emtec's position in the Midwest region of the U.S."

Greg Lewis, Co-CEO of Emerging said: "We have been looking for new ways to grow and are excited to join Emtec. Emtec provides a larger platform for us and we feel that all of our associates will be able to provide an even better level of support and our clients will benefit from our expanded service offerings and delivery options (onsite, onshore and offshore)."

Don Sweeney, Co-CEO of Emerging, added: "We have found a culture that feels very familiar and welcoming. There is a great future for Emtec and we are happy to be such an important milestone in the path to reach their goal to become a billion dollar IT services provider."

What's in a Name?

Desktop virtualization or virtual desktop infrastructure: What's the difference?

Desktop virtualization is transforming how organizations manage, support and protect desktop computing environments with the promise of a more modern, user-centric application and data delivery model. The architecture seeks to free users and IT from more than two decades of complex, device-centric computing and deliver a more user-friendly experience.

"Customers are intrigued by the possibility of a better desktop management model and the operational savings desktop virtualization could deliver," said Ian Song, senior research analyst, Enterprise Virtualization Software, IDC. "In the next 12 to 24 months, desktop virtualization technologies will move beyond just managing PCs and become a solution that can provide a holistic management paradigm addressing many different facets of end-user computing."

For all its transformative possibilities, desktop virtualization remains misunderstood. Part of the problem is that marketing hype has blurred the distinction between the overall concept of desktop virtualization and the various available models for implementing this concept. Part of the problem is that marketing hype has blurred the distinction between the overall concept of desktop virtualization and the various models for implementing this concept. There is particular confusion when it comes to Virtual Desktop Infrastructure (VDI). Although the terms desktop virtualization and VDI often are used interchangeably, VDI actually is just one component of a total desktop virtualization solution.

The Basics

Desktop virtualization is gaining steam because it addresses one of the most time-consuming and expensive operations supported by IT organizations — deploying and managing end-user desktops. According to industry estimates, managing a single desktop can cost more than \$5,000 a year.

Desktop virtualization helps relieve these headaches by separating the desktop environment from a particular compute resource, application environment

and user environment. In the VDI model, these "elements" of the desktop are virtualized in the data center so that they can be accessed via a wide range of devices from any location. A hardware virtualization layer provides numerous virtual machines (VMs) that can be used to host desktop images for multiple users. If properly architected, these elements join together to create a rich user experience indistinguishable from the traditional desktop.

The goals of desktop virtualization can also be achieved through application streaming, server-based computing and cloud services and blade-based computing. VDI is generally — but not always — the approach with the best use case. However, application streaming and hosting technologies provide by far the best ROI and TCO, and should not be ignored as the way to deliver more resources with less overhead to a particular user base. In many cases, the various approaches should be combined with VDI to create the most flexible architecture.

A Complete Solution

The journey to desktop virtualization can be difficult for organizations that currently are not well on their way toward centralizing data and user profiles. These data centralization requirements are essential first steps in a successful move to desktop virtualization.

After that, the most intricate part of the journey is how organizations manage application delivery. If applications are installed at every endpoint, even with automated tools, this model is much more difficult to manage than a centrally installed or accessed model. Application streaming and hosting technologies provide by far the best ROI and TCO over a VDI model, and they simply cannot be ignored as methods for delivering more resources with less overhead to a particular user base.

Some of the key benefits or components of a complete desktop virtualization solution are:

Virtualized and centralized desktop management. This is a PC-replacement strategy that has many benefits, but also can be an expensive move that will not show immediate ROI because of the back-end hardware and storage required to prepare such an infrastructure. Longer-term ROI is realized through more efficient managing and scaling of application and desktop resources, providing agility and flexibility for mergers, acquisitions and other day-to-day adds, moves and changes.

Application virtualization. Application virtualization involves the use of various "sandbox" methods to present applications to end-user devices as a single, isolated package that does not typically install within the file systems and registries of the target devices. Iso-

lation minimizes application conflicts and creates a single-instance installation of an application that can be used in a virtual desktop, traditional desktop or from a Remote Desktop service experience.

Single-instance OS management. Hosted virtual desktops, or VDI, is the foundation for a full desktop virtualization solution, but not a complete solution. The ability to create a single OS image and leverage this image for hundreds or even thousands of virtual desktops is a key to a great VDI solution. Both Citrix and VMware have methods for "provisioning" or "cloning" a single OS image to minimize the amount of storage required to support large numbers of virtual desktops.

The typical distributed desktop computing environment in which everyone in a company has his or her own PC or laptop loaded with applications and data is costly to own, complex and time-consuming to manage. Desktop virtualization can reduce some of the costs normally associated with the traditional model and increase IT efficiency. Application virtualization also plays a role in delivering what users need, regardless of end-computing device or OS platform. However, organizations must remember that while VDI is often the most appropriate way to achieve these benefits, it is not the only way.

Desktop Virtualization Makes the Grade

Budget cutbacks dictate that K-12 school districts look to modern IT infrastructure solutions to get the most out of their resources. Increasingly, education technology leaders view desktop virtualization as a viable way to deliver applications and resources to students while reducing IT costs.

Desktop virtualization solutions allow school IT administrators to centrally manage all of their virtual desktops in a school's data center, significantly reducing the maintenance time and costs associated with legacy PC deployments. In addition, the desktop virtualization solution is an energy-efficient alternative to traditional PCs.

Western Wayne School District in Pennsylvania recently virtualized its desktops using VMware View and thin clients, and has been able to update hardware and

software district-wide to ensure better access to applications and a consistent learning experience across all of its students. The district is now building out one of the first "green" IT campuses in Pennsylvania with two thin client computer labs running virtual desktops hosted from the high school nine miles away.

"The move to virtualization was driven by the need to meet limited budget resources, while still meeting technological and educational needs for students and faculty," said Brian Seaman, the district's network administrator. "Not only did we see a cost savings to the technology budget after deploying VMware View, we also saw a reduction in energy use. A typical desktop uses 100 to 150 watts of power, while a thin client uses a 10th of that amount. Virtualized desktops are the best option for sustainability and manageability."

Opportunity Knocks

Gartner highlights five CRM strategies that cost little but will generate positive results.

Lessons learned from previous downturns indicate that 40 percent of companies will use the current economic slump as an opportunity to generate post-recovery growth via effective use of customer relationship management (CRM) strategies, according to Gartner, Inc. Companies that fail to invest in CRM strategies because of the tough economic climate will delay perceived benefits by at least 12 months once the economy recovers, giving rivals an advantage in the market.

"Just because times are tough and budgets are being cut, companies should not think that means no CRM investment," said Scott Nelson, managing vice president at Gartner. "Companies need to think in terms of spending smarter, not spending less. There are zero-cost or low-cost strategies that can be implemented now that can make all the difference, generate competitive differentiation and not draw the attention of the CFO."

Nelson said there is no such thing as a true "zero-cost strategy," as money has often already been spent on CRM systems and there are ongoing care and maintenance expenses. However, CRM success can be secured without spending more money on technology. Many organizations have large investments in call centers, Web sites, marketing systems and sales force automation. Companies can wrap effective strategies around these tools and generate real success from a customer standpoint.

"CRM is a journey, not just a one-time-and-done strategy," said Nelson. "If the right strategies are employed now, then companies will get a 'slingshot' effect going into the eventual recovery, putting them well ahead of the rivals who chose to wait and who equate CRM success with spending more money on technology."

Gartner has identified five strategies that companies can undertake now that cost very little or nothing, but which will generate positive results.

Customer Communities

Gartner predicts that CRM of the future will be about creating online communities of customers via emerging social media such as Facebook, Twitter and similar Web sites. The economic downturn provides a great opportunity to begin experimenting in this area, and Gartner advises companies to set up accounts on the various Web sites and learn what they do and don't do, and how users interact.

Analytics

Once they are bought and installed, analytic tools can be put to good use during economic downturns. Many companies have more information than they know what to do with, and now they have the opportunity to study attrition models, look at next-most-likely-to-buy models, and figure out channel-usage patterns. While doing so, companies should bear in

mind that customer behavior may change when the economy improves.

Segmentation

Many segmentation schemes are based on psychodemographics, profitability or account attributes. However, a down economy provides companies with the opportunity to review their segmentation strategy and see if it really is best.

Process Redesign

Process is an often-overlooked part of CRM. In many cases, all CRM technologies have done is taken out old, broken processes and made them run more efficiently. Now is an excellent time to study customer processes with a view to redesigning them and creating a win/win situation for both the company — which gets greater efficiency — and customers — who

get a "partner" who interacts with them in a meaningful way.

Organizational Redesign

Organizational change is one of the most difficult areas of CRM strategy, but many companies need to make the move from product-centric to customer-centric. In a down economy, with fewer distractions, many companies will find that this is the perfect time to start addressing some of the organizational issues that get in the way of serving the customer.

"At the end of the day, CRM is all about change. Changing from product to customers, changing age-old processes, changing enterprise mindsets, and changing how companies relate to customers," said Nelson. "All of this can be done without new systems, and the challenging economic environment may give companies just the chance they have been waiting for."

Social CRM Growing Rapidly

As awareness and use of social networks increases, customer service executives and planners are feeling increasing pressure from corporate executives to articulate a strategy for how this new communication channel will be harnessed so that they don't get left behind. For many organizations, such a strategy will revolve around social customer relationship management (CRM).

Social CRM — sometimes referred to as CRM 2.0 — involves the integration of social media and social networking platforms such as Twitter, Facebook, LinkedIn and YouTube into traditional CRM platforms. Such integration is increasingly important in an age when customers' purchase decisions are just as likely to be influenced by the real-world experiences of online contacts than by a company's marketing and advertising efforts.

"For many companies, brand building has been synonymous with rigid control over messaging, but in the age of the social customer, this is no longer desirable even if it were possible," said Bruno Teuber, Vice President & GM EMEA, Lithium Technologies.

Most deployments of social CRM are taking place in corporate marketing departments as an exercise in brand management, such as maintaining a presence on Facebook or Twitter. However, savvy customers are learning that the employees that manage interactions across these channels can also provide customer service functions — sometimes with much-faster responsiveness than that

provided over formal contact center channels. As customer awareness and use of social CRM for marketing as a back door to customer service increases, it is expected to progress from an exception-handling situation to a process that needs to be standardized to scale to broader use.

Gartner, Inc., projects that 30 percent of leading companies will extend the goals of their online community activities over the next two years to include the design of enhanced service processes. The firm says social CRM for customer service has the potential to bring new and dynamic methods for improving customer service, and in doing so is creating opportunities for new and existing providers in the customer service and contact center infrastructure markets.

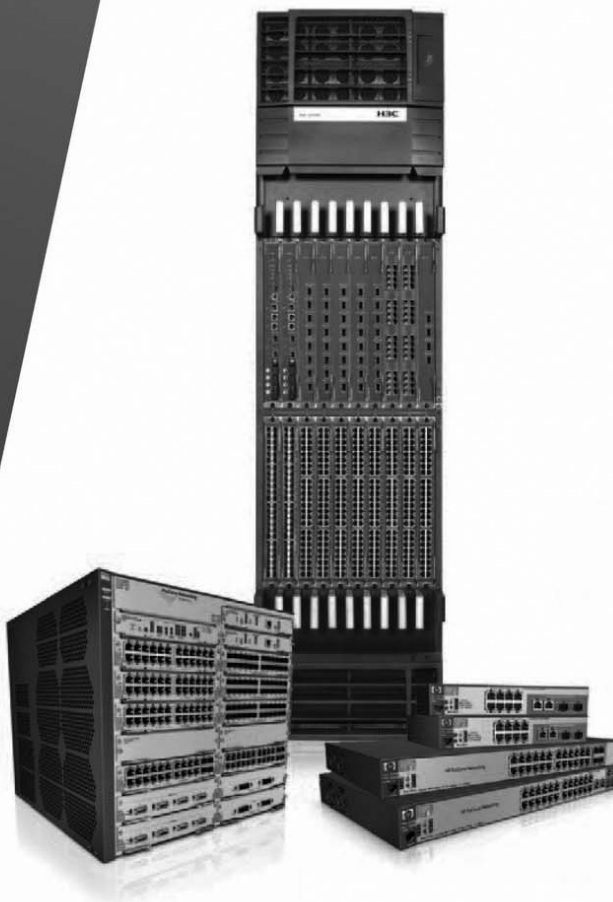
This is why Gartner expects the worldwide market for social CRM to reach more than \$1 billion in revenue by year-end 2012, up from approximately \$625 million in 2010 and a projected \$820 million in 2011.

"In 2010, only 5 percent of organizations took advantage of social/collaborative customer action to improve service processes; however, customer demand and heightened business awareness is making this a top issue among customer service managers," said Drew Kraus, research vice president at Gartner. "At current trajectories, within five years we expect that community peer-to-peer support projects will supplement or replace Tier 1 contact center support in more than 40 percent of top 1,000 companies with a contact center."



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Human Firewalls

Employee vigilance is the key to thwarting 'social engineering' attacks.

Technology is only one line of defense against hackers. Establishing a “human firewall” through strong internal security policies, training and education is just as important as investing in antivirus software, firewalls and virtual private networks.

Hackers often take advantage of the kindness and trust basic to most humans to gain access to an otherwise secure computer system — a strategy called social engineering. The recent News Corp. scandal in which reporters hacked cellphone voicemail accounts of 9/11 victims, politicians, celebrities and crime victims is likely a high-profile example of social engineering. Although details haven't been confirmed, many security experts are speculating that the reporters used a technique known as pretexting, which involves calling the phone company and convincing a technician to change the PIN for a customer's voicemail.

Social engineering works because hackers are able to prey on people's trust, lack of awareness and curiosity. Anytime an unknown person calls requesting information, it should raise a red flag. Other signs to watch for include the caller refusing to provide contact information, rushing the call or flattering the employee excessively, using intimidation tactics, making out-of-the-ordinary requests or claiming a request was approved by an authority.

What makes a good human firewall security policy? The SANS Institute makes the following recommendations:

Educate employees. Implement a set of procedures for setting up new employees on your network. New hires should immediately begin training on the organization's security policies and procedures. Policies and procedures should be placed on the company's intranet where they can be checked frequently for updates and additions.



Create a password policy. Employees should change their passwords periodically, and passwords should include special characters, numbers and even misspelled words to make them more difficult to crack. But remember the human equation. If the password policy is too stringent, employees won't follow it. Strike a balance between security and ease of use.

Be suspicious of unsolicited phone calls. Never provide personal information, such as credit card or bank details, to an unsolicited caller — even if they claim to represent a respected company.

Secure your help desk. Establish procedures for giving out passwords to employees. For example, the procedure should require that the help desk call the employee back to verify his location. Consider requiring the use of personal information or code words before the password is given out. Many organizations

simply don't allow any passwords to be given out over the phone.

Provide proper support. If a help desk staffer refuses to give an angry vice president his password, that employee must be supported if the vice president complains. Finally, make sure that your help desk knows who should be contacted in the event of an attempted security breach.

Create and maintain access privileges. Specific procedures should state who has access to various parts of your network, and how they may access it. These procedures should also state who is authorized to approve access, and who can approve any exceptions.

Consider using ID badges. Large organizations should require employees to wear picture ID badges and guests to wear “visitor” badges at all times. Anyone without a badge should be challenged. Be especially alert to vendors, such as coffee, candy or soft drink vendor employees who enter your building to refresh snack areas.

Shred all confidential documents. Provide paper shredders in all areas of your organization that handle sensitive information. Remember that such seemingly innocent information as a phone list, calendar or organizational chart can be used to assist an attacker using social engineering techniques to gain access to your network.

Protect your physical plant. Sensitive areas in a building should be physically protected, with limited access. The doors in these areas should be locked — perhaps with passkeys or passwords — and access granted only to those with a need to be in that area.

Report all violations. Develop a process for reporting and insist that all violations of security policy be reported. Even a minor policy infraction could be the first sign of an impending social engineering attack.

Phone Scams Exploit Victims' Fear, Trust

The consumer complaints board Callercenter.com reports that the most frequently reported telephone scams thus far in 2011 involve the use of social engineering tactics designed to exploit victims' fear or good nature to steal money.

The most prevalent con has been the “Microsoft PC Repair Scam.” In this scheme, the victim receives a phone call from a criminal claiming to be a security engineer from Microsoft or other well-known, legitimate companies. The scammers say they are

providing free security checks and attempt to deceive their victims into permitting remote access to their computer.

The alleged technician then finds mundane errors on the PC and presents them as dangerous viruses. The victim is then guided to download a malicious program, which will demand a credit card and subsequently charge the card. This scam is extremely popular among cybercriminals and has been reported in every developed English-speaking country.

Microsoft has already published several Fraud Alerts, but the fraud continues to grow in size.

The second-most prevalent scam in 2011 has been the well-known “Grandparents Scam.” In this scam, fraudsters call elderly persons and pretend to be grandchildren. They plea for money to help them out of a supposed crisis, such as being arrested in a foreign country. To make the story more plausible, another individual will make a follow up phone call and

pretend to be a police officer or a lawyer who confirms the story.

“The security of software is improving all the time, but at the same time we are seeing cybercriminals increasingly turn to tactics of deception to trick people in order to steal from them,” said Richard Saunders, director of International Public and Analyst Relations at Microsoft. “Criminals have proved once again that their ability to innovate new scams is matched by their ruthless pursuit of our money.”



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New Lease on IT Life

When money is tight, IT leasing helps reduce costs, conserve capital and maintain effectiveness.

Volatility in world financial markets is impacting IT spending. In tough economic times, budgets are under unprecedented pressure and access to bank funding is limited — particularly for small to midsize businesses (SMBs).

In a poll of 426 small-business owners, the Federal Reserve Bank of New York's Office of Community Affairs found that 63 percent of those SMBs that applied for a business line of credit from a bank were denied. This tightening of the money supply is having profoundly negative effects on IT initiatives.

According to a recent Wakefield Research survey of more than 500 SMB IT managers, 93 percent say their companies have placed cost concerns above the best IT solutions, leading 89 percent of those companies to experience IT-related problems. The top three IT problems reported by cost-conscious companies are low-performing hardware (46 percent), out-of-date hardware (37 percent) and unreliable hardware (23 percent), leading to suboptimal computing efficiency and an overall loss of productivity.

Under such conditions, the IT equipment leasing option becomes extremely attractive.

Many Benefits

According to the Equipment Leasing and Finance Association, first-quarter financing by U.S. businesses for capital purchases increased 34.5 percent over the same period last year. Overall, business financing has increased 44 percent over the previous year.

That's because the operational, financial and strategic advantages of IT leasing are numerous. The ability to conserve capital, shift costs between capital and expense budgets, and access incremental capital are all important reasons to lease. Leasing also provides protection against obsolescence, helps maintain technology refresh cycles and can shift the burden of environmentally friendly disposal to the lessor.

Of course, leasing is not a complete no-brainer. When considering technology leasing, it's important to look at the total cost of ownership (TCO) associated with the equipment. After all, the initial purchase price is generally less than half of that total cost. Maintenance, support, training, upgrades and the ultimate disposal of the equipment make up the remainder. As with any technology procurement decision, these factors impact the value of leasing.

It All Adds Up

Unfortunately, the typical lease-versus-buy analysis remains a "spreadsheet" exercise that attempts to measure small differences in capital expenditures while glossing over TCO. By failing to integrate operational cost/performance data into lifecycle planning and "lease-versus-buy" models, IT organizations may be incurring a 20.5 percent cost premium to acquire, manage and decommission their IT equipment, according to IDC.

"Although many IT professionals recognize the opportunity shorter lifecycles present intuitively, most organizations continue to struggle with translating this into an analytic analysis," said Joseph C. Pucciarelli, program director

for IDC's Technology Financing and Management Strategies.

On the other hand, leasing not only eliminates the up-front cash outlay but can also include provisions for complete lifecycle management. This reduces TCO and eases migrations and upgrades. A fixed monthly budget amount also gives the IT manager more flexibility when it comes to the deployment of new applications.

There are other solid financial reasons to lease IT equipment. Many leases include flexible end-of-term options that reduce the legal and environmental costs associated with equipment disposal. There may also be tax benefits. When considering the entire IT lifecycle — procurement, deployment, support and disposal — the cost of leasing will likely be comparable to that of other financing options.

Where's the Real Value?

Given the popularity of IT leasing, many technology providers now offer leasing services. A primary benefit of partnering with a technology provider rather than buying direct from a vendor is the ability to get best-of-breed equipment at competitive rates. This benefit extends to the leasing transaction.

Technology providers may be able to leverage volume purchasing and vendor relationships to garner special pricing and rebates. Customers who lease all of their equipment through the technology provider may thus be able to negotiate better deals than if they went direct.

More importantly, customers who lease from a technology provider benefit from a relationship with a partner who will keep their business, technology and financial needs in mind. The leasing business is a mature industry with very few differences in basic terms. Thus, the overall business relationship is a key consideration when choosing a leasing provider.

Companies lease IT equipment for different reasons. Smaller firms may be most interested in avoiding major cash outlays. IT managers at larger companies may need to keep equipment purchases out of their quarterly budgets. Either way, leasing helps the finance department by preserving capital and assisting in balance sheet management. It helps the IT department in standardizing platforms, planning regular equipment rotations and speeding new deployments. In today's volatile financial environment, that's a real win-win.

Leasing Offers Major Tax Incentive

Leasing IT equipment is not only a sound financial strategy for many businesses, it can actually be profitable.

Section 179 of the U.S. Internal Revenue Code allows businesses to deduct the cost of certain types of property as an expense rather than requiring the cost to be capitalized and depreciated. Two congressional acts passed late in 2010 (The Tax Relief Act of 2010 and The Jobs Act of 2010) affected Section 179 in a positive way.

The Section 179 deduction limit increased to \$500,000 (from \$250,000). The total amount of equipment that can be purchased or leased increased to \$2 million. This includes most new and used capital equipment — as well as software. In addition, "bonus depreciation" increased to 100 percent on qualified assets.

The obvious advantage to leasing or financing equipment and then taking the Section 179 deduction is that an organization can deduct the full amount of the equipment, without paying the full amount this year. In some cases, the amount saved in taxes can actually exceed the payments, making this a very bottom-line-friendly deduction.

The Section 179 deduction is a tax incentive that is easy to use, and gives businesses an incentive to invest in themselves by adding capital equipment. In short, taking advantage of the Section 179 deduction will help businesses keep more capital, while also getting needed equipment and/or software.

To qualify for the Section 179 deduction, the equipment or software must be placed into service by Dec. 31, 2011. Organizations should consult a tax adviser to see what equipment will qualify for these extra tax incentives.

SMBs in the Cloud

Global study shows that small to midsize businesses will be using more cloud services over the next three years.

In many ways, cloud computing seems ideally suited to small to midsize businesses (SMBs). Smaller organizations often lack the in-house resources to maintain a complex IT infrastructure, and hesitate to tie up capital in fixed overhead. SMBs in a growth dynamic need the ability to scale IT capacity on demand to meet changing needs, and introduce new service rapidly to take advantage of new opportunities. Cloud computing fills the bill on all counts.

It's hardly surprising, then, that SMBs plan to increase their spending on cloud computing services, including Software as a Service (SaaS) and Infrastructure as a Service (IaaS) offerings. Microsoft's global "SMB Cloud Adoption Study 2011" investigated how cloud computing will impact SMBs in the next three years. The research found that 39 percent of SMBs expect to be paying for one or more cloud services in that time period, an increase of 34 percent. It also finds that the number of cloud services SMBs pay for will nearly double.

Those SMBs paying for cloud services will be using 3.3 services, up from fewer than two services today. The larger the business, the more likely it is to pay for cloud services. For example, 56 percent of companies with 51 to 250 employees will pay for an average of 3.7 services within three years.

Gradual Move to the Cloud

SMBs are not flocking to the major cloud providers such as Amazon, Apple or Google, however. The survey found that past experience with support from a service provider is a key driver of service provider selection among SMBs. Eighty-two percent of SMBs say buying cloud services from a provider with local presence is critical or important.

Furthermore, SMBs are taking a measured approach to cloud adoption, and seeking ways to minimize monthly service fees. Within three years, 43 percent of workloads will become paid cloud services, but 28 percent will remain on-premises and 29 percent will be free or bundled with other services.

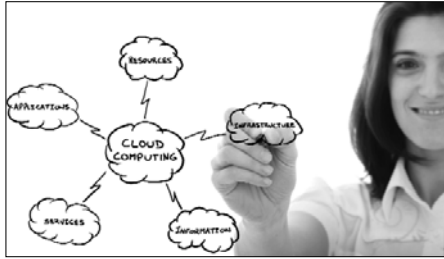
"Cloud adoption will be gradual, and SMBs will continue to operate in a hybrid model with an increasing blend between off-premises and traditional on-premises infrastructure, for the foreseeable future," said Marco Limena, vice president, Business Channels, Worldwide Communications Sector at Microsoft. "As cloud computing becomes more ubiquitous and SMBs' existing IT becomes outdated, adoption will grow rapidly. Hosting service providers should consider the appropriate sales, delivery and support models to target larger SMB customers that are more likely to pay for cloud services."

Cloud Supports Growth, Profitability

The 2011 study indicates that cloud service adoption is not limited to SMBs that see themselves as fast growers. The study showed little difference in adoption rates between SMBs that expect to grow in the next three years (42 percent) and those solely focused on profitability (40 percent).

Growth companies want a scalable environment that can meet their expanding needs, with an affordable, pay-as-you-go pricing model that eliminates the need for over-investment in IT. SMBs that want to maintain their size, but want to become more profitable, seek cost-effective, efficient solutions that match their needs for predictability and low overhead cost. Cloud services can serve both sets of criteria.

The study also found that SMBs that are adopting both SaaS and IaaS services are larger, more growth-oriented and more interested in additional services, such as unified communications and remote desktop support. This provides an opportunity for hosting service providers to offer both SaaS and IaaS in order to acquire and retain high-value customers and maximize revenue per customer.



Location Analytics Growth Expected

ABI Research forecasts continued growth in the location analytics market, expecting it to reach \$9 billion in 2016. The firm says the recent "locationgate" controversy in which Apple and others were logging the location of mobile devices will not halt the growth of location-based services (LBS) and advertising (LBA).

At the moment, the initial LBA trials are largely focused on geofencing, with impressive results. Geofencing involves setting up a virtual "fence" around a location, such as a coffee shop, so that the system becomes aware of consumers who are nearby and pushes information to their cell phones. However, the real power of LBA will come through social, geographic, physical and emotional indicators to filter advertisements to a specific user. The best way to combine these indicators and target them to individuals in a non-intrusive, anonymous way is through location analytics.

"While the location analytics market is relatively new, it has been evolving for a number of years and has been the major driver for recent location-related acquisitions by the likes of Apple, Google, Nokia, Facebook and Microsoft," said ABI Research analyst Dominique Bonte. "Eventually, location will become commoditized and will be treated as just another piece of demographic information. Consequently, location analytics will become the core provider of value in location-based advertising."

More CIOs Deploy Green IT

Almost three-quarters of CIOs have deployed green IT within their organization, with an additional 8 percent planning to do so by the end of 2012, according to a survey by the independent technology analyst Ovum.

The firm says the number of organizations using green IT grew to 73 percent in the second half of 2010, up from approximately 68 percent in the first half, as tightened IT budgets and a sluggish economy forced IT decision-makers to scrutinize spending and wake up to the potential cost savings green IT can deliver.

"This growth in green IT penetration reflects a change of attitude by CIOs and other IT decision-makers," said Rhonda Ascierio, Ovum analyst. "Previously, they considered green IT optional because they defined its value primarily in terms of corporate image rather than the bottom line. It is now viewed as a core technology that delivers business value by cutting costs and increasing efficiency."

Ovum surveyed CIOs about five major categories of green IT: data center virtualization, data center power and cooling technologies, desktop virtualization, printing and paper usage management, and power management tools for PCs and monitors. Of these, data center virtualization has the greatest penetration (52 percent). Ovum says all categories will experience growth over the next couple of years.

World IPv6 Day Termed a Success

Top websites and Internet service providers around the world, including Facebook, Google, Yahoo and Akamai, joined together with more than 1,000 other participating websites in June for World IPv6 Day — a global-scale trial of the new Internet Protocol, IPv6. By providing a coordinated 24-hour "test flight," the event helped demonstrate that major websites around the world are well-positioned for the move to a global IPv6-enabled Internet, enabling its continued exponential growth.

With IPv4 addresses running out this year, the industry must act quickly to accelerate full IPv6 adoption or risk increased costs and limited functionality online for Internet users everywhere. World IPv6 Day participants came together to help motivate organizations across the industry — Internet service providers, hardware manufacturers, operating system vendors and other web companies — to prepare their services for the transition.

A key goal of World IPv6 Day was to expose potential issues with real-world IPv6 use under controlled conditions. Given the diversity of technology that powers the Internet, the global nature of the trial was crucial to identify unforeseen problems. The vast majority of users were able to access services as usual, but in rare cases, users experienced impaired access to participating websites during the trial.

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ID Thieves Don't Take Vacations

Experts say travelers don't take necessary precautions to protect their personal information.

The Internet has become an indispensable tool for planning vacation or business travel, providing the means to book airline tickets, make hotel reservations, select restaurants and more. However, security experts say many consumers get so caught up in the planning they forget to take basic steps to protect themselves from potential fraud and identity theft.

"When consumers plan vacations or business travel, they tend to be more focused on getting the right deals that work with their schedules and budget. It's easy to get distracted searching for the best deal and it's these distractions that sometimes cause us to make mistakes. We click on search results for companies we've never heard of and give more information than we need to on Internet travel sites or on the phone, which can put us at risk," said Steve Schwartz, EVP, Consumer Solutions for Intersections, Inc., a leading provider of consumer and corporate identity theft risk management services.

A recent survey conducted by Experian Consumer Direct found that consumers often put their personal information at risk when booking flights at home, logging on at public Wi-Fi hotspots or surfing the web in a hotel room. Other findings indicated that an alarming number of people are not protecting their sensitive documents before leaving on a trip. In fact, 76 percent of consumers do not place personal items in a safe or safety deposit box when they depart for their trip.

"The survey results were very telling about the many ways your identity can be exposed when you travel," said Jennifer Leuer, SVP of Experian Consumer Direct. "What people don't realize is that thieves wait for summer vacation, too — not to take in some beautiful sights but to take unsuspecting travelers' information."

Additional results indicated that enterprising identity thieves who monitor social networks or online activity will find plenty of victims. About one-fifth of all survey respondents post their

travel plans to social networking sites, and the number increases in the 18-to-34 demographic. Survey trends also showed the bulk of travelers staying connected while on vacation, with a disturbing number accessing public Wi-Fi, increasing their personal data's vulnerability.

Whether on a vacation or business trip, the following travel tips can help protect personal information:

- When available, use a hard-wired connection or a personal Wi-Fi hotspot rather than public Wi-Fi. A DSL connection is typically more secure than any free Wi-Fi network you may find in a hotel business center or lobby.
- If you must use public Wi-Fi, create a strong password. Strengthen your password by making it longer and including an array of symbols, letters and numbers.
- If you plan on using Wi-Fi provided by your hotel, ask what security measures are taken to protect guests' information.
- Don't broadcast travel plans on social media sites. Postpone posting pictures of your adventures until you return home. Posting photos in real time are an indicator that your home is vacant, welcoming intruders.
- Lighten your load before hitting the road. Cash or credit cards are the best forms of payment while traveling. Go through your wallet, purse and/or briefcase and remove any unnecessary personal items such as Social Security card, bills, extra credit cards, library card and checkbook. Protect these items from home intruders by locking them in a personal safe or a safety deposit box.
- Book travel on secure sites. While third-party sites may offer better prices, some deals are too good to be true. If it is a boutique travel site, be sure to do your research. Check for any feedback on the site, such as in online forums, blogs or groups.
- When you click on the page to pay, ensure that it's a secure site. The URL should begin with "https."

SMBs Dissatisfied with Storage Options

Small to midsize businesses (SMBs) say they are not getting the solutions they need from traditional storage vendors and are wary of cloud storage solutions, according to a survey of more than 250 international small business and IT executives conducted by storage vendor Drobo.

Survey respondents were nearly unanimous (99 percent) in saying they will not move 100 percent of their storage to the cloud, and a majority note that 75 percent or more of their storage will remain onsite.

Eighty-nine percent of respondents said they are dissatisfied with "big box storage" companies' current SMB storage offerings, citing a need for SMB-focused support for server virtualization, Microsoft Exchange, and file backup at an affordable price. Eighty-one percent said it is of medium to high importance to have remote access to their data; 76 percent said on-premises backup is a high storage priority, and 83 percent said that data protection features are a high storage priority.

"Today's businesses demand technically sophisticated storage that works, without complicated management," said Tom Buiocchi, CEO at Drobo. "These survey findings align with what we're seeing in the market — businesses want robust storage that's also affordable and easy to use."

IT Expected to Drive Growth, Efficiency

With a focus on new growth opportunities and efficiencies, 29 percent of U.S. private companies surveyed for PwC US's Private Company Trendsetter Barometer plan to increase their IT budgets over the next year.

Trendsetter companies' IT investments will be focused on two main areas over the next 12 months: innovation (36 percent) and maintenance (64 percent). Significantly, companies in the innovation segment allocate a larger portion of their budgets to IT than those primarily in the maintenance segment — 9.53 percent versus 5.01 percent.

Nearly half (46 percent) have identified important and/or sizeable areas or functions in need of IT upgrade or improvement, and 18 percent of those businesses report that they'll require additional budget expenditures to make the necessary changes. Overall, these companies are a faster growing group, forecasting an average revenue growth rate of 11.5 percent over the next year versus 9.1 percent for all other private companies.

Key areas of planned IT investment for the next one to three years are information security (70 percent), next-generation data management and analysis (50 percent), enterprise mobility via tablets and handheld devices (48 percent), social media/networking (46 percent) and cloud computing (40 percent). Companies in the innovation segment are significantly more likely to invest in next-generation data management and analysis, social media/networking, virtualization, cloud computing and context-aware computing than those in the maintenance segment.

Worldwide Mobile Phone Market Grows

The worldwide mobile phone market grew 11.3 percent year over year in the second quarter of 2011 — despite a weaker feature phone market, which declined for the first time since the third quarter of 2009. According to IDC's Worldwide Mobile Phone Tracker, vendors shipped 365.4 million units in the second quarter of 2011 compared to 328.4 million units in the second quarter of 2010. The 11.3 percent growth was lower than IDC's forecast of 13.3 percent for the quarter and was also below the 16.8 percent growth in 1Q11.

The feature phone market shrank 4 percent in 2Q11 when compared to 2Q10. The decline in shipments was most prominent in economically mature regions, such as the U.S., Japan and Western Europe as users rapidly transition to smartphones.

"The shrinking feature phone market is having the greatest impact on some of the world's largest suppliers of mobile phones," said Kevin Restivo, senior research analyst with IDC's Worldwide Mobile Phone Tracker. "Stalwarts such as Nokia are losing share in the feature phone category to low-cost suppliers such as Micromax, TCL-Alcatel and Huawei."

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ALC-03

Blocking the Bad Guys

Whitelisting offers a new approach to security by focusing on 'known good.'

Fans of classic Hollywood westerns never have trouble distinguishing the ethics of the main characters: The good guys wear white hats; the bad guys wear black. In the world of network security, it's a good deal more difficult to spot the villains.

For years, network security has grown from the proposition that it is possible to identify and "blacklist" bad traffic at the perimeter. Tools such as firewalls, antivirus software and intrusion detection systems are designed to protect against known threats. The problem with this approach is that bad guys aren't always so easy to identify.

Threats often can't be identified until after the fact, leaving exploitable gaps between the time security patches are issued and when they're installed. Less than 20 percent of malware is identified within the first day of its existence and the detection rate rises to just 62 percent after 30 days, according to a

study by cyber security firm Cyveil-lance.

In addition, the growing use of web applications is exposing organizations to new levels of risk. As end-users download more and more third-party applications to enhance productivity, they are frequently providing cyber out-laws with another avenue of attack. Rather than using pure network-level assaults, hackers can now circumvent traditional perimeter security measures to quietly target obscure flaws in specific applications.

Gaining Trust

A relatively new approach called application whitelisting (or application control) offers a different way of thinking about security. It is essentially the opposite of blacklisting, allowing only preapproved code to run and automatically preventing the installation and execution of any unwanted or untrusted applications.

Whitelisting solutions have been around awhile, but early solutions simply limited the execution of code to a verified list of accepted applications. While that was a solid approach at the time, it no longer meets the needs of today's dynamic organization in which users are constantly seeking new tools to improve productivity. This includes a wide variety of web applications, open-source tools, commercial programs and cloud-based applications. In a simple whitelisting model, the IT organization would be overwhelmed by the need to regularly inspect all these applications and make updates to the "approved" list.

The latest solutions offer a far more flexible approach. Rather than constantly managing a centralized whitelist before changes are allowed, users of intelligent whitelists define a set of automated trust rules that are fine-tuned to their risk appetite and control tolerance. This eliminates the need for constant intervention by IT by automating the verification of good software using common indicators such as the reputation of the software publisher or the reputation of the tool implementing an update or a new piece of software.

Whitelists also allow IT to provision different levels of trust to different end-users. Trusted power users can be given full rein to place a new application on the whitelist, either for personal use or for a large group of users.

"As IT consumerization, social media and adaptive persistent adversaries continue to transcend and undermine conventional security, it is increasingly necessary to adapt our security and policy enforcement," said Josh Corman, Research Director, Enterprise Security Practice at The 451 Group. "In the right use cases, application control can reduce the chances of running malicious, unwanted, and even vulnerable elective applications."

There are a number of different whitelisting methodologies, but they are generally based on some common means of identifying application components and tying them to whitelisting policies. The SANS Institute, the global leader in Internet security research and training, says these defining characteristics include:

- **Certificates:** Also known as "signing," certificates are created to certify that the applications come from a trusted source. Applications that have been digitally signed by a software vendor's trusted certificate can be assessed

by the operating platform and the whitelisting software. Many whitelisting tools refer back to the central server for digitally signed applications because they typically have a higher degree of trust associated with them.

- **Path values:** The software path, or location on the system, is another attribute commonly used to fingerprint and identify applications. The whitelisting software specifies an accepted path, and anything outside of that path is bad. This could include standard file and directory hierarchies, as found on all Windows and UNIX-based platforms, or specific types of entries found only in the Windows registries or the /proc file system on Unix or Linux.

- **Hash values:** A cryptographic hash can be created for a file or groups of files affiliated with an application using commonly accepted protocols such as MD5 or SHA-1. Some of these hashes are pre-generated by a vendor and available publicly, while others are generated by whitelisting software at the time of policy generation and enforcement. These hashes are periodically compared to new hashes generated on the fly to ensure the software is the same and has not changed.

- **Services:** Many applications have installed or affiliated services associated with them. Such services might be represented in the Services Management Console on Windows and the /etc/xinetd folder on Linux, for example. States are defined within the whitelisting policies and then the software assesses, identifies and compares states at a given time.

- **System and user behavior:** Users define specific user and system behavior sequences that the whitelisting program allows. Examples might include TCP ports used by the software, access logs generated by specific users, and times of day for access. These are most often used in conjunction with some of the other methods listed.

The exploitation of application flaws represents a fundamental shift in the security threat landscape. According to Gartner, three-quarters of today's security attacks are focused at the application layer. When paired with traditional security solutions, application whitelisting can help make this new frontier safe for law-abiding users.

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10/11

Data Center Best Practices

Energy-saving suggestions that can work in facilities of any size.

Energy and power costs continue to command the lion's share of the budget in data centers of all sizes. Data center facilities with 24x7 operations are among those with the highest density of energy-consuming equipment of any modern building.

"They can use 100 times the electricity of a typical office building on a square-foot basis," said William Tschudi, energy analyst at Lawrence Berkeley National Laboratory. "Energy costs of \$1 million per month are not uncommon in large data centers that require megawatts of electricity."

Few organizations are more concerned with data center efficiency than Google, which requires one of the most powerful computing infrastructures in the world to conduct its operations. Google runs more than a million servers in data centers around the world, and processes more than a billion search requests and about 24 petabytes of user-generated data every day.

While Google's research into data center efficiency includes such experiments as seawater-cooled data centers and solar thermal receivers, the company says the real key to efficiency is a rigorous application of best practices. In a recent company blog, Google identified several of its best practices and design considerations that can be applied to both small and large data centers.

Measure Power Usage

You can't manage what you don't measure, so it is important to characterize a data center's efficiency performance by measuring energy use. Google uses a ratio called PUE — Power Usage Effectiveness — to help reduce energy used for non-computing activities such as cooling and power distribution. To effectively use PUE it's important to measure often — Google samples at least once per second. It's even more important to capture energy data over the entire year because seasonal weather variations have a notable affect on PUE.

Manage Air Flow

Good air flow management is fundamental to efficient data center operation. Start with minimizing hot and cold air mixing by using well-designed containment. Eliminate hot spots and be sure to use blanking plates for any unpopulated slots in server racks. Google says thermal modeling using computational fluid dynamics (CFD) can help organizations quickly characterize and optimize air flow for a facility without disruptive reorganizations of the computing room. Also be sure to size your cooling load to your expected IT equipment, and if you are building extra capacity, be sure your cooling approach is energy proportional.

Use Free Cooling

Free cooling is removing heat from a facility without using the chiller, which is the dominant energy-using component of the cooling infrastructure. This is done by using low-temperature ambient air, evaporating water or using a large thermal reservoir. There is no one right way to free cool, but water- or air-side economizers are proven and readily available.

Adjust the Thermostat

Raising the cold aisle temperature will reduce facility energy use. Don't try to run your cold aisle at 70F; set the temperature at 80F or higher —virtually all equipment manufacturers allow this. For facilities using economizers, running elevated cold aisle temperatures is critical as it enables more days of free cooling and more energy savings.

Optimize Power Distribution

Minimize power distribution losses by eliminating as many power conversion steps as possible. For the conversion steps you must have, be sure to specify efficient equipment transformers and power distribution units (PDUs). One of the largest losses in data center power distribution is from the uninterruptible power supply (UPS); be sure to specify a high-efficiency model. Also keep high voltage as close to the load as feasible to reduce line losses.

Throw Another Server Log on the Fire

Cloud computing is hot, literally. In fact, researchers at Microsoft and the University of Virginia say that the heat generated by racks of cloud servers could be used to heat homes and offices.

The researchers have proposed the development of "Data Furnaces" — micro data centers housed in the basements of regular homes and offices. These Data Furnaces, which would consist of 40 to 400 CPUs (between one and 10 racks), would be ducted directly into the building's heating system, providing free heat and hot water.

The idea is that Data Furnaces would be supplied by companies that already maintain big cloud presences. In exchange for providing power to the rack, home and office owners will get free heat and hot water. The cloud service providers would get a fleet of "mini data centers" that would provide low-latency services to nearby web surfers.

"With continuously increasing demand for computing, the community must explore novel ways to expand computing capacity without increasing financial burden and energy costs," the researchers write. "Data Furnaces will reuse the facilities and energy already allocated for heating purposes to provide computing services with low cost and energy footprint."

Study Finds iPads Enhance Learning

Tablet computers are valuable tools when integrated into college and university classrooms, according to an Oklahoma State University study. During the fall 2010 semester, five sections of two courses on two campuses used the Apple iPad as part of a pilot program. The goal was to determine the impact the iPad would have on both students and faculty, and decide if it should be rolled out across the university at some point in the future.

According to OSU, student expenses went down in the classes featuring iPads since students were able to use cheaper electronic textbooks rather than hard copies. Moreover, the university found that if all the students' textbooks were available electronically, they could save enough over two semesters to cover the cost of buying the iPad, which retails for \$499 to \$829 depending upon storage requirements and connectivity options.

Students also benefited greatly from Apple's App Store, OSU found. They were able to find "thousands of educational software possibilities" in the App Store to help complement web-based tools they employed. Students also used Apple's tablet as a "substitute for paper and pen."

Suffering from Internet Addiction?

Technology can be as addictive as alcohol and cigarettes, according to a consumer research group that claims people experience withdrawal symptoms when they go a day without emails, texts and Facebook.

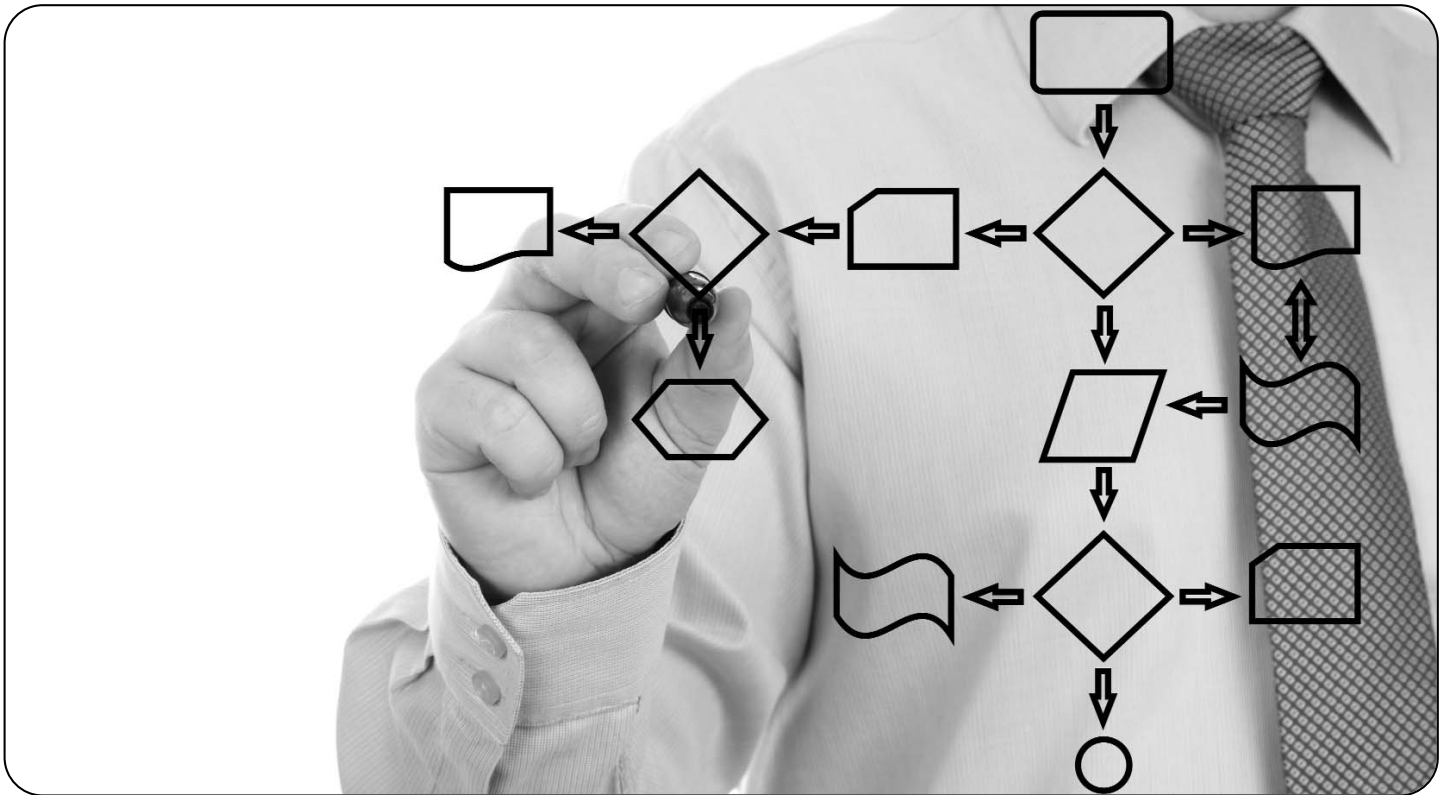
The extent of people's "digital dependency" in their everyday lives was revealed by international consumer research specialist Intersperience in a new project entitled "Digital Selves." The survey involved more than 1,000 individuals from age 18 to over 65.

The project also involved qualitative research, including challenging participants to get through one full day without using technology. One survey participant described it as "like having my hand chopped off" and another called it "my biggest nightmare."

Many participants found it extremely hard to resist the temptation to go online, especially those for whom online communication represents a large part of their social interaction. A total of 40 percent of people felt "lonely" when not engaging in activities such as social networking, emails, texting or watching their favorite television channels.

"Online and digital technology is increasingly pervasive. Our 'Digital Selves' research shows just how dominant a role it now assumes, influencing our friendships, the way we communicate, the fabric of our family life, our work lives, our purchasing habits and our dealings with organizations," said Paul Hudson, chief executive of Intersperience.

Next year, the official manual for the American Psychiatric Association will include "Internet addiction" as a diagnosis.



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