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Tons of Space

FROM THE TOP BOB WILKINS



Understanding Outsourcing

Welcome to the latest issue of *Connect*!

OUTSOURCING IS A hot topic in information technology circles today. Increasingly, businesses of all sizes are finding that outsourcing some or all of their IT functions makes financial sense. In addition, done properly, it can improve efficiency and make critical data more accessible and safer.

But like any opportunity, IT outsourcing raises a host of questions. What are the advantages and pitfalls? What functions should I outsource, and what should I keep in house? What's the best way to do a cost-benefit analysis? Where do I find an outsourcing partner that best fits my business, and how do I manage the relationship?

To help you better understand outsourcing, we've put together a special report in this issue of *Connect*. We have stories and information designed to give

you a better overall picture of the most current trends, products, and technologies and the collective wisdom of those who've already taken the plunge and succeeded.

At PC Connection, we welcome this rising interest in outsourcing. As a complete IT solutions provider, we're ready to work with businesses and organizations to help optimize the value of their technology budget. Our Account Managers can advise you if outsourcing is right for you, and then set you up with the correct program and partners.

For more than 20 years, PC Connection has been an industry-leading provider of IT products and services. We built our business with product knowledge, expert advice, and toll-free tech support before, during, and after the sale.

Today, we employ teams of certified on-staff experts in areas ranging from networking to wireless communications. We can also guide you through our extensive network of third-party service providers. Our goal is always to find a complete and cost-effective IT solution that's right for you and fits your budget.

As the cost of maintaining equipment becomes a more substantial portion of your IT budget, we want to make sure you can rely on us to reduce not only your equipment costs, but also your service and maintenance costs. Feel free to give us a call and we'll assess your needs and give you the scoop on how outsourcing might help your IT department.

Bob Wilkins
Executive VP
PC Connection, Inc.

“As a complete IT solutions provider, we're ready to work with businesses and organizations to help optimize the value of their technology budget.”

PC Connection

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PC Connection



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Small and midsize companies are suddenly finding IT outsourcing options tailored for their specific needs. Learn how to determine what stays and what goes, and how to craft an arrangement that fits just right. **PLUS: My Turn** PC Connection's IT guru Mike Davis gives his two cents on how to make outsourcing work.

Supercharge Your Sales Force 36

Looking for a cheap, no-fuss way to invigorate your sales team? The new breed of hosted sales force automation (SFA) tools might just be the answer.

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With new Web-based customer feedback tools, small and midsize companies are finding out, without expensive research, just how customers feel about their products and services.

“Technology allows us the perception that we are invisible” and that no one can see what we're doing—or rather, not doing—when it comes to security. **PAGE 47**

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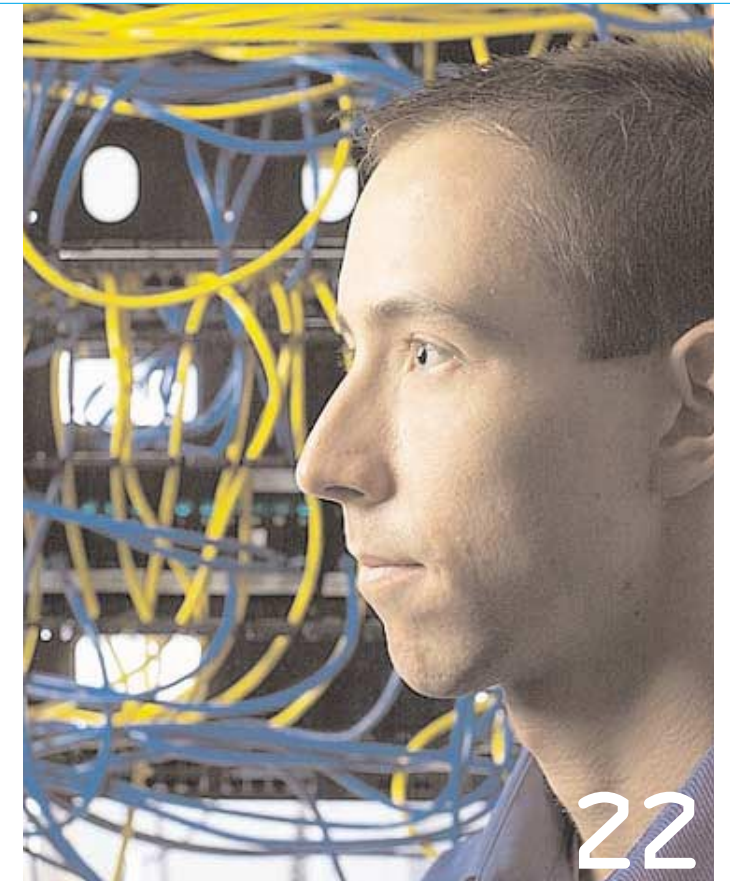
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Cover: Illustration by Mirko Ilic.

TOP LEFT: VIKTOR KOEN; LEFT: TAVIS COBURN;
RIGHT: STEVE BURNS.



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Threads

NEWS. TRENDS. TECHNOLOGY. BUSINESS.

SPAM

Stop Phishing

Phish has left its home in the consumer pool and is heading for the waters of corporate America.

PHISH, SADLY, is not the jam-band quartet of the same name that sent legions of 20- and now 30-somethings into nomadic raptures; it's a new, particularly virulent form of spam that goes "fishing" for personal data by masquerading as legitimate e-mail asking for personal identification numbers, credit card numbers, Social Security digits, and so on.

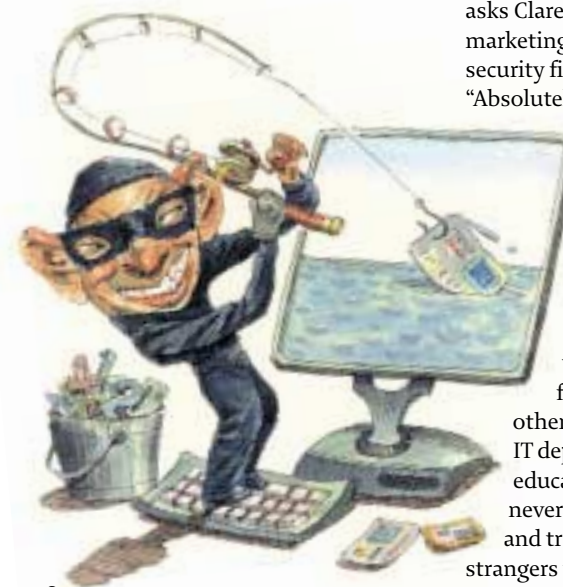
Phish takes spam to the next level by sending out legitimate-sounding e-mails that direct users to fake Web sites that

appear to be those of banks, insurers, retailers, and credit card companies. To date, phish's greatest hits include well-publicized scams involving Citibank and PayPal.

The newest one is an e-mail purportedly from no less an authority than Microsoft Corp. itself. The e-mail tells recipients they've been hit by a virus and need to update their systems. Unwary users are directed to a Web site, which opens a nice back door into corporate data.

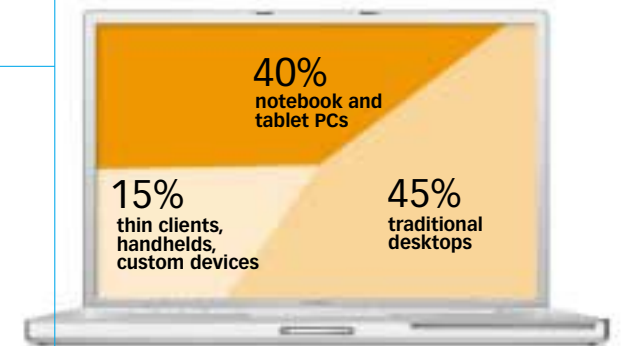
"Is this something corporate IT should be worried about?" asks Clarence Morey, product marketing manager at Internet security firm NetIQ in Houston. "Absolutely." Thankfully, Morey says, the double-barreled approach of vigilance and education should help squash phish outbreaks inside companies. That means that in addition to the standard firewall, anti-spam, and other security apparatus, IT departments need to educate employees about never opening attachments and treating e-mails from strangers with kid gloves.

For the latest news on phish, check out the Web site www.antiphishing.org.



JOHN CUNEO

DESKTOP DECLINE? By 2006, notebooks, tablets, and other portables will edge out the desktop's dominance. SOURCE: Meta Group



PROJECT MANAGEMENT

Putting the People Back in Projects

Project off schedule and over budget? You're not alone. Only 16 percent of IT projects are completed successfully, according to Mark Gould, director of management development programs at Boston University's Corporate Education Center.

To help bring those numbers up a bit, Gould and his colleagues have developed a new competency model that urges managers to tackle projects with a combination of traditional technical skills and general business skills such as accounting and finance.

Gould suggests project managers pay attention to things such as observable skills and 360° feedback assessments, to get an accurate picture of the talent pool before building a project team.

For more information, visit <http://butrain.bu.edu>.



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THREADS

Store it up Think of it as California Closets for corporations. IT managers now have something else to oversee—a storage management infrastructure. Data storage is becoming an even more distinct operational discipline, argue analysts from Meta Group, a Stamford, CT, market-research firm, and a storage infrastructure can give corporations agility they might otherwise lack.

To get a handle on all that data, Meta Group says IT should:

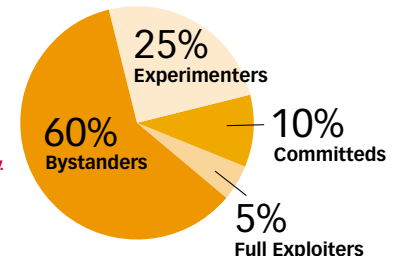
- Define human roles and responsibilities (get ready to manage a "storage policy director," "storage architect," and "storage administrator");
- Identify and evaluate storage-management tools (namely, a central repository and applications that identify, allocate, configure, and deploy storage assets); and
- Understand the storage taxonomy (that's knowing the difference between "adaptive storage resources," and, say "storage tier optimization").

There now, don't you feel organized already?

MOVING OFFSHORE Despite the hype, most Fortune 1,000 firms have not jumped on the offshore outsourcing bandwagon—yet.

BYSTANDERS, who are doing nothing or are just starting to investigate the potential of going offshore.
EXPERIMENTERS, who have relationships with offshore vendors for small projects, but haven't made it a key element of their IT strategy.
COMMITTEDS: Using offshore outsourcers for mission-critical development services.
FULL EXPLOITERS: Developed global outsourcing as a core skill.

SOURCE: Forrester Research, Inc.



SERVER MANAGEMENT

Fighting Downtime

Follow these guidelines to prevent lost productivity due to server outages.

WHEN A SERVER fails and there's a hiccup in service, it's more than just an annoyance. Server downtime is one of the most visible culprits of lost worker productivity, thus responsible for thousands of dollars of waste.

That's why it's become even more critical that small and midsize companies invest in some form of a high-availability solution to keep downtime to a minimum. According to one calculation by Ferris Research, Inc., a market-research firm in San Francisco, a year's worth of outages that reduces staff productivity by 50 percent will cost \$95 per mailbox, or \$47,500 for a server with 500 users (that's assuming a labor cost of \$39 an hour). Outages that occur during off-hours may reduce that impact by half. In either case, though, we're not talking chump change.

Ferris outlines a few common approaches to dealing with server outages:

- **Spare servers.** Ferris recommends keeping spare hardware on the ready to function as a backup server in the event of a hardware failure. Administrators will have to perform a restore of the system from a tape or other media. The upside is this approach prevents outages while waiting on a repair.



The downside: There's a delay in restoring the image from the backup media.

- **Traditional server clusters.** A spare "failover" server is linked up to one or more active servers so if one fails, the "failover" is automatically brought into play. This approach is quicker than one that requires restoring from backup, but it is more expensive and requires a higher level of server management skills.
- **Multiple boundary relays.** Failure on servers that act as Internet gateways have the greatest impact because they route messages for an entire organization. Ferris analysts say larger companies should consider having multiple SMTP or relay servers to provide redundancy and load balancing.

"InfraStruXure™ responds to today's healthcare environment."

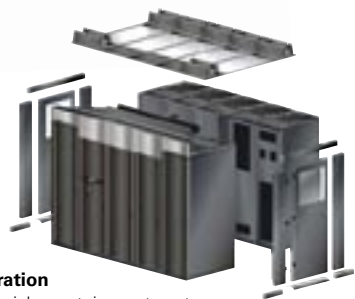
"Our systems must be available 24x7 to deliver critical patient care information quickly to the doctors and nurses in our network...."

Seth Sladek, Data Center Manager, Cambridge Health Alliance



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FUNTHREADS

Long and light What are road warriors seeking in a laptop? Something that's painless to lug around and something that stays powered long enough so they can work effectively on the road.

IBM is betting its new ThinkPad X40 notebook line fits just that bill. The redesigned X40, which weighs in at 2.7 lbs. (almost a full pound lighter than its predecessor, the X31 ThinkPad), raises the bar in terms of portability, while adding a spate of new functions. The X40's smaller footprint doesn't skimp on keyboard and screen size. The keyboard has the same dimensions as the X31, and the screen remains unchanged at 12 inches. Pricing starts at \$1,499.

Extras include an 8-cell battery that allows for 7.5 hours of use, and when combined with a battery loaded in the docking station, the X40 can stay powered up for a full day. If you're willing to forgo the movies, think about how much you could get done on an overseas flight!



LADIES OF FORTUNE 53% of all online gamblers in the United States are women. Why? They prefer having the gambling experience without having to travel, dress up, and deal with social interactions.

MUSIC

Music Maker

FORGET daydreaming about cutting your own music CD. Why not give it a whirl with GarageBand, the latest in Apple Computer, Inc.'s easy-to-use series of iLife applications that leverage technology to make hobbies such as photography (iPhoto) and music (iPod and iTunes) accessible—and an addiction—to anyone semi-proficient with a Mac.

Touted as a "studio in a box," GarageBand lets people with no musical training (or even those with a decent background) enter the world of a virtual recording studio. Right at your fingertips are hundreds of musical instruments, prerecorded loops, special audio effects, and features that function as a bona fide sound engineer to help you control everything from volume

level to the mixing of tracks. You can even record your own compositions and jazz them up with GarageBand simply by plugging your guitar, keyboard, or microphone into your Mac and putting the software's features to work.

While GarageBand has capabilities that even a seasoned musician can appreciate, it is not a substitute for a professional recording application. But at a \$49 price (for GarageBand and the rest of the iLife applications), it's almost a no-brainer for anyone with the slightest interest in jamming. With a little practice, who knows, the rest of us wannabes might just discover what it takes to become a superstar.



GADGETS



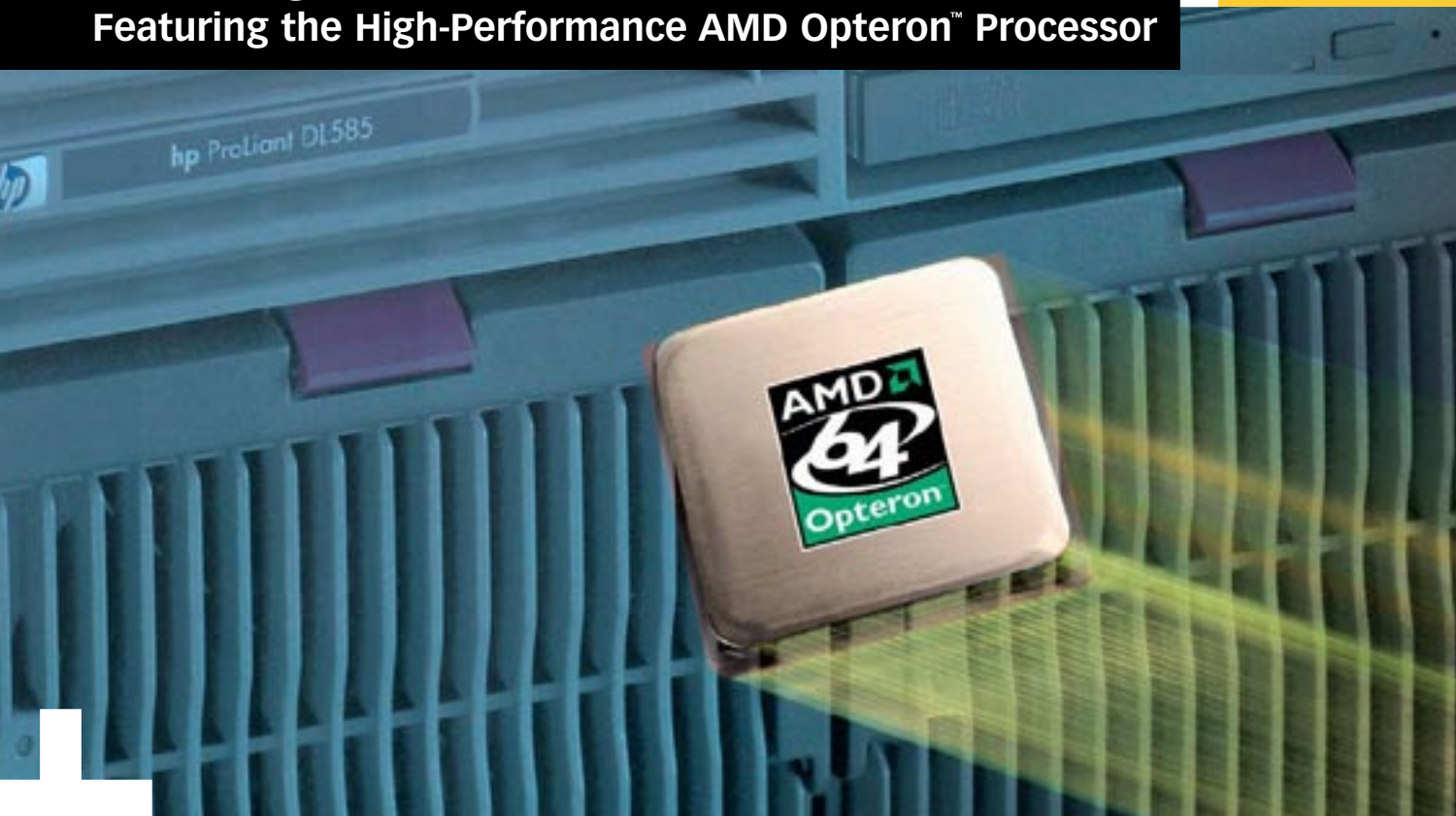
Better than Dick's?

Gadget geeks the world over think of Dick Tracy as their childhood über-hero, but even Dick's pre-modern, two-way, walkie-talkie wristwatch never pulled news off the Net—mostly because there was no Net.

All that's changed now: Suunto Inc.'s, N3 "wristtop" lets wearers get a steady stream of news from Microsoft's MSN Direct subscription service. The 2.2-ounce unit can pull down news headlines, detailed weather reports, and stock prices,

and it can receive (but not yet respond to) instant messages sent from MSN Messenger. The Suunto watch costs \$300, and the subscription news service is available for \$9.95 a month in select areas. For details visit www.suunto.com or www.msndirect.com.

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invent

FUNTHREADS

Online faithful Use the Internet to shop, sure. Surf the Web to find information, definitely. But what about going online for faith-related reasons?

According to a national survey conducted by the Pew Internet & American Life Project (www.pewinternet.org), the practice is more common than you might think. Nearly two-thirds, or 64%, of all Americans going online (nearly 82 million Americans) have, at one time or another, done so for some sort of religious activity, from sending holiday-related greeting cards to making donations to religious groups.

ELECTRONICS

TiVo for the Masses

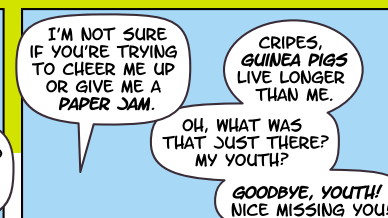
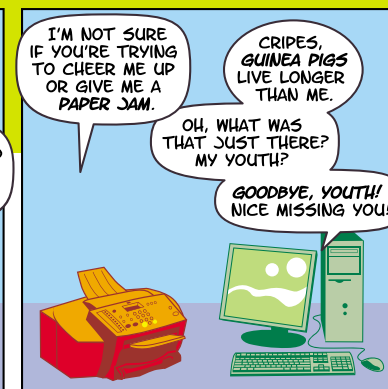
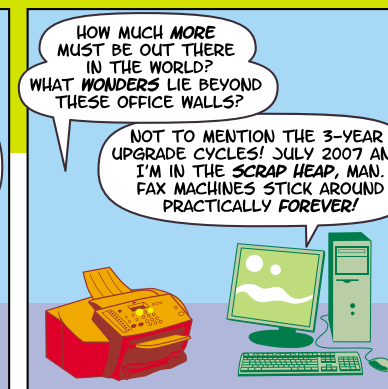
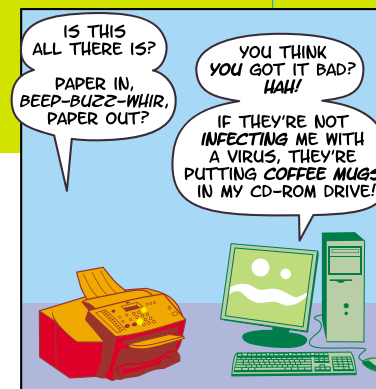
WHO'S MALE, affluent, and nurtures a love of satellite TV? Today, that describes the one in 40 U.S. households (about 7 percent), which own a digital video recorder (DVR). By 2009, however, DVRs, and not just the much loved TiVo system, will land in nearly 44 percent of homes, far beyond those of the early technology adopter elite, according to a new study by Forrester Research Inc., a market-research firm in Cambridge, Mass.

The expected surge in popularity is due to a number of factors. The once pricey and relatively unknown piece of electronics gear is now nearly a household name and can be purchased for under a couple of hundred dollars. DVR wannabes, as Forrester calls them, are hungry for DVR capabilities, including skipping commercials, pausing live TV, and easily recording all episodes of a given show. But perhaps the biggest boost to DVRs is the cable companies' decision to make DVRs a standard part of their cable services over the next few years.

With that kind of roll-out strategy, you can forget about your TiVo-envy.



CUTTING EDGE George Lucas fans take note: Check out the legendary film maker's feature film debut with *THX 1138: The George Lucas Director's Cut* DVD, to be released September 14. *THX 1138*, which initially came out in 1971, attracted a cult following for its portrayal of a disturbing, futuristic world. Go to www.thx1138movie.com for more info on the upcoming flick.



DISCONNECTED

TOP: WARNER HOME VIDEO; ILLUSTRATION: JOHN CUNEO

By jaQ Andrews and Erik Evensen

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compression is data and software dependent. Copyright © 2004 Iomega Corporation. All rights reserved.

Gaming for Grown-ups

DIGITAL LIVING

BY TRACY MAYOR

More adults are tuning out TV for a better reality show: Interactive online games.

MICHAEL SPRAGUE has a social life, honest, he does. On weekends, he's happy to head out to dinner with his wife or catch some live music with friends. During the week, though, after eight hours in the office and a pile of dinner dishes, the 34-year-old Sprague is too beat to do much more than kick back in front of the screen.

But like a growing number of adults his age, Sprague isn't vegging out in front of the TV screen. He's engaged with another kind of screen—his computer screen, immersed in the interactive war “shooter” game, *Ghost Recon*, playing with as many as 36 other people from all over the world.

“Whatever type of game you're into—sports, car racing, whatever—you can find somebody online that's into it too,” says Sprague, a partner with

System and Network Engineering, a network management consultancy in Beverly, MA. “It's a whole new level of interactivity.”

Gaming isn't just for slackers anymore. A recent study by the Entertainment Software Association (ESA) found that the average age of game players is now 29 years old, a decade and more beyond the pimply adolescents most often stereotyped as gamers. Men age 18 and over represent the largest group of gamers at 38 percent. However, girls, women, and aging Baby Boomers are all getting in on the act as well. Girls between 6 and 17 make up 12 percent of all gamers, for example; women 18 and older account for 26 percent of the total gaming population; and a full 17 percent of game players are over age 50, up from 13 percent in 2000.

“With half of all Americans playing computer and video games, the signs point to interactive entertainment as the entertainment choice of the 21st century,” declares ESA President Douglas Lowenstein.

So what's the allure of gaming for the so-called mature set? For openers, gaming is easier than ever before: Cheap, powerful PCs are a staple in an ever-increasing number of homes, broadband Internet connections are fast becoming ubiquitous, and in many households, state-of-the-art gaming systems are considered as much of an entertainment necessity as a DVD player or cable television. As fans point out, gaming is interactive and challenging in all the ways that, say, television viewing or newspaper reading isn't. And let's not forget, GenXers and those younger than them grew up on video games.

Stu LeBeau is one male in the prime demographic (he's 31) who's mostly given up on television. The reason? He can find better reality online than he can on the networks.

“On TV, everything is trying to be a reality show, but to me, that's not interesting,” says LeBeau, senior Web visual designer at PC Connection, Inc., in Marlow, NH. “Online, there's a level of realism that keeps me interested.”

LeBeau wouldn't be drawn to the game he's into—*Project Gotham Racing*, which he plays

on his Xbox system—if it were merely a chance to push a few buttons and make a car go fast. It's the sophisticated reality of the game he likes. “You can swap engines, try out different gear ratios, put different tires on different cars,” LeBeau ticks off. “We're doing what the real mechanics do.”

Lorien Carney, 30, likes gaming so much, she went and made it her day job. She's always been drawn to computers and gaming, she says.

Now Carney's one of the people in charge of online community relations at Turbine Entertainment Software. The Westwood, MA., company develops *Asheron's Call* and *Asheron's Call 2: Fallen Kings*, part of a new breed of massively multiplayer online games

(known as MMOGs) that allow thousands of players to adopt characters and interact in an online medieval world.

Asheron's Call 2 attracts a healthy percentage of female players, Carney says. “It's interesting. The women often take on organizational roles,” she observes. “They like to start allegiances and become matriarchs, that sort of thing.”

As for Carney, she and her fiancé both game in their spare time, but only rarely in the same online universe. “We try not to get into each other's space,” she says philosophically. “If we want to be together, we go do something outside in the real world.”

Tracy Mayor writes frequently about technology and business.



“With half of all Americans playing computer and video games, the signs point to interactive entertainment as the entertainment choice of the 21st century.”

—Douglas Lowenstein
ESA President

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PRICE: About \$99

HIGHLIGHTS: High-capacity optical disk; four controller ports.
EXTRAS: Game Boy Advance handheld systems plug into the Cube; plays Game Boy games as well.

Xbox by Microsoft Game Systems
PRICE: About \$179

HIGHLIGHTS: Powerful graphics, real-time Dolby Digital 5.1 surround sound, speed, and intensity.
EXTRAS: DVD capability; Xbox Live online subscription option.



Performance PC by various manufacturers
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One-Stop Marketing Shop

A standard computing architecture makes HealthSTAR's multi-company business run as one.

WHAT DO YOU get when you put together a portfolio of best-of-breed companies in the health care marketing space? What you get, HealthSTAR Communications, Inc., will tell you, is a highly integrated company that is a one-stop shop for marketing services related to the health care and pharmaceutical fields.

Yet this integrated solutions provider, even by its own account, was anything but that three years ago. In June 2001, HealthSTAR was 20 employees pursuing a single discipline. An aggressive acquisition strategy transformed the base company into a multi-group conglomerate, with 13 divisions and over 500 employees, handling everything from advertising to help with clinical trials.

The problem was that the 13 companies operated in completely different ways. There were different financial and human resource systems, dissimilar PC platforms, and sometimes, proprietary manual practices that didn't quite jibe. HealthSTAR knew it had to get serious, fast, about creating a standard computing infrastructure.

The first step was to build a corporate financial system that each of the divisions could access. Standardizing the hardware across divisions was also critical. "Everyone had different systems—there was Hewlett-Packard, Dell, white boxes, and a couple of IBMs now and then," explains Christopher Regan, information systems supervisor for HealthSTAR in Woodbridge,

NJ. "But when you have all these different systems, you don't know if they will play nice in the sandbox."

With help from PC Connection, Inc., HealthSTAR opted to standardize all hardware—desktops, servers, and laptops—across the entire company on IBM equipment. IBM was also the vendor of choice for a storage area network (SAN), a critical piece of the company's computing architecture.

With the many challenges their corporate IT department faces, Regan and his peers have partnered with PC Connection to help negotiate software licenses, determine optimal configurations for systems, and do product evaluation. Another plus: PC Connection has local systems integration partners. Says Regan: "We never feel like we're out there alone."

IN THE WEEDS WITH PC CONNECTION

Stephen Lopes, Account Manager

On what's unique about

HealthSTAR: "They're open to new pieces of technology. Most customers have a prejudice toward new technology... because they've been burned in the past. HealthSTAR is always willing to look at new products, but they expect you to make a good business case."

On why PC Connection got the business: "Of all the companies

pitching their business, I was the one that always returned calls and sent their quotes in on time. They've told me they like the fact I was a guy who could give them what they want."

On what's unique about the relationship: "We have a very open and honest relationship. There's no negotiation, which makes everything easy and quick. They don't question what we're

doing and they don't have to check with the competition to see if they're getting a fair price. They know they are."

On his role: "I bring together all the pieces they need—I get the infrastructure for them, I help put together the business case they need to sell it through, and I bring in partners to make it happen. It's one-stop shopping—they call me for everything."



Equal Opportunity Education

CUSTOMER PROFILE

BY BETH STACKPOLE

White Hat's charter schools leverage technology to give inner-city kids an edge.

URBAN SCHOOLS in decay, a chronic high-school dropout rate, and a highly unskilled workforce. That's the epidemic White Hat Management LLC is battling using management efficiencies, strong partnerships, and a healthy dose of state-of-the-art computing capabilities. Its goal: To give school-age kids in inner cities an education alternative and a chance for the same type of safe, nurturing learning opportunity available to their suburban peers.

Started in 1998 by industrialist David Brennan, White Hat is now the fourth largest charter school operator in the United States, overseeing the education of 16,000 students in 32 schools across Ohio as well as in Phoenix and Denver. It employs 1,300 teachers, staff, and administrators and offers the full complement of

education management and school operation services. As a charter school option, White Hat's programs are offered as open enrollment and tuition free to the communities it serves based on availability.

"Our belief is that there's hope for every child, not just those from two-parent families who can come to school prepared to learn with all the right support at home," says Mark Thimmig, CEO and president of White Hat Ventures, the parent company, in Akron, OH.

White Hat is delivering that hope through a variety of school programs. The most widespread are the HOPE Academies, 12 elementary schools set up in urban Ohio in former parochial school buildings, which were taken over by White Hat and revitalized. The curriculum, while leveraging computer technology,

is more traditionally book-driven.

More unique to White Hat are its 19 Life Skills Centers, an alternative high school operated in Ohio, Arizona, Colorado, and two coming online in a few months in Detroit. These programs, which serve over 10,000 high-school dropouts, employ a full computer-based curriculum so students can move forward in their studies at their own pace. Each student has access to a desktop PC and a secure, Web-based learning management system. Teachers play a support role. Students are required to participate in a vocational program and find and maintain a full-time job for three months prior to graduation. The prize: A bona fide high-school diploma, not an equivalency certificate.

The other pieces of White Hat's educational lineup are also heavily technology driven. This summer, the company is opening the doors to a new High Tech High in Cleveland, OH, which will cater to ninth and tenth graders, with other grades added over time. The \$1 million-plus renovation project utilizes state-of-the-art wireless laptops, Web access, and computer-based instruction, giving students the ultimate in learning flexibility. White Hat also oversees the Ohio Distance and Electronic Learning Academy (OHDELA), which provides a computer-based K-12 curriculum, Internet access, and a PC for more than 2,000 Ohio families. The company has also

opened digital streaming production studios to bring distance learning to the corporate sector.

White Hat's ability to find the right partners is critical to its success. PC Connection, Inc., White Hat's primary computer and electronics supplier, has been critical to making the technology side work. PC Connection facilitates distribution and logistics and ensures that each system is ready to go, right out of the box, says Roy Berlocker, White Hat's director of purchasing.

Technology will always remain at center stage. Says Thimmig: "It's all about student empowerment—about telling students they can learn at their own level and at their own pace."



DELIVERING HOPE: White Hat's Mark Thimmig (left) and Roy Berlocker (right)

"Our belief is that there's hope for every child, not just those from two-parent families who can come to school prepared to learn with all the right support at home."

—Mark Thimmig
CEO and President
White Hat Ventures

PC CONNECTION VITAL STATS

Stuart Sanborn Executive Account Manager



Schooling: Bachelor of Science in education; Masters of Educational Administration (MSEA)
Experience: Taught public school for 11 years; has taught college-level courses in politics and history for

the past 20 years.

Connection to education:

"I enjoy continuing to be part of the process—part of helping students learn and giving them the tools they need to learn. I still have the sense that I'm helping."

What's unique about White Hat?: "Most charter schools are looking for the best and brightest [students]. But White Hat has set up a business model and an educational model to provide attention and assistance to people on the lower end of the social/economic spectrum. They're helping the students that the public system has failed or who have failed in the public system. There's a lot of support for the kids and their families."



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¹Based on an IDC study of seven Red Hat Linux and IBM xSeries customer implementations assessed over a three-year time frame at a discount rate of 10%. "Linux and Intel-Based Servers: A Powerful Combination to Reduce the Costs of Enterprise Computing," IDC white paper, sponsored by IBM and Red Hat Corporation, May 2003. Results achieved may not be typical. Actual customer experience may vary. ²Additional charges apply. Standard support includes next-business-day response in some countries. IBM, the e-business logo, eServer, the eServer logo and

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OUTSOURCING IN OR OUT

The key is to align what's outsourced with the company's mission. Here's how.

WRITTEN BY TRACY MAYOR | ILLUSTRATION BY MIRKO ILIC

AS THE OLD ADAGE goes, medium-size businesses never stay that way for long: They either grow into large businesses, get acquired, or wither on the vine. ■ While all that growth is good for the business, it can be hell on the IT department. Sooner or later, it's nearly inevitable that even the most self-sufficient technology shops will find themselves overwhelmed with work and ready to give outsourcing a long, hard look for the first time. As larger U.S. companies find themselves entangled in the debate over the ethics and economy of offshore outsourcing, midsize firms are quietly discovering the domestic market for

“Understand your motives behind wanting to outsource before you begin.”

outsourcing has suddenly become a whole lot more hospitable to their needs. Having spent the past couple of years squeezing as much business as they can from the small-office-home-office market (SOHO), outsourcers of all sizes and specialties are now taking a renewed interest in medium-size businesses (“MSBs”)—which is good news indeed for companies with a few hundred employees or less.

It’s good because done right, outsourcing can help IT in these shops, which typically have big-company technology challenges with low-budget resources to solve them. Outsourcing can help these companies’ already stretched IT staffs maintain competitive focus, enhance their technical skill sets, and cut costs. Companies willing to do a little legwork up front—for example, making a good business case for outsourcing and then taking the time and care to choose a vendor and structure an

agreement that works with their specific needs—can bring strategic and economic benefits to their entire organization.

Outsourcing works best, though, when it’s part of an overall company-driven strategy—not just a haphazard or one-off decision. While it’s tempting to offload particularly odious or tedious tasks, IT and the entire organization are better served by aligning outsourcing with the company’s overall mission. What that means is managers, ideally from both information technology and other key business areas, need to ask some hard questions of their organization to get the most from any outsourcing decision. In IT terms, that means first analyzing its current structure, prioritizing systems and tasks, and then analyzing the risks and benefits of outsourcing for each.

“Understand your motives behind wanting to

Who to turn to?

Medium-size businesses are like the Goldilocks of the outsourcing world—it’s hard to find something that fits them juuuust right.

Small businesses, with their straightforward technology needs, are often happy to turn over some or all of their IT function to a capable, experienced outside service provider.

On the other end of the spectrum, large businesses have the monetary clout to demand just what they need from the biggest super-providers in the business.

Now, as outsourcers of all shapes and sizes begin to

tailor their offerings to the middle of the market, medium-size businesses are finally getting some choices of their own. And like Goldilocks, their options generally fall into three categories, according to a new study from Meta Group, a Stamford, CT, market researcher.

Market leaders These brand-name behemoths—names like IBM, CSC, EDS, Accenture, and SAIC—have been rolling out variants of their services aimed at the mid-market. Much like what’s available to larger corporations, these offerings combine a full range of technical capabilities with

business process integration and vertical-market expertise at price points more friendly to midsize companies. Smaller businesses may, however, have a hard time capturing their full attention.

Technologists These firms tend to specialize in one area of the outsourcing arena—offshore, say, or applications delivery. Players in this range include companies like Unisys, Infosys, TCS, Perot Systems, and Keane. One note of caution: By choosing this route, companies could end up with multiple, small outsourcing contracts instead of having one agreement that covers the spectrum of their needs.

Niche providers There are hundreds of companies in the niche end of the market. These companies target specific vertical markets (banking or health care, for example), discrete geographic locations, or specific customers, including small and medium-size businesses. This class of outsourcer probably offers the most symbiotic relationship for smaller businesses, but companies need to be diligent about making sure their provider of choice has a viable business plan as well as financial stability.

outsource before you begin,” advises Ed Quintana, director of remote managed services at Oxford Corp., an IT consultancy and outsourcer in Beverly, MA. “Are they financial? Part of a corporate philosophy change?” Having that underlying goal articulated, he says, will help clarify other decisions in the process.

What stays, what goes

In the past couple of years, IT departments have worked hard to align themselves more strategically with the goals of the business, and outsourcers have followed suit with more strategy-oriented services. That means that, in addition to such bread-and-butter services as application development and network maintenance, leading vendors are now offering services to align IT with business processes like payroll or finance and to pull together once-disparate technology and business departments.

That kind of convergence is of particular importance for small and medium-size businesses: For one, they typically have smaller IT departments, staffed with generalists rather than specialists. And secondly, smaller businesses often don’t have the cash cushion that their larger cousins enjoy, which means that one misaligned project or process has much greater potential to damage the firm’s overall well-being.

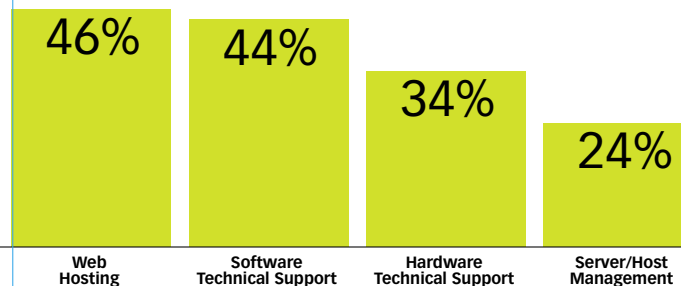
Even so, the bottom line is still king: IT managers in small and medium-size businesses are most apt to outsource when it offers gains in focus, speed, or cost reductions, according to a recent report from Gartner, Inc., a Stamford, CT, market-research firm. Most frequently, IT managers opt to either outsource the high end (specialty services or one-time projects) or outsource the low end—the day-to-day, mundane tasks to which they’d rather not dedicate too much people power.

At Phoenix’s Sky Harbor International Airport—the fifth busiest airport in the world for takeoffs and landings—the Technology Development Section outsources specific projects, leaving its permanent staff to concentrate on core responsibilities. “If it’s highly specialized, we outsource,” explains airport spokeswoman Deborah Ostreicher. “The role of our full-time, permanent IT staffers is to be expert generalists, and [the section executive] functions like a project leader,” she says.

WHAT TO SEND OUT?

Midsize companies say they’re most likely to outsource...

SOURCE: Gartner, Inc.



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MAKING THE DECISION

To get the most from outsourcing, examine these key decision points:

Strategy. Know why you're outsourcing and what you expect to gain from it.

Evaluation. Define your requirements up front.

Selection. Identify partners that can meet your business needs.

Contract development. Define service levels and detail payment models.

Management. Monitor the outsourcing relationship and adjust when necessary.

and data from Meta Group, another Stamford, CT, research firm, says high-end outsourcers are engaged most frequently to provide such services as application configuration, development and maintenance, business service integration, and management consulting.

Getting the best agreement

Once you've decided what to outsource—and know what your goals for the arrangement are—it's time to shop for a partner and an agreement you can live with. To get a deal that contributes the most to your corporation's interests, analysts and executives suggest you consider a few key points:

Ask Questions. Does the provider have clients in the same size range as your company? Does it bring to the table either horizontal knowledge—database expertise, say—or vertical-market know-how—health care, energy, or finance, for example—that's relevant to your company? Are they interested in your firm's big-picture goals as well as the IT details? Are they readily willing to provide references? (When they do, check them!) Also, make sure you query your provider about the partners they will bring on to service your account. Their performance depends on these relationships, so it's essential to cover all of your bases.

Do the Math. Make sure to build into your contract service-level agreements or other metrics to ensure your outsourcer is delivering the services and support it promised. Vendors typically want blanket, multi-year contracts. Don't let this dissuade you from asking for exactly what you want. Especially in tight times, outsourcers should tailor their offerings to fit your needs, not the other way around.

Make It Work. Articulate both up and down the chain of command why you're outsourcing, what it brings to the company, and why you chose the provider you did. Appoint an internal, senior-level person as a relationship manager.

Appealing as outsourcing may be, experts say companies should never outsource their core business—that's giving away the keys to the castle.

If you manufacture widgets, that means keeping the widget-design system in-house. In a similar vein, IT executives should tread carefully when making architecture and infrastructure decisions with an outsourcer, lest they get locked into someone else's packaged IT model that won't work for their company down the road.

Finally, analysts caution, whatever they decide to outsource, IT managers at small and midsize businesses in particular shouldn't wash their hands of the tasks. Most companies in this sector are in growth mode, so they're in a unique position: They're on track to become big companies, thus their IT departments should grow accordingly. When that happens, they often decide to bring many services back under internal control. And that won't work if IT has handed over everything to an outsider.

Tracy Mayor writes frequently about technology, management, and business.

The Measure of Success

You've done your homework, crunched the numbers, chosen the best vendor for your company's IT needs. Now all that's left is to ensure that your partnership stays on track.

The best way to make sure that happens is to build service-level agreements (SLAs) or key performance indicators (KPIs) into your contract. These concrete metrics help ensure the work is being delivered on time and up to snuff.

Some common metrics include speed of implementation, average response time of critical applications, number of help-desk calls fielded, and average time on call.

Once all your metrics are in place, experts offer one last bit of advice: Don't rely solely on numbers to ensure top performance. The very best client/outsourcer arrangements are built upon carefully nurtured human relationships. —T.M.

SOURCE: Gartner, Inc.

The Ins and Outs of IT Outsourcing

MY TURN BY MIKE DAVIS

Straight talk on a timely topic from PC Connection's VP of Information Services.

AS A LEADING provider of IT solutions, PC Connection maintains a substantial 24/7 IT operation. As Vice President of Information Services, Mike Davis's job is to make sure the company has the data-crunching power to process and ship thousands of orders each day. We spoke with him recently about the benefits and pitfalls of a hot issue—IT outsourcing.

What role does IT outsourcing play at PC Connection?

I'm a believer in peak staffing. By that I mean having enough people to do the business of PC Connection on an ongoing basis—to keep the data center running, to do most projects in a planned fashion. We use outsourcing for supplemental staffing needed for projects that don't necessarily require

permanent employees to develop or support. Basically, it's another pair of hands that can focus primarily on getting that job done.

What's an example of how PC Connection has used IT outsourcing?

A good one is the major upgrade we made recently to our Web sites. We couldn't accomplish it alone because it required a huge staffing spike. The spike would eventually go down, and you could go forward from there. But to get the job done and move our sites to a new e-commerce platform, we relied on outsourcing, and it worked.

What are the economics involved in IT outsourcing?

In most cases, staffing costs are the key. I just ran the numbers, and from a systems development perspective, I know what our

costs are per person per hour, fully loaded, for personnel in our department. If I were to outsource any of that work and get a good deal, I'd be paying between \$50 and \$100 an hour over my in-house cost. So if I can keep a person busy 2,000 hours a year, then it's much more economical for me to own them. If I can't do that or it's a project involving a temporary staffing spike, only then does it make sense for us to outsource.

Outsourcing is hot, but it's not new. What lessons have been learned?

If you think back in time, there was a period when Ross Perot's company, Electronic Data Services (EDS) was going gangbusters. People were turning over their whole backroom systems to EDS because they could do it better, they could do it cheaper, the whole litany. Today, many, if not all, of these companies have come full circle and brought it back to themselves because it was too expensive and they lost control.

From my experience, I am challenged when people talk about the advantages of IT outsourcing offshore. If a company is a for-profit organization and you're running a good IS shop—a tight budget, well-managed IS organization—I don't know how somebody can do it cheaper than I can do it—and cover their overhead and make margin.



KEEPER OF THE KINGDOM: Davis advises against turning over all efforts to outsourcers to avoid getting burned.

“You shouldn't turn the keys to the kingdom over to some outsiders to deal with.”

If I don't do significant software development, should I consider IT outsourcing?

If your company is in the SMB space with five servers and 20 desktops, then outsourcing your hardware maintenance makes total sense. If you have some applications, outsourcing makes sense because of the size. Because you can't keep a person busy all the time, and it's more economical.

Is outsourcing the way to go with installing and integrating new technology or systems?

I would outsource absolutely, as long as the outsource provider would support a knowledge transfer. For example, when we upgraded our Web platform, one part of the deal was that the outsourcer would support the transition of knowledge to our staff. And that worked well—so well, that we are now moving to

implement a significant further upgrade, and it's all being done by our people.

How do you manage the process of IT outsourcing?

You shouldn't turn the keys to the kingdom over to some outsiders to deal with. For a company this size, if you go out and say to someone, “Do such and so for me,” and you don't know what they're doing, and you walk away—I'm sorry, you've just screwed yourself. They've done whatever in your backroom, and your internal staff is going to take it on and maintain it, and they don't know what's transpired.

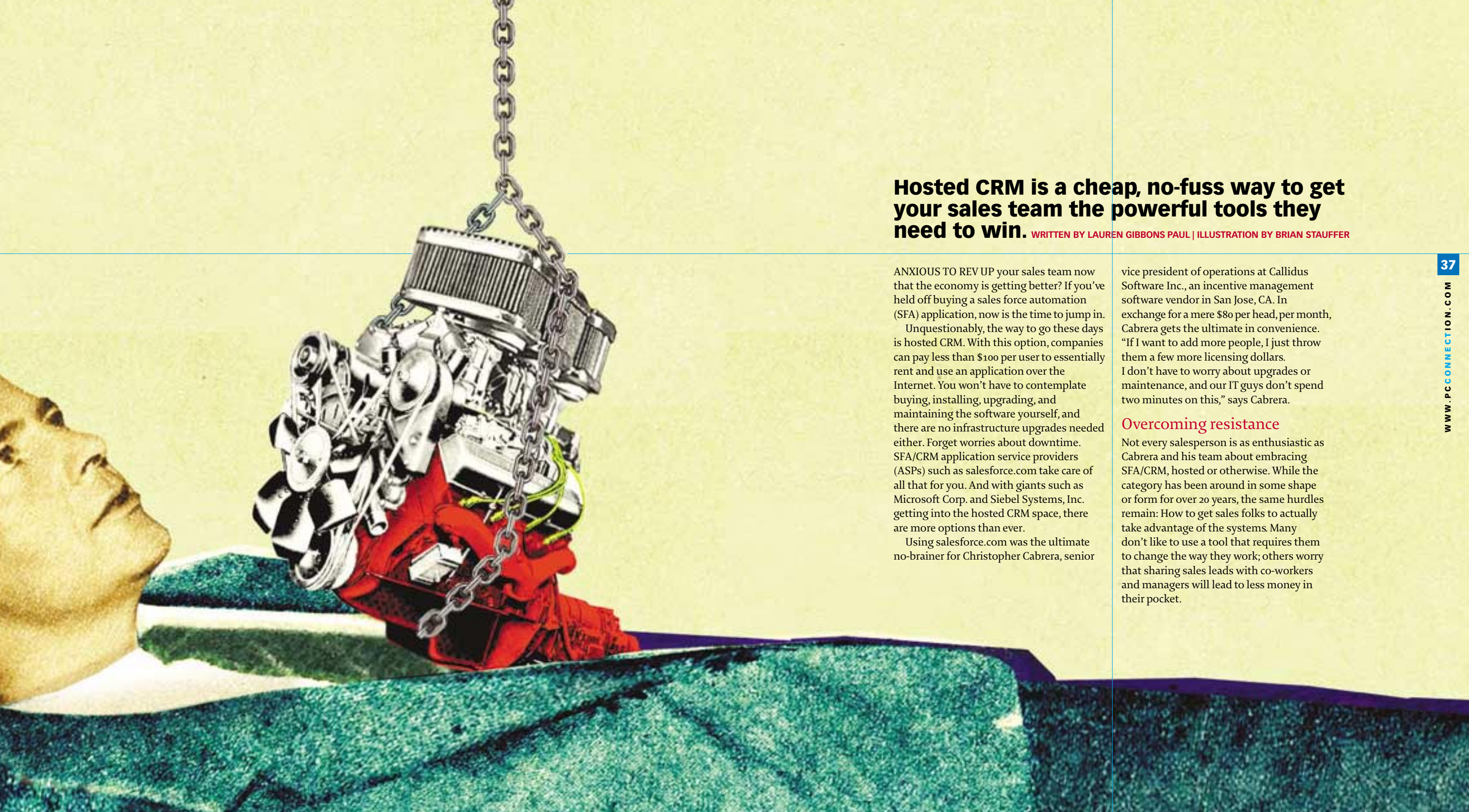
When it's time to outsource IT projects, how do you manage expectations within your permanent team?

From an operational perspective, oftentimes an IT staff will

welcome outsourcing because it's going to help them move a technology forward. As long as they can manage it, and as long as the training component is taking place to ramp people up, then it can work. From a software development perspective, it's a little bit more of a challenge. There's still a lot of pride of ownership and a concern about the quality of code that someone else is going to write.

Is outsourcing for all organizations?

It comes back to size, and back to the comment on a sustainable staffing level. How good and efficient is your IS shop? Also, a key question is with whom you do business. It's all about relationships.



Hosted CRM is a cheap, no-fuss way to get your sales team the powerful tools they need to win. WRITTEN BY LAUREN GIBBONS PAUL | ILLUSTRATION BY BRIAN STAUFFER

ANXIOUS TO REV UP your sales team now that the economy is getting better? If you've held off buying a sales force automation (SFA) application, now is the time to jump in.

Unquestionably, the way to go these days is hosted CRM. With this option, companies can pay less than \$100 per user to essentially rent and use an application over the Internet. You won't have to contemplate buying, installing, upgrading, and maintaining the software yourself, and there are no infrastructure upgrades needed either. Forget worries about downtime. SFA/CRM application service providers (ASPs) such as salesforce.com take care of all that for you. And with giants such as Microsoft Corp. and Siebel Systems, Inc. getting into the hosted CRM space, there are more options than ever.

Using salesforce.com was the ultimate no-brainer for Christopher Cabrera, senior

vice president of operations at Callidus Software Inc., an incentive management software vendor in San Jose, CA. In exchange for a mere \$80 per head, per month, Cabrera gets the ultimate in convenience. "If I want to add more people, I just throw them a few more licensing dollars. I don't have to worry about upgrades or maintenance, and our IT guys don't spend two minutes on this," says Cabrera.

Overcoming resistance

Not every salesperson is as enthusiastic as Cabrera and his team about embracing SFA/CRM, hosted or otherwise. While the category has been around in some shape or form for over 20 years, the same hurdles remain: How to get sales folks to actually take advantage of the systems. Many don't like to use a tool that requires them to change the way they work; others worry that sharing sales leads with co-workers and managers will lead to less money in their pocket.

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“No rep loves to use these systems—that’s in their DNA. But they have to make sure their boss is happy.”

From a technology standpoint, these concerns have mostly been mitigated. The lighter-weight, hosted SFA/CRM products have achieved ease-of-use where traditional applications, such as Siebel, fell off because they were designed from the ground up to meet the needs of the road warrior. Salesforce.com, NetSuite, and Salesnet “follow the Microsoft Word model. You can figure out how to use them in five minutes. They’re that simple; that intuitive,” says Ian Jacobs, principal analyst, CRM, for Current Analysis Inc., a market research firm in Sterling, VA. Another advance: Most of these systems have role-based analytical capabilities, so only sales managers can get an overall view of prospects in the pipeline. Sales reps can’t view the information to steal each other’s leads.

As head of the sales organization and a longtime sales guy himself, Cabrera loves that particular capability. He can hop onto the salesforce.com Web site at any time and see where things stand. “I can look at our pipeline by rep or region—that is hugely powerful to me,” he explains.

Nevertheless, even Cabrera concedes that his salespeople sometimes grumble, for all the old reasons, about having to use salesforce.com. But not using the system is not an option. “No rep loves to use these systems—that’s in their DNA. But they have to make sure their boss is happy,” says Cabrera.

Rajil Vohra, general manager of sales for RS Software in Alpharetta, GA, chose NetSuite in part because of ease-of-use. “Usage has not been a problem,” says Vohra. Still, he did not skimp on training the sales reps prior to implementation.

Training is critical, according to Laura Preslan, an analyst at AMR Research, Inc., in Boston. The key is presenting the SFA/CRM application to the sales rep in the context of the sales order process, not simply as a tutorial on how to navigate the system.

One of the biggest benefits of the new class of hosted CRM applications like salesforce.com is the addition of business intelligence and analytical



SALES GUY: Hosted tools help Callidus's Cabrera pump up his sales team.

tools that have surfaced over the last year. Integration and customization are also major trends.

For Cabrera, there is no comparison between using a hosted application vs. trying to run it in-house. “We have had no downtime. I’m paying a few thousand dollars to use this every month,” he says. “This is insignificant compared to the value it’s given me.”

Lauren Gibbons Paul has more than 15 years of experience as a writer for publications such as eWEEK, CIO, and Network World.

CRM: Sales tactics

AMR Research, Inc. estimates the CRM market (which includes SFA) will reach an astounding \$10.8 billion this year, up from about \$9.8 billion in 2003. Companies planning to invest should consider these key priorities:

- **Buy into customer analytics.** If you don’t already have a tool to help analyze which customer-buying data can help improve the efficiency of your marketing campaigns, get one.
- **Segment your customers.** Use analytics to discover who your most profitable customers are. Then lavish them with attention and special offers.
- **Clean up messy pricing processes.** Today’s buyers are much more savvy about what products and services should cost. Tie supply and demand together through effective pricing practices.
- **Improve sales effectiveness.** Spend CRM dollars on configuration, guided selling, sales methodologies, and other tools that will help reduce the cost of sales.



REINING IN WI-FI

WLANs promise the utmost in flexibility, but without the proper controls and security options, they can wreak havoc. Here's how to mitigate the risk.

WRITTEN BY LISA VAAS | ILLUSTRATION BY VIKTOR KOEN

They're everywhere.

Starbucks has them; McDonald's has them; and now, you too can easily pick up your own mini Wi-Fi network—cheap! Heck, you can even take it to work, along with your brand-new Windows XP laptop, which will immediately start sniffing the air for wireless access like a puppy scents a bone, regardless of whether you had the foresight to bring your equipment to the IT department to get security configured.

If you've already done that, a pox on your head: Your equipment has joined the ranks of rogue access points that are driving IT managers nuts as they try to secure enterprise networks from the probing of wireless hackers.

No wonder Mike Bedwell is a paranoid man. The manager of Public Safety Systems for the City of Aurora, CO, Bedwell has to keep private information, such as crime records, property records, and

addresses out of the hands of any wireless user except for police and fire personnel. Casual wireless users make that tough.

But for the City of Aurora and for other organizations, such as universities, hospitals, and companies that rely on mobile workforces, the benefits of wireless networks far outweigh the risks. The trick to getting the benefits of mobility is to understand the risks involved, as well as how to mitigate those risks—as opposed to opening themselves, and their networks, up to a security mess.

Security Headaches

Just how scary is wireless? Experts say that it's inherently insecure, no matter what vendors say to the contrary. Weak spots include WEP-enabled (Wired Equivalent Privacy) devices. WEP was supposed to make Wi-Fi connections as resistant to hackers as wired networks, but in fact, the security

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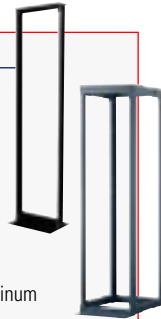
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"The best you can do is build what amounts to a multilayer defense mechanism."

standard can be cracked in a matter of minutes. Other weaknesses include rogue access points that may or may not be attempting to tap into your data, unsecured laptops whose default is to search for a wireless access point, and more.

For most enterprises, rogue access points are the biggest headache of all. That's true for the Cherokee Nation, says Jon B. James, IT manager for the tribe, with some 240,000 members. One of the best ways to avoid rogue access points from compromising its vast network, James says, has been to set up equipment that detects the presence of undiscovered wireless MAC (Media Access Control) addresses within frequency range. Other important steps include limiting physical access to wiring closets and offices and educating users so they report on suspicious activity, says James, in Tahlequah, OK.

Not everybody relies on sniffing out MAC addresses to protect the WLAN, however. For Ohio University, these addresses, which are numbers associated with network interface cards, make it impossible to associate an individual rather than a machine with malicious activity on the network. "If you have a hacking incident launched from a particular MAC address, we believe you can't prosecute them effectively," says Todd Acheson, Internet Systems Group Manager for the University's Communications Network Services, in Athens, OH. "They can say, 'I wasn't using that machine at that time.'"

To get around that snag, the university opted for Bluesocket Inc.'s Wireless Gateway device. This device solves the attributable network access problem by intercepting HTTP connections and generating log-in challenges for authentication. That way, his team knows who users are, rather than simply which machine is used.

For the City of Aurora, a little problem called Blaster spelled out how vulnerable the wireless network was. In October 2003, the worm struck the city's frame-relay network, infecting both the network and all wireless laptops in fire trucks and police cars. The incident not only made Bedwell all too aware of the City's security vulnerabilities, but also impressed upon him the key benefits of wireless technology, particularly for doing software updates. A worm may have brought down the City's

forces, but as far as rogue access points go, Aurora is now immune, Bedwell says. The thanks go to a VPN, authentication, and strict control over which ports are open.

Considering all possible threats, it's not surprising that experts recommend a multi-tiered defense. Two-way authentication, in which both the access point and node are verified, is a first step. Encryption and authorization, which determines what resources users can access, are the other two necessities. "The best you can do is build what amounts to a multilayer defense mechanism," says Stan Schatt, a vice president and research director at Forrester Research, Inc., in San Diego, CA.

After all that, does the way of the airwaves still sound too scary? If so, it might help to think of embracing wireless in these terms: Better to get a handle on it, before it gets a handle on you.

Lisa Vaas is a veteran technology reporter and analyst who lives in Mashpee, MA.

THE REAL DEAL

Wi-Fi comes with a plethora of hidden costs.

Consider these:

■ While 802.11b promises a 300-foot range, it delivers about half that in most environments, experts say—which means you'll wind up buying twice the equipment you thought you needed to achieve a given coverage level.

■ The more users, the more access points you'll need.

■ Most companies do a small, initial pilot of a WLAN—say, with some 10 or 20 access stations. That's easy, but the final project may have 6 to 10 times as many stations, which is a whole other story entirely.

■ Authenticating visitors can be surprisingly time-consuming. SOURCE: Forrester Research, Inc.

DON'T

LET

A

GOOD

PC

GO

BAD

Protecting your own PC is inexpensive and easy. Failing to do so can hurt—not only yourself, but also others in cyberspace.

WRITTEN BY ROBERT L. SCHEIER | ILLUSTRATION BY TAVIS COBURN

IMAGINE A PARALLEL universe where you let a stranger who says he loves you into your home, no questions asked. You accept gifts from such strangers, even though the gifts are saturated with disease, and let those strangers use your property to rob and harass others across the globe.

Where is this strange world? Look no further than the computer and broadband modem blinking away on your desk or at the servers in your utility closet. Any unprotected computer can and probably is spreading viruses, spam, or even worse calamities across the community of the Internet, even though it takes less than \$100 a year and a few minutes a week to prevent most of the damage.

The problem is that people act by a different and much looser set of rules on the Web than they do in real life. Because a PC doesn't give you tangible feedback, it makes it harder to see "that any harm has





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been caused by your behavior," says Nancy Willard, a former attorney, teacher, and consultant, who now directs the Center for Safe and Responsible Internet Use, in Eugene, OR. "Technology allows us the perception that we are invisible," she contends, and that nobody can see what we're doing—or rather, not doing—when it comes to security.

Downloading music from the Web without paying for it seems risky because record companies have tracked down, and prosecuted, some users for theft of intellectual property. But even seemingly innocent activities such as downloading free software can be risky, since the programs might contain not only viruses but "spyware," which tracks the user's travels on the Web or gathers other sensitive information from their computer.

"We have people, families, and kids [using] peer-to-peer networking software and who are downloading 'free' music or 'free' games or 'free' software," says Willard. The true costs of these nifty downloads, she says, can include "a total invasion of your privacy, identity theft, and allowing others to take over your computer to be used in ways that are not supportive of the common good."

Part of what's needed to correct the problem is a simple lesson in basic PC security. Individuals, of course, should actively install antivirus software and regularly update it with the signatures of the latest viruses and other malicious code. What's also essential is to regularly update your operating system and other software with the latest security patches and to install a hardware or software firewall to block malicious incoming and outgoing traffic. A hardware firewall is a physical device (often a router) that blocks malicious traffic and can be used to protect multiple systems. A software firewall is an application that serves the same purpose, but is sold as a standalone application and runs on a single computer. Wireless local area network (WLAN) users should also activate the encryption capabilities that ship with all wireless networks and change the default name of the network to make it harder for drive-by hackers to penetrate systems.

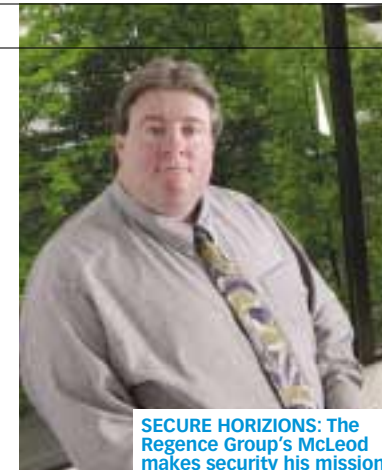
But beyond investing in products is a much more difficult sell—motivating individuals to accept their part of the responsibility. David McLeod of The Regence Group is all too aware of that challenge.

Four years ago, McLeod embarked on a mission to create a culture of computer security at The Regence Group, a partnership of health care insurers headquartered in Portland, OR. Besides having to protect its own e-commerce sites, The Regence Group had to be absolute in its ability to protect patient information, says McLeod, the firm's director of security and chief information security officer.

McLeod formed a security committee that included executives responsible for key business functions—not just security. He also relied on "constant, friendly reminders" such as posters, pens, as well as classes offered to employees on how to secure computers.

The bottom line: What we do as individuals on the Web has the potential to hurt fellow Netizens.

Robert L. Scheier, a freelance writer in Boylston, MA, writes frequently about computer security.



SECURE HORIZONS: The Regence Group's McLeod makes security his mission.

WHO'S LIABLE FOR SLOPPY SECURITY?

You probably can't be sued for letting your PC infect someone else's. But what stands today could easily change tomorrow, observers say.

The law is unclear on whether the damages from, say, a denial-of-service attack, can justify a lawsuit, says Michael Woods, a senior executive vice president with MZM Inc., a Washington, DC firm, specializing in policy analysis. Nor is it clear, he says, what constitutes legal "negligence." "If I don't check my computer for two days and don't install the latest Windows patch," he asks, "am I negligent?"

Until the legal issues are clarified within the next four to five years, he suggests doing your best to protect your own systems and to keep checking with your own attorney.—R.L.S.

JOHN RIZZO

How Are We Doing?

IT'S OFTEN SAID that knowledge is power, so when an employee at online retailer Vermont Teddy Bear had a brainstorm for a new bear for Mother's Day a couple of years back, marketing officials weren't leaving anything to chance. Before investing in the product, they opted to conduct a Web-based survey of customers who had purchased bears for past Mother's Days in order to see if the idea would fly.

New online survey sites and CRM tools are helping companies analyze customer data. WRITTEN BY ESTHER SHEIN

The bear, called "Spa Ma," came dressed in a terrycloth spa robe and slippers and included a grab bag of lotions and potions for Mom. While the concept was originally intended as a short-term Mother's Day gift, an online survey put forth to customers on the Zoomerang Web site revealed such a groundswell of interest, Spa Ma eventually landed the cover bear spot for the retailer's May 2002 catalog.

"We've used Zoomerang for a whole host of surveys, from brand positioning to logo treatments and new concepts—and on an ongoing basis with a lot of accuracy," says Michelle Cote, Vermont Teddy Bear's loyalty marketing and market research manager, in Shelburne, VT. "We found it's been beneficial to us, and our customers really enjoy taking [online surveys]."

Whether it's to gain feedback on new product development, monitor customer satisfaction on existing products, or learn about customer preferences and buying habits, Web-based, customer feedback tools are leaving a lot of small companies with a warm and fuzzy feeling. The reasons are compelling: These types of tools offer immediate, secure feedback, are an inexpensive way to get results, and are generally easy to use. Web-based surveys, in particular, are highly valuable for helping midsize and smaller companies tap online customers for information in an efficient and cost-effective manner. This is

particularly true when compared with traditional market-research and survey instruments, which typically require the services of specially trained professionals and, as a result, can get rather pricey.

Consequently, Web-based feedback mechanisms are rapidly becoming an integral part of a company's repository of research tools, sometimes as part of a Customer Relationship Management (CRM) suite. Potential prospects and customers are more willing to take surveys online, and marketing departments are gravitating to the approach because it delivers higher-quality information about things such as customers' future behaviors. Also, Web-based surveys can be tailored to personalize a message and engage respondents, notes Sheryl Kingstone, a program manager at Yankee Group, based in Toronto.

"More and more, people will realize the benefits of integrated customer feedback ... because you're capturing the information, not in a silo effect, but integrating it into a CRM application for cross-department use," Kingstone says.

Chock full of feedback

Before companies can get started with online surveys, though, they first need to have a handle on managing e-mail from customers. That's where Thule, a manufacturer of carload carrier systems, got started. Its goal was to decrease the number of e-mails that came in via its Web site inquiring about products. Using Web eService Center, a hosted application from CRM vendor RightNow Technologies, Inc., of Bozeman, MT, Thule was able to help customers help

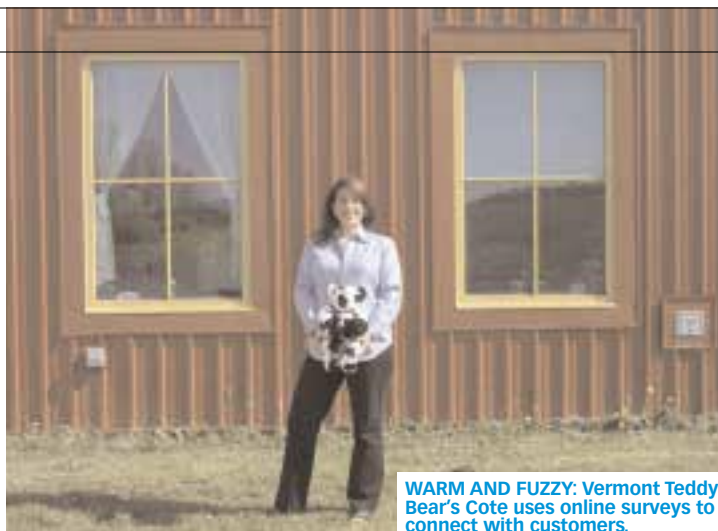
Who to Turn To? A sampling of vendors:

WEB-BASED FEEDBACK MECHANISMS:

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- KANA www.kana.com
- RightNow Technologies, Inc. www.rightnow.com

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WARM AND FUZZY: Vermont Teddy Bear's Cote uses online surveys to connect with customers.

themselves, setting up a forum where they could get answers to product and installation questions on a Frequently Asked Questions page on the Thule site. Within one month of going live, e-mails decreased by 20 percent, while site traffic rose substantially, says Steve Doviak, marketing manager at Thule, based in Seymour, CT.

Once they had a handle on the e-mails coming in through the site, Thule decided it was time to put

the customer information to good use. The company began using RightNow's Metrics tool, a survey application that lets the manufacturer follow up with visitors on their site experience as well as to assess traffic flow and determine the types of questions being left unanswered by the system.

With Metrics, Thule's product management department was able to post a very specific survey to hear firsthand from customers about a design issue rather than the group hearing about the same issues, after the fact, from sales reps. One important finding came after the company, which also makes sporting equipment, conducted a search of questions about disc brakes on mountain bike carriers that had been asked on the site over a 60–90 day period. Doviak's group took the e-mails, sent out an ad hoc survey asking those people whether their questions were satisfactorily answered, and then conducted a follow-up survey. Based on the feedback they received, Thule made the appropriate design modifications to the disc brakes. Best of all—customers "feel like they're involved in the process [of fine-tuning the product], and their response rate is 60 to 70 percent when they're asked for feedback a second time," Doviak adds.

Vermont Teddy Bear's Cote also says the company relies heavily on the feedback it receives from the Zoomerang surveys for product development. "We've found that for the most part, the scores we've gotten for product surveys are a reliable, solid indicator for forecasting sales," she says. "And we can get feedback on how new products test versus an existing product." That tells Vermont Teddy Bear how broad the appeal is for a potential new product like Spa Ma. Who knows—a whole lot more mothers might get pampered with the bear for the next few Mother's Days to come.

Esther Shein has been a freelance writer and editor specializing in technology and business, for several years.

CAROLYN BATES

Survey How-tos

Cast a wide net. Answers are only as good as your respondents. Get a good, unbiased selection of customers or prospects to speak to, and don't always survey the same people in your database. **Lean on experience.** Craft questions that are worded in an unbiased way so you get the type of responses you need to draw conclusions. Some Web survey sites offer sample surveys that can be modified for your product.

Avoid friends and family. If you don't have a database of names available, use a Web survey site that will allow you to purchase names of their own panelists.

Make sure it's quick. If the survey is too long, people will get annoyed and won't finish it. The principle of KISS—Keep it Simple Stupid, really applies. If it's short and sweet, they'll be more willing to take another one. —E.S.

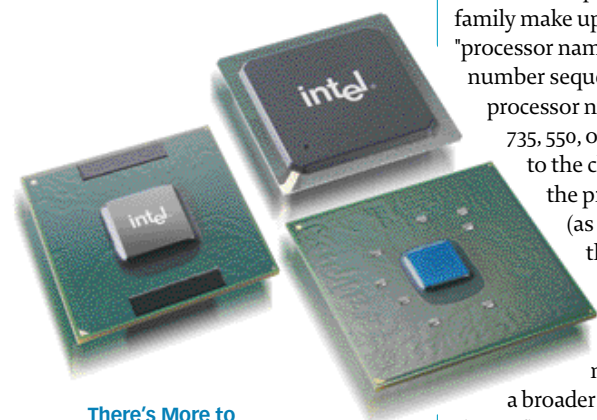
NOW YOU KNOW

Moving Beyond GHz

BY RICHARD HOSTLER

INTEL INTRODUCES PROCESSOR NUMBERS

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While it is the most common measurement for performance, clock speed (in MHz or GHz) is not always an accurate indication of a processor's overall performance. Differences in cache amount, front side bus, and processor architecture can produce large differences in system performance. Add to this Intel technologies like Centrino and you may find yourself comparing a Pentium-M processor with a lower clock speed to a Pentium 4 that blows it away in the GHz department. However,

when all performance factors are considered, the P-M may very well outperform the P4 in real-world notebook environments.

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300 Series

Celeron D, Celeron M, Celeron M Ultra Low Voltage (ULV)

PROCESSOR FEATURES*

	FEATURE DEFINITION
ARCHITECTURE	Basic design of a microprocessor that may include process technology and/or other architectural enhancements.
CACHE (MB/KB)	Temporary storage for frequently accessed or recently accessed data. Storing certain data in a cache speeds up the computer's operation. Cache size is measured in megabytes (MB) or kilobytes (KB).
CLOCK SPEED (MHZ/GHZ)	The speed of the processor's internal clock which dictates how fast the processor can process data. Clock speed is typically measured in GHz (Gigahertz, or billions of cycles per second).
FRONT SIDE BUS (MHZ/GHZ)	The connecting path between the processor and other key components, such as the memory controller hub. Front side bus speed is measured in MHZ or GHZ.

*As Intel processors evolve and advance over time, Intel will integrate new feature technologies and capabilities that may increment the processor number.

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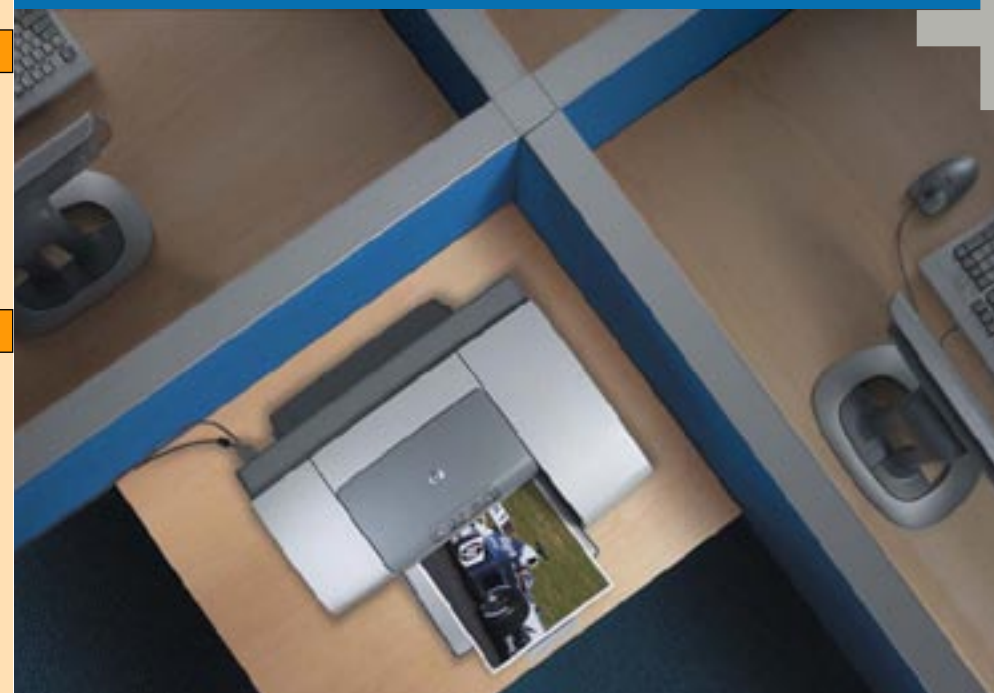
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The Clock is Ticking on NT Support

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WRITTEN BY RICHARD HOSTLER

DID YOU KNOW?

Exchange 2003 will not function in an NT Domain.

If you plan to upgrade from Exchange 5.5 to 2003, bear in mind that you must also migrate from your NT domain to Active Directory. Keep current and stay competitive by trusting your entire platform migration to PC Connection. Together with our national network of service partners, we'll handle all the details, ensuring your business stays up and running throughout the migration and stays clear of any incompatibility issues.

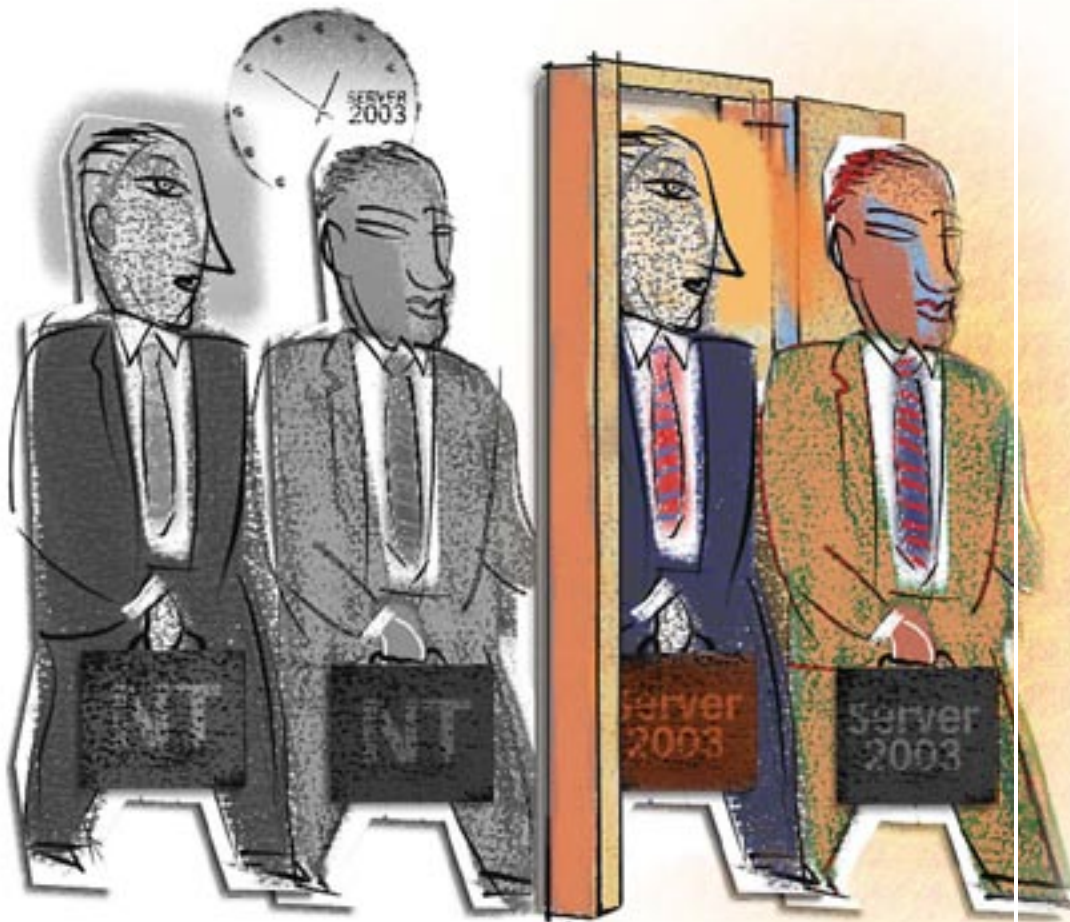
Embrace Change

You held onto your NT servers because you felt an upgrade to Windows 2000 would be too disruptive. Good thinking. Windows Server 2003, available for a little over a year, includes easier NT migration tools than Windows 2000. It also offers new network features, including easier configuration, enhanced wireless LAN support, better remote access, and significant Active Directory upgrades. So, relax. Your NT support may be coming to an end, but the Windows platform has a bright future.

What is Active Directory?

Improving on the domain architecture of Windows NT 4.0 to provide directory service for distributed environments, Active Directory enables you to more easily and effectively share and manage information about network resources and users. Active Directory acts as the central authority for network security, enabling Windows Server 2003 to readily verify a user's identity and control his or her access to network resources. It also acts as an integration point for bringing systems together and consolidating management tasks. Combined, these capabilities enable you to apply standardized rules to distributed applications and network resources, without requiring you to maintain a variety of specialized directories.

IF YOUR BUSINESS IT SYSTEMS ARE BUILT AROUND THE WINDOWS NT PLATFORM, JANUARY 1, 2005 IS MUCH MORE THAN JUST THE START OF A NEW YEAR—IT MARKS THE END OF MICROSOFT'S SUPPORT FOR NT. THE TIME TO MIGRATE IS NOW, AND PC CONNECTION CAN HELP YOU BEAT THE CLOCK.



The phase-out of Windows NT means migrating to Windows Server 2003

With support for NT due to expire in 6 months, now is the time to plan for and implement your business's migration to Windows Server 2003. Migration can be a challenging process—if not done properly, it can tie up valuable IT resources and put your entire network at risk. You may find that, like many other businesses, you simply don't have the in-house expertise or manpower to carry out this critical upgrade without disrupting day-to-day responsibilities. Before you attempt to go into it on your own, give PC Connection a call. Our unique service offerings can make your Server 2003 migration a smooth, problem-free experience.

Think of migration as a carefully choreographed dance. However, unlike a traditional dance where missteps lead to nothing more severe than bruised toes, missteps during your Windows Server 2003 migration can leave you without key services that could ultimately cost you customers. Something as simple as forgetting to configure your newly upgraded machines to the Pre-Windows 2000 compatible access mode can leave you without remote-access support for yet-to-be upgraded workstations and servers.

There's also the matter of your primary domain controller (PDC). During even the most efficient migrations, your PDC is likely to be offline for between 1 and 3 hours. Hit a few snags and you could be looking at considerably more downtime. That means operations like password changes and user account changes can't be performed until our PDC is back online.

If you do make it through your PDC upgrade without encountering major obstacles, you might be tempted to breath a sigh of relief. Not so fast. You still have your NT 4.0 backup domain controllers (BDCs) to upgrade. Server 2003 and NT 4.0 employ different replication services. Therefore, any files that are replicated between domain controllers, such as

logon scripts, will have to be managed separately—more work for your IT staff who are already neck deep in the migration.

On top of all this, there are security policy changes to consider. Windows Server 2003 offers enhanced security, including server message block (SMB) packet signing and secure channel signing. These technologies provide added security in a full Server 2003 environment, but can create serious complications in a mid-migration mixed environment. To allow clients running earlier OSs to communicate with your Server 2003 domain, you will need to disable these security features until your migration is complete.

Sound daunting? Relax. PC Connection can help.

Together with our national network of service partners, PC Connection can help you plan for and execute a complete platform migration. Our in-house experts can assess your current business systems, and recommend the proper upgrades, while our service partners provide complete platform-migration services, and perform any necessary on-site hardware installations. From single-office environments to larger multi-site networks, we can handle everything. Call your Account Manager today to put our unique combination of in-house expertise, strategic partnerships, extensive product selection, and broad service offerings to work for you.

To upgrade your NT 4.0 PDC to a single-domain forest you'll need to follow these steps:

- 1] Back up all your domain data
- 2] Delegate the DNS zone for the new domain (if you have an existing DNS infrastructure)
- 3] Identify and plan for potential upgrade problems
- 4] Upgrade the PDC from NT 4.0 to Server 2003
- 5] Install Active Directory
- 6] Authorize the DHCP service (if running on your PDC)
- 7] Configure Windows Time Service
- 8] Enable aging and scavenging for DNS
- 9] Verify DNS server recursive name resolution
- 10] Test upgraded domain
- 11] Modify your security policies

That's just for one component. Spread this kind of systematic process over your entire enterprise and you may be looking at more than your IT department can handle.

Call PC Connection. We'll make sure your migration is a smooth, problem-free experience.



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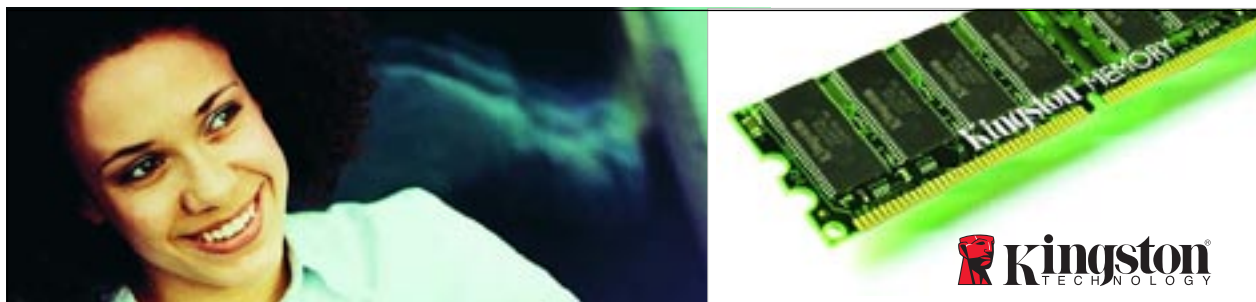


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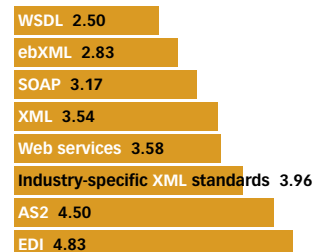


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Destination: XML

MOST VALUABLE

PLAYER: XML variations rank highly useful (1 is very low, 5 is very high)



SOURCE: Yankee Group

Alphabet Soup

A sampling of the latest flavors:



- **Chemical CIDX** (Chemical Industry Data eXchange)
- **E-government SAML** (Security Assertion Markup Language)
- **Education SIF** (Schools Interoperability Framework)
- **Electronics RosettaNet**
- **Financial services IFX** (International Financial eXchange)

The **Skinny eXtensible Markup Language (XML)** is a framework for identifying data to be transmitted over the Web. XML is not a language unto itself (like English)—it defines only the basic syntax that data will follow. Hundreds of groups are working on XML variations with industry-specific definitions.

71%

Ready for prime time

of companies increased spending last year on applications that improve interactions with customers and suppliers. SOURCE: Yankee Group

Did you know?

XML is actually a version of SGML (the Standard Generalized Markup Language), which is the standard "meta-language" for text markup systems. Techies say XML is much easier to use than SGML.

Taking hold

Business-to-business XML volumes increased 160% last year while EDI (Electronic Data Interchange) volumes rose only 18%.

WHAT'S THE BIG DEAL? Once an industry defines elements in standard documents (such as purchase orders and invoices), companies can easily automate processes, saving money and time by taking people out of the equation. These standard documents are called document type definitions, or DTDs, and they are highly industry-specific. A sign that XML acceptance is reaching critical mass: Microsoft Office 2003 includes XML support in applications from Word to InfoPath, a new e-forms tool.

Want More Info?

As you can see, XML is pretty complicated stuff. Visit www.pconnection.com/connect for some additional resources, including: www.xml.org/ The XML Industry Portal www.xml.com/ Everything XML Web publication www.w3.org/XML/ Explanation of XML from the W3C www.ucc.ie/xml/ An XML FAQ xml.coverpages.org/ Repository of XML-related articles



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