Don't underestimate your B players.

Hostile Bid for PeopleSoft May Delay Apps Purchases

J.D. Edwards sues Oracle for obstructing merger

BY MARC L. SONGINI
DENVER
Whatever the outcome, Oracle Corp.'s hostile takeover bid for PeopleSoft Inc. is already creating confusion and doubt among users of both PeopleSoft and J.D. Edwards & Co.

Java Should Be Open-Source, Creator Says

Other Sun execs wary of incompatibility issues

BY CAROL SLIWA
SAN FRANCISCO
If pressed to vote yea or nay, the "father of Java" said last week that he would cast his ballot in favor of making his creation more open-source, even though he recognizes that some of his Sun Microsystems Inc. colleagues make strong counterarguments.

Vendors Clamp Down On License Compliance

Audits increase as software makers look to offset sagging sales by enforcing existing contracts

BY THOMAS HOFFMAN
LOS ANGELES
IT managers at a Gartner Inc. conference here last week said software vendors are increasingly threatening — and then conducting — audits to determine whether users are complying with their licensing agreements.

Wal-Mart Backs RFID Technology

Will require suppliers to use 'smart' tags by 2005

BY JAIKUMAR VIJAYAN
AND BOB BREWIN
CHICAGO
Wal-Mart Stores Inc. last week said it plans to require its top 100 suppliers to put radio-frequency identification tags on shipping crates and pallets by January 2005, a move that's likely to spur broader adoption of the technology because of Wal-Mart's market clout.

Fraud-Busters

Tired of losing millions of dollars to fraud, Internet retailers are teaming up to fight online credit card scams and take back the e-neighborhood.

Fraud-Busters

Knowledge Center
E-Business

RB KIDS MICK LESTER uses a mix of tools to combat fraud.

Avid supporters of the technology, however, are唱 the Retail Systems 2003/VICS Collaborative Commerce conference here, IT managers and technology vendors alike said that RFID devices still need to overcome major manufacturing, pricing

RFID, page 14
The body coordinates 639 muscles to meet changing demand.
Manages storage resources to meet changing demand. On demand.
Build a scalable data warehouse with a single point of control.

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Only SAS provides a high-impact, low-risk way to achieve intelligent data warehousing. You can extract, transform and load data from any source, across any platform, while assuring quality. Simplify the way you create and customize reports. And deliver a shared version of the truth. To find out how top companies reap bottom-line rewards with SAS software—by leveraging the value of data from corporate systems, e-business channels, the supply chain and beyond—visit us on the Web or call toll free 1 866 270 5727.

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NEWS

6 Sybase gives China free software to help fight SARS.

6 SCO has credible evidence to support its claim that Linux infringes on its Unix copyrights, say analysts who have seen the code.

7 The Homeland Security Department sets a two-year deadline for integrating its systems.

7 HP unveils OpenView products and services that will play a role in its “adaptive enterprise management” strategy.

8 A new Bugbear virus targets financial institutions.

10 FleetBoston is building a nearly $10 million IT command center to unify the bank’s systems and centralize network management work.

10 Sprint exits Web hosting but will help users migrate.

12 CeBIT makes its U.S. debut, but the attendance forecast is cut in half.

12 HP plans a disk array that supports serial interconnects.

13 Q&A: “Father of Java” James Gosling discusses the status of his creation.

16 No big boost in IT spending is likely this year, according to surveys by Meta Group and Forrester.

17CRM vendor Salesforce.com offers a hosted application development service.

TECHNOLOGY

30 Q&A: Lining Technology Up With Business. The CEO of Managed Objects, Siki Giunta, talks about the link between IT and business success.

32 Future Watch: Capchas Eat Spam. Programs that distinguish between humans and machines could fight spam and contribute to advances in artificial intelligence.


MANAGEMENT

35 Fraud-Busters. Web retailers are joining forces to battle online credit card fraud. The effort includes forming groups like the secretive Merchant Fraud Squad.

38 Q&A: Nurture the B Team. The A players get the star treatment. But it’s also important for IT managers to pay ample attention to the B players — those steady, capable performers who matter more in the long run, says consultant Vineeta Vijayaraghavan, who co-authored an article about the subject in this month’s Harvard Business Review.

OPINIONS

8 On the Mark: Mark Hall says JavaOne was the place to be for gossip about IBM, Sun and Microsoft. There was some talk of Java programming, too.

18 Maryfran Johnson explains why enterprise users are the real victims in Oracle’s hostile — some say frivolous — bid to buy PeopleSoft.

18 Pimm Fox examines site-monitoring technology that purports to get to the heart of really useful customer data.

19 David Moschella scoffs at characterizations of the IT industry as “mature” and says it’s time to start thinking optimistically about IT’s future.

34 Nicholas Petreley peeks into SCO’s mailbox for a new perspective on the Unix/Linux ownership squabble.

42 Bart Perkins offers a checklist of issues to consider — from U.S. privacy and security laws to potential employee backlash — before taking the offshore IT outsourcing plunge.

50 Frankly Speaking: Frank Hayes predicts Microsoft won’t be much help in stopping viruses. He provides tips to help you get through a virus-studded summer.

ONLINE

WWW.COMPUTERWORLD.COM

.Net vs. Java
DEVELOPMENT: The debate continues, with columnists Matt Puccini and Keith Franklin taking opposing sides. QuickLink k2350

Protect Your Data From Wi-Fi Attacks
MOBILE/WIRELESS: Don’t miss these tips on how to make a Wi-Fi network more secure. QuickLink 38874

Best Practices for Mastering Secure Code
SECURITY: The cost of fixing faulty software soars after an application is deployed, says Steve Orrin, CTO at Sanctum Inc. Here’s how and why you need to build security into Web apps from the start. QuickLink 38578

You, Too, Can Contribute To Open-Source
OPPERATING SYSTEMS: If your company isn’t developing source code, you can still help the open-source movement — while boosting your technology ROI, writes columnist Timothy Witham. QuickLink 38782

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Sybase Gives China Free Software to Fight SARS

Company answers request for help with $300,000 worth of database software

By Todd R. Weiss

WHEN THE Chinese Embassy in Washington sent out hundreds of e-mails early last month asking the world for ideas and information on how to control the spread of SARS, the IT community responded.

Sybase Inc. said last week that it will donate approximately $300,000 worth of database management software that will be used to monitor and track existing and new cases of the potentially fatal respiratory disease.

The e-mails were sent out by Dr. Larry Wu in his capacity as second secretary for science and technology at the Chinese Embassy. Hundreds of replies came back from technology companies, business associations, consultants and others, mostly in the U.S., Wu said.

One of the e-mail recipients was the nonprofit Computerworld Honors Program, which recognizes IT users around the world who take technology in new and innovative directions to benefit mankind.

Computerworld has a seat on the board of the Honors Program and is a co-founder of the group, which was established in 1988.

Dan Morrow, executive director of the program in Herndon, Va., said the e-mail was forwarded to Honors Program board members, including a Sybase representative.

Sybase CEO John Chen said the company manager suggested to his colleagues that they offer assistance to Chinese health authorities. "We all immediately, within minutes, said, 'Great idea,' " Chen said.

"They asked for help, and we were just qualified in this case to help them.

Sybase's software will help track the SARS virus in China.

Analysts Say Evidence May Support SCO Case

Contested code gives credence to Unix claim, but courts will ultimately decide

By Todd R. Weiss

As promised, The SCO Group Inc. last week revealed to several industry analysts some of the Linux source code that it claims was illegally copied from Unix.

But analysts have varying opinions about the significance of what they were shown and how it fits in with the $1 billion lawsuit that Linton, Utah-based SCO filed against IBM in March. In that lawsuit, SCO alleges that IBM misappropriated SCO Unix trade secrets by putting some of the code into Linux [QuickLink #6901].

Laura DiDio, an analyst at The Yankee Group in Boston, said she saw "two or three" samples of the allegedly infringing Linux code that appeared to be a "copy and paste" match of the SCO Unix code.

DiDio and the other analysts were able to view the code only under a nondisclosure agreement, so she could not divulge details, she said.

"The courts are going to ultimately have to prove this, but based on what I'm seeing . . . I think there is a basis that SCO has a credible case," DiDio said. "This is not a nuisance case.

George Weiss, an analyst at Gartner Inc. in Stamford, Conn., recently reviewed several supporting documents from SCO, and he said they potentially bolster the company's claims.

The documents allegedly show the contracts that gave SCO the rights to Unix. Weiss refused to sign the nondisclosure agreement, so he didn't view any of the contested code. But the documents he saw at least gave credence to SCO's claims, he said.

Not a Judge or Jury

Bill Claybrook, an analyst at Boston-based Aberdeen Group Inc., said the code he viewed shows that SCO could have a claim. But he noted that his assessment based on a brief look at some of the code is far different from a judge or jury eventually reaching a verdict in the IBM case. "I have no idea" if there's a problem with the code, Claybrook said.

"From what I've seen, I think people should be taking the SCO accusations seriously, but I don't know if they have any proof," he said. Although he was shown code that was the same in both Unix and Linux, Claybrook said there was no way to determine the origin of the code.

Dan Kusnezetzky, an analyst at IDC in Framingham, Mass., said he turned down SCO's offer to look at the code because it wouldn't have provided any fair conclusions or answered any questions about the case.

Even if there are code matches between Linux and Unix, he said, there would be no way to know whether it was put there legally or who put it there. "How do they know it was IBM?" he said.

The products Sybase is providing include Sybase IQ, Enterprise Application Server, Adaptive Server Enterprise, PowerBuilder and PowerDesigner. The software will be used to create critically needed databases to track and monitor SARS cases in hospitals and other health centers across the country.

Dublin, Calif.-based Sybase made the donation directly to the Chinese Center for Disease Control and Prevention. Although no hardware systems have been donated with the Sybase software, Wu indicated that China has sufficient systems in place to make immediate use of Sybase's donation.

"We have made some mistakes in the campaign to fight SARS," Wu said. "We [initially] thought it was not so serious a disease."

Oracle Reports Strong Quarter

Oracle Corp. last week announced revenue of $2.83 billion for its fiscal fourth quarter, up from $2.77 billion for the same quarter a year ago. Oracle said it had $9.47 billion in revenue for its full fiscal year, 2% lower than the $9.67 billion posted last year. CEO Larry Ellison said the company "had a great applications quarter" compared with its competitors.

Oracle Corp.

Former VP Pleads Guilty to Fraud

Terry W. Davis, former vice president of finance and controller for Santa Clara, Calif.-based Network Associates Inc., last week pleaded guilty to charges of securities fraud.

Network Associates "had a great applica-

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Sybase's software will help track the SARS virus in China.
HP Users Welcome Expanded OpenView Product Line

Better network management is key to vendor's 'adaptive enterprise' initiative

BY MATT HAMBLEN

Hewlett-Packard Co. will take some of the vapor out of its "adaptive enterprise management" strategy with the introduction today of more than 30 new and enhanced OpenView management products and services.

The products are being announced at the HP Software Forum in Chicago, where users will gain exposure to concrete examples of HP's adaptive enterprise initiative. That initiative is mirrored by strategies from competitors such as IBM, Sun Microsystems Inc. and Computer Associates International Inc., which variously describe such technologies as "autonomic" or "on-demand" computing.

The aim is to enable businesses to reduce IT complexity and cost by creating an infrastructure that changes with business demands.

One of the enhanced tools being announced today, HP OpenView Network Node Manager 7.0 (NNM), caught the attention of several OpenView users planning to attend the conference. Enhancements to the widely used network management tool include support for Linux and the ability to manage more objects on a network, as well as support for native Duplicate IP. The latter is useful for collecting network data at one point on multiple IP networks, said Bill Emmett, solutions marketing manager at HP.

Duplicate IP support is interesting because it could help recently merged companies to monitor combined IP networks that aren't identical, said Jason Kennedy, a systems management analyst at Best Buy Canada Ltd. in Burnaby, British Columbia.

Best Buy Canada has a large OpenView project under way that started in late 2002 and should take another year to fully implement.

Once complete, the system would monitor networks and network devices in 130 stores and warehouses in Canada "through a single pane of glass with a service-oriented focus," Kennedy said.

"Adaptive enterprise management" might be called 'autonomic' or 'on-demand,' but that's just wordsmithing," he said. "It really comes down to how I save money for the business. That's why I exist."

Another OpenView user, Zurich Life Insurance Company of America in Schaumburg, Ill., is looking for an easier interface with the HP OpenView Service Navigator tool, said Timothy Hagn, vice president of Zurich's IT operations and engineering.

In fact, HP said, Service Navigator Value Pack 7.1, being announced today, is easier to use and includes a new connection between Service Navigator and Open View Service Desk to help correlate network problems with customer service calls received by the help desk.

In the long term, Hagn said, he wants OpenView's adaptive technology to monitor his network and describe ways that he can quickly cut down on electricity and ventilation costs for computing centers by tapping underserved servers.

DHS Sets Timeline for IT Integration

CIO says project due to be finished within two years

BY PATRICK THIBODEAU

WASHINGTON

Steve Cooper, who as CIO at the U.S. Department of Homeland Security (DHS) must untangle the mess of disparate networks and data standards of the 22 federal agencies that merged to form the DHS, said last week that a unified IT infrastructure will be completed within 18 to 24 months.

"We're moving toward one Department of Homeland Security," Cooper said at the E-Gov conference here. "We want to unify and simplify the environment as rapidly as we can."

Cooper said he plans to rely heavily on commercial applications to accomplish what is no simple task. Federal agencies have historically operated autonomously, and their IT systems weren't designed to interoperate with one another. According to Lee Holcomb, chief technology officer at the DHS, a key hurdle to overcome is the various agencies' differing business rules, which dictate how data is described, collected and accessed.

Holcomb's job is to devise a plan to make data held by each agency accessible by other agencies under the DHS umbrella. Data mart and data warehousing options are currently under consideration.

DHS is also examining best approaches for providing remote users with wireless access to department systems. The department also plans to increase the deployment of portable devices within the next six to nine months.

As agency integration efforts take shape, department IT officials expect to post more job advertisements in the months ahead.

Although position requirements haven't yet been fully identified, there are many technologists who have "a desire to become part of the Department of Homeland Security mission," said Pat Schambach, CIO for the Transportation Security Administration, which is now an agency of the DHS.

Getting a job at the agency requires a security clearance, but officials say that hasn't been an obstacle — getting an initial security clearance can be accomplished in as little as two weeks. Higher security clearance levels, however, can take months.

Meanwhile, emerging technologies appear to be playing a growing role at federal agencies. For instance, Cooper said, agencies are working with commercial vendors to find ways to utilize unstructured data, such as data that isn't located in a relational database and can't be easily manipulated and analyzed.

The CIO Council, a body made up of all the CIOs in the federal government, has in fact formed a committee to examine emerging technologies.

"We want the government to be at the forefront of leveraging technology," said U.S. Air Force CIO John Gilligan. "We want to be scanning the horizon and be an early adopter. We need to convey to industry what our technology needs are."

Craig Luigart, CTO at the U.S. Department of Education, disputed the stereotype that the government lags behind the private sector in the adoption of IT.

Many agencies were early adopters of new technologies, such as voice over IP and virtual private networks, and they are now seeing returns on those investments, he noted.

"I never liked being No. 2," Luigart said.
Microsoft Acquires Antivirus Assets

Microsoft Corp. has agreed to buy the intellectual property and technology assets of GeCAD Software SRL, an antivirus software vendor in Bucharest, Romania. Microsoft plans to use the technology as part of an upcoming antivirus offering. But it said a GeCAD product used primarily with Linux systems will be dropped. The financial terms of the deal weren’t disclosed.

Cisco Gets Ruling Against Huawei

A federal judge in Marshall, Texas, issued a preliminary injunction barring Shenzhen, China-based Huawei Technologies Co. from selling routers that include software derived from Cisco Systems Inc.’s source code. But Huawei, which was sued by Cisco in January, said the injunction is “extremely narrow” and won’t affect routers that have replaced the disputed ones.

SuSE Readies Linux for Desktops

SuSE Linux AG said it plans to release a desktop PC version of Linux for corporate users in the U.S. and Europe later this month. The SuSE Linux Desktop software starts at $598 for five end-user licenses and comes bundled with Sun Microsystems Inc.’s StarOffice 6.0 suite of desktop applications. But Nuremberg, Germany-based SuSE said it will also support Microsoft Office.

New Bugbear Virus Targets Financial Institutions

Firewalls, antivirus software are so far keeping worm out of banks’ systems

BRIEFS

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Short Takes

MERCURY INTERACTIVE CORP. said it’s acquiring KINTANA INC., a developer of software for monitoring IT operations, in a cash-and-stock deal valued at about $225 million. Both companies are based in Sunnyvale, Calif. . . . YAHOO INC., also in Sunnyvale, announced an upgrade of its instant messaging software for corporate users.

New Bugbear Virus Targets Financial Institutions

Firewalls, antivirus software are so far keeping worm out of banks’ systems

MARK HALL • ON THE MARK

Sun Exec Blasts IBM for Linux . . .

. . . strategy, saying, “IBM has been using Linux [Torvalds] like a tool and exploiting the open-source community.” Those fighting words come from Jonathan Schwartz, executive vice president for Sun’s software group. He doesn’t think IBM’s Linux sales have been kind to CIOs, either. “They’ve been spreading IP [intellectual property] radiation” to companies that get their Linux from IBM because of Big Blue’s contract problems with SCO Group. Sun, he hastened to add, has crossed all its ‘t’s and dotted all its ‘i’s with SCO just in case the Unix/Linux legal claims have merit. . . . IBM was on the minds of many at Sun’s eighth JavaOne Conference in San Francisco, and not just because it had two booths on the show floor. Rumors flew daily from Moscone Center North to South, where the gathering of 15,000 or so Java devotees was held, that IBM “needed to buy Sun to save Java,” as one breathless rumormonger put it. But Sun’s marketing VP for software dismissed that notion with a laugh. “IBM can’t afford us,” guffawed John Loiacono. “We have five-and-a-half billion dollars in the bank. IBM doesn’t have $5 billion.” True. But, hey, interest rates are pretty low. Maybe IBM could take out a second mortgage on its digs in Armonk, N.Y. . . . If you’re a rabid Solaris user, these verbal jousts can be fun. But more fun might be an early look at Solaris 10. Real early. Like a year to a year and a half before it’s released. Word is that Sun is developing a program called Express that will give users a hands-on experience with its Unix system well before the beta release. . . . Schwartz, Loiacono and other Sun execs also enjoyed knocking Microsoft for its “failure” in the handset market. By the end of the year, Schwartz claims, Java will be installed on more than 350 million cell phones, BlackBerries and other similar devices, while Windows “won’t even be there.” What makes Java appealing to IT on handsets, says Ernie Cormier, vice president at Nextel Communications Inc., is that “you can control the entire UI [user interface].” He envisions IT deploying Java

New Bugbear Virus Targets Financial Institutions

Firewalls, antivirus software are so far keeping worm out of banks’ systems

BY TODD R. WEISS

The latest variant of the Bugbear computer virus is being investigated by the FBI because it was found to be targeting financial institutions. Bill Murray, a spokesman for the FBI, said last week that the investigation began June 6 and will seek to track down the originators of the virus through electronic “fingerprints” often left behind within the code.

Bugbear is a mass-mailing worm that also spreads through networks, according to Cupertino, Calif.-based Symantec Corp.

The virus can infect executable files and is particularly dangerous because it can log the keystrokes a user enters on his computer, potentially allowing an attacker to get a victim’s personal information and account numbers. It also contains backdoor capabilities and can shut down antivirus and firewall programs.

Banks were identified as key targets when it was discovered that the worm’s code contains a list of the domain names of more than 1,000 banks from around the world, according to Symantec.

Suzanne Gorman, chairman of the Financial Services Information Sharing and Analysis Center, said the Reston, Va.-based financial industry security organization responded immediately to the first reports of Bugbear attacks on banks by warning members to make sure that their security systems are fully in place. No member banks have yet been infiltrated by the Bugbear virus because of firewalls, antivirus protection and other multilayer IT security systems, she said. “Right now, we’re remaining on high alert,” Gorman said.

Robin Bloom, an IT and security analyst at Baroudi Bloom Inc. in Arlington, Mass., said Bugbear is particularly insidious because of its keylogger capabilities, which collect and document user input and provide it to an attacker. “That fundamentally undermines the security when it gets in there,” Bloom said.
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FleetBoston Building IT Command Center

Project will unify bank's systems and centralize network management work

BY LUCAS MEARIAN
ALBANY, N.Y.

BY NOVEMBER, FleetBoston Financial Corp. plans to complete a nearly $10 million project to build an enterprise operations center that will bring all its systems and network management operations into one room and provide real-time links to a secondary data center 150 miles away.

Robert Wischnowsky, FleetBoston's chief technology officer, said the new command center will centralize network support operations that have remained fractured following acquisitions by the Boston-based company. He added that he expects to be able to cut FleetBoston's IT staff by an unspecified number and increase the amount of floor space available at its primary data center here by 3,500 square feet - two benefits that should produce a return on investment within a year.

FleetBoston has become one of the 10 largest banks in the U.S. by buying more than 190 firms during the past 20 years - a growth strategy that Wischnowsky said will continue. But in an interview at the data center this month, he said merging systems became a standardized process, but the networks supporting FleetBoston's flagship banking business and its credit card services and capital leasing subsidiaries are currently separated from one another.

A Matter of Trust

"We've had firewalls in between [networks] because no one trusted each other," Wischnowsky said. FleetBoston plans to bring the nonbanking operations onto its consolidat-
ed network and "drive the standardization of processes across the company," he said.

For example, the company in April went live with IBM's Tivoli Business Systems Manager software after an 18-month rollout. Ed Glenning, who manages FleetBoston's enterprise systems, said the tool is being used by systems administrators to centrally monitor and control application and database servers, batch processing jobs, and mainframe CICS systems.

FleetBoston's systems, corporate networks, and the network that supports its 3,400 ATMs are managed with different software tools by workers in separate locations - the first two are in adjacent rooms at the Albany data center, and the ATM network is in another building in Albany.

But Glenning said that by November, he expects to consolidate all the systems and network management activities on Tivoli software and relocate the management operations to the new command center, which is being built within the Albany data center.

A Ridgefield Park, N.J., facility will be expanded as a back-up data center and will share FleetBoston's data processing workload and act as a disaster recovery site. IT workers at both facilities will be able to operate every key system, from network servers and routers to management software, Glenning said.

Avi Litan, an analyst at Gartner Inc. in Stamford, Conn., said operations center consolidations are "monumental" tasks.
The competition won't guarantee a virus fix in two hours. Then again, they don't have Ken Tanada, Ph.D.

TREND MICRO DELIVERS THE INDUSTRY'S ONLY TWO-HOUR, PENALTY-BACKED VIRUS RESPONSE GUARANTEE. Viruses move fast. But Trend Micro's antivirus experts move faster. In fact, our TrendLabs engineers' commitment and experience allow us to offer the industry's first and only Virus Response Service Level Agreement. If an antivirus pattern file isn't delivered from our engineers to your network in two hours or less, you'll be compensated. A financially backed guarantee. Combine this with Trend Micro's award-winning strategy for addressing the entire virus lifecycle, and you're better prepared to manage threats and minimize costs. Quickly. To learn more, visit www.trendmicro.com/sla.
CeBIT America Debuts, Defying Show Slump

Organizers halve attendance forecast; hope focus, format will provide appeal

BY STACY COWLEY
NEW YORK

WITH MARKETING budgets drying up and trade-show attendance shrinking, this summer seems a quixotic time to launch a new IT conference. But this week, Germany’s CeBIT Ubershow will make its U.S. debut, with an enterprise focus and a European format that organizers are counting on to set it apart from its troubled brethren.

The project has already suffered from the continuing economic slump. A year ago, show organizer Hannover Fairs USA Inc. forecast 40,000 attendees for its debut of CeBIT America. Now, the company hopes to attract 20,000. Exhibitor numbers are also lower than the 400 to 500 originally forecast, with 361 signed on.

But show executives said they’re confident CeBIT America will prove its worth to visitors and vendors — confident enough to sign a five-year reservation contract with the Jacob K. Javits Convention Center in New York.

B2B Focus

CeBIT America will be a tightly focused business-to-business show. Instead of aisles of booths lining the show floors, organizers said they’re arranging exhibitors into clusters of related technologies, with numerous lounge areas available on the floor to promote business discussions.

Storage, networking and wireless products will be prevalent at the show. Hewlett-Packard Co. is planning to preview upcoming handheld devices and notebooks and will join with several partners to demonstrate new storage devices (see story below). Sony Electronics Inc. will focus on storage as well, bringing new libraries and tape drives to the show.

Microsoft Corp. plans to push its Tablet PC software, while 3Com Corp. will show firewall products and network management technology. PalmSource Inc. plans to make several announcements about new mobility, security and systems management offerings.

Vote of Confidence

Persuading vendors to spread their trade-show dollars around and take a chance on the debut of CeBIT America has gone fairly smoothly, according to organizers. “Most of the significant players have said yes to us,” said Mark Dineen, managing director of CeBIT America. “That’s a huge vote of confidence.”

One vendor said CeBIT’s brand name was an important factor in its decision to exhibit. “They have a great track record, and we hope they’ll be bringing that to the U.S.,” said Albert Chu, vice president of business development at Sunnyvale, Calif.-based PalmSource.

The IT show market has been a harsh one lately. Event cancellations are common, and Comdex parent Key3Media Group Inc. has filed for bankruptcy protection. Comdex’s former general manager, Bill Sell, defected and is heading a brand and customer development operation for CeBIT America.

According to Sell, CeBIT America isn’t expected to make a profit this year. Princeton, N.J.-based Hannover Fairs USA is prepared to give it several years to break even, he said. “It’s a long-term investment,” Dineen added.

“This is a completely different model, and people are responding to that,” he said. “We just have to remember the focus of the event: quality, quality, quality; enterprise, enterprise, enterprise.”

Cowley writes for the IDG News Service. Computerworld news editor Don Tennant contributed to this story.

HP Plans Disk Array That Supports Serial Interconnects

Hewlett-Packard plans to announce at CeBIT America that it will ship by mid-2004 a disk array that can mix serial attached SCSI drives and low-cost serial Advanced Technology Attachment (ATA) devices.

HP said the upcoming array will have a single serial backplane that can support both kinds of drives, plus an interface that will let the different disks replicate data to one another for backup and recovery purposes. The mix-and-match capabilities could potentially lower storage costs by allowing IT administrators to provision capacity based on the type of data that’s being stored.

Daniel Morreale, CIO at North Bronx Healthcare Network in New York, recently talked to HP about the array for potential use in storing medical images and documents from clinical studies. “I can definitely see the value of it,” he said. “We’d like to get rid of our tape environment.”

HP’s disk array would let North Bronx Healthcare store images and electronic documents on serial ATA disks that cost roughly the same as tape devices and provide end users with online access to the data. Morreale said. But he added that the health care provider is currently installing an EMC Centera array, which uses parallel ATA disk drives to store data in a nonwritethrough format.

Mark Almendinger, enterprise infrastructure manager at Huntington Bancshares Inc. in Columbus, Ohio, said the financial services firm could use the promised HP array to take advantage of inexpensive serial ATA drives for applications like its Notes e-mail systems. Data from heavy-duty transaction applications could be stored on higher-performance serial attached SCSI devices, added Almendinger.

HP is partnering on the mixed array with disk drive maker Seagate Technology LLC in Scotts Valley, Calif., and network adapter vendor Adaptec Inc. in Milpitas, Calif., Seagate and Maxtor Corp., also in Milpitas, have both said they plan to begin shipping serial attached SCSI drives to hardware vendors by year’s end.

A 1.0 version of the serial attached SCSI specification was ratified by a technical committee last month and is in the midst of a 45-day public comment period. One of the key features built into the new storage interconnect technology is its compatibility with serial ATA drives [QuickLink 36708].

HP is the first vendor to formally announce plans to develop an array that mixes the two technologies. But Robert Gray, an analyst at IDC in Framingham, Mass., said the product promised by HP is only the first of what will be “a total industry flip over time” to such devices.

— Lucas Mearian
Sun's Gosling Discusses State of Java

BY CAROL SLIWA

Sun Microsystems Inc. Vice President James Gosling, the creator of Java, last week spoke with Computerworld about the company's latest Java activities. Excerpts follow:

Those who have been to previous JavaOne conferences have noted the declining attendance. Do you think that signals waning interest in Java? I don't think there's any interconnection between the population decline and what's going on in the Java world. The socioeconomic state of the world pretty much explains everything, I think. If you talk to people about the energy of what they are doing, I actually think it's higher today.

Sun talked a lot about working to boost the Java population from 3 million to 10 million developers. Do you think that's a realistic goal? I think it's a very realistic goal. It's a tough one, and a lot depends on how you think of the goal. You've got this huge educational system that is feeding the world with pre-educated Java developers. If you count ed up all the people who have learned to program in Java, we are way ahead of 10 million.

Over what time frame will 10 million be achievable? I'd be happy in five years. It wouldn't be at all surprising if it happened a lot faster than that.

Like many companies, Sun is introducing a tool, code-named Project Rave, that seeks to reduce the complexity of developing in Java. Have you been involved in that? Yeah. We tend to come out of the gate with something that works really well at large scale, and at small scales it's too complicated. So there's a dual goal here. One is to make it so that the people at the lower end can use a lot of this infrastructure that was really designed around high-end deployments. There's also this other subtext to it, which is that the things that start small, if they succeed, they always become large. So with these tools, you can do systems that start small, start easy, but they can grow up and turn into big sophisticated systems.

Continued from page 1

Java

Java has reached the point where market pressure would ensure that no "bully" could succeed in introducing incompatible technology that could fracture a developer community that has grown to value Java's consistency and interoperability.

"My personal feeling is that we're over the edge, but I also feel a little nervous about that," Gosling said. "There are still all kinds of opportunities for mayhem."

Not Ready for Leap

One prominent executive who isn't ready to take the leap that Gosling favors is Jonathan Schwartz, executive vice president of software at Sun. He said the problem with open-source, the "tyranny of the volume leader."

"If Java was open-source, Microsoft could take it, deliver it as they saw fit and drive a definition of Java that was divergent from the one that the community wanted to be compatible," he said. "And to the victor would go the spoils of that nefarious action."

Sun formally established the Java Community Process (JCP) in 1998 to develop and revise Java technology, and it now claims that more than 650 members participate. Under the JCP, intellectual property is protected by a license that requires anyone using a Java spec to demonstrate compatibility with the technology's reference implementation.

Even though Sun has worked to make its standardization process more open — and, along with JCP members, to allow for more technologies to be made available under an open-source licensing and development model — it has yet to make core elements of Java open-source, Gosling said.

Sun's lawsuit claiming that Microsoft Corp. violated its contract by trying to introduce a version of Java that was incompatible with its specifications has made some colleagues particularly sensitive to the open-source issue, Gosling said. He added that there are still enough differences of opinion at Sun, which tends to be a consensus-driven company, that he can't predict when or if Java will be made open-source.

"There are days when I feel like it's going to be tomorrow. There are days when I feel like it's going to be never," Gosling said. "If I talk to the lawyers involved in the Microsoft case, I always come back completely horrified, [thinking] if we ever do this, we're screwed."

The open-source debate over Java is nothing new at Sun. Gosling and others at the company acknowledged that the discussion started long before the growing popularity of the open-source Linux operating system caused a commotion in the industry. But the debate has heated up more recently, Gosling said.

Rob Gingell, chief engineer at Sun and chairman of the JCP program, said an argument erupted via e-mail about a month ago among about 100 Sun field engineers who work with customers.

On the open-source question, they wondered, "Why don't we just say yes?" But he said that on further examination, he realized that they were referring more to the open-source style of development than the intellectual property issues associated with open-source.

"Given its importance to the future of my company and our shareholders' stake in our company, I'm not willing to be risky with it," Gingell said. "I'm going to want to understand it and be able to be definitive about it within a reasonable risk profile before I'm willing to let that go."

Gosling said he didn't become swayed that Java was ready for open-source until about a year ago, and he said he's not convinced he's right. He said he has made his opinion known internally for quite some time, although he hasn't made a point of discussing his views publicly.

"We actually do open-source a lot of stuff — but not the core bits," Gosling said. "And we've talked about slicing up the core so that some of it's open-source, and by and large, that isn't an easier problem than doing the whole thing."

Schwartz said the Java.net online community that Sun introduced last week is "filled to the gills with open-source projects with Java." He also said that he, Gosling and others just published the Java Research License, which allows more open-source development on core parts of Java.

“Anyone who wants to experiment with core parts of Java — everything under the guts of the virtual machine, the language constructs themselves — is more than welcome to do so," Schwartz said. "But they can't introduce them into the commercial domain."

Gosling, too, is well aware of the potential pitfalls if Sun takes the open-source step. "Open-source ways of dealing with software work really well as long as you get this sort of collegial atmosphere," he said. "If you happen to have a bully on the block who is really strong, it doesn't work."

Opinions on Open-Source Java Mixed

Some of the prominent vendors that work on Java standards through Sun Microsystems' Java Community Process (JCP) favor Java being turned over to the open-source community. Many corporate developers, however, have some strongly divergent opinions on the matter.

The following is a sampling of these developers' views:

■ Clay Mathur, senior staff programmer, Charles Schwab & Co., San Francisco: "When you're trying to make reusable code, it's better to have standards. I prefer the standardization that the Java Community Process provides, rather than everybody doing their own thing."

■ Ramu Kannan, director of information technology at Humana Inc., Louisville, Ky.: "Sun is not the company that it used to be. Java should be open. . . . Also, Sun is driving a lot of Java in a certain direction, which I don't think the rest of the community may want."

■ Tom Van Atta, manager, Univ./Basis Services, The Scotts Co., Marysville, Ohio: "I think the JCP is the right way to maintain it. If it becomes open-source, it'll be too hard to control."

■ Bob Celmer, technical fellow, AutoZone, Memphis: "I would like to see it go open-source, because there are those of us who would like to have greater visibility into how the technology works — particularly with new things."

JAVAN DEBATE

Read what others have to say about the open-source Java issue.

QuickLink 39196

www.computerworld.com
**RFID**

and standardization hurdles before widespread usage can begin.

Wal-Mart's move is expected to result in the deployment of nearly 1 billion RFID tags with embedded electronic product codes (EPC) for tracking and identifying items at the individual crate and pallet level, said Pam Kohn, vice president of the Bentonville, Ark.-based retailer's global supply chain operations. But even Wal-Mart's initial RFID effort will be narrowly focused. Although RFID tags can gather and track a variety of data related to products, materials and more, Kohn said Wal-Mart will concentrate at first on using the technology to improve inventory management in its supply chain.

"We're still determining all the benefits," Kohn said. "We don't want to overburden ourselves." She added, though, that even if Wal-Mart were to collect no new data with the RFID tags, the efficiency and accuracy with which items can be tracked would be huge benefits in and of themselves.

RFID uses low-powered radio transmitters to read data stored in tags that are embedded with tiny chips and antennas. Proponents of the technology say such "smart" tags can store more detailed information than conventional bar codes, enabling retailers and manufacturers to track items at the unit level.

RFID tags have been available for several years, but adoption has been slow because the tags are more expensive than bar coding and because standards are lacking to ensure interoperability between tags and data readers.

Gary Robertson, executive director of global infrastructure at Delphi Corp., a Troy, Mich.-based maker of automotive electronics systems that uses RFID devices in its manufacturing operations, said Wal-Mart's decision to deploy the technology "will legitimize it and push it into the mainstream.

"The fact that the largest company in the world is publicly adopting EPC open standards should give companies confidence that the day of a single, interoperable RFID system is close at hand," said Kevin Ashton, executive director of MIT's Auto-ID Center in Cambridge, Mass.

The Auto-ID Center is working with Uniform Code Council Inc. (UCC) in Lawrenceville, N.J., and EAN International in Brussels to develop a standardized EPC format for storing data on RFID tags. That effort got another boost last week when Microsoft Corp. said it will join AutoID Inc., a not-for-profit joint venture set up by UCC and EAN to oversee the still-evolving standards.

**Cost Possibly $50M**

Wal-Mart didn't say how much the effort would cost or its suppliers or whether new systems will be needed to support the technology. But even at the 5-cents-per-tag price that Wal-Mart said it plans to seek from vendors, the cost of the tags alone would total $50 million.

According to the Auto-ID Center's Web site, RFID tags typically cost at least 50 cents each, and RFID readers sell for $1,000 or more. Big companies could require thousands of readers for all their factories, warehouses and stores, the site says.

Wal-Mart isn't the only retailer putting its faith in RFID. London-based Marks & Spencer PLC, one of the U.K.'s largest retailers, is rolling out RFID technology in its food supply chain operations. The project involves putting 13.56-MHz RFID tags on 3.5 million new plastic trays used to ship products, according to Keith Mahoney, the company's food logistics controller.

Marks & Spencer has subjected the tags to a variety of temperature, moisture and distance tests before deploying them, Mahoney said during a presentation at the conference. Although the lack of common RFID protocols and standards remains an issue, "we could not allow the lack of them to hang up the project," he added.

RFID can yield "a huge benefit" for some companies, said David Hutchins, senior director of enterprise systems at Kraft Foods North America Inc. in Northfield, Ill., and a member of the AutoID board. However, Kraft is still evaluating the technology's potential value in its own supply chain. "The first thing is figuring out the business case," Hutchins said.

**CHIP ISSUES**

Meeting Wal-Mart's RFID tag needs may not be easy. Texas Instruments warns:
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Surveys Show No Big Boost Likely in IT Budgets This Year

Forrester, Meta say many users plan to spend less than budgeted amounts

BY THOMAS HOFFMAN

Stock markets are strengthening, and consumer confidence has increased in recent months. But thus far, those developments aren’t having much of a positive impact on corporate IT spending plans.

In fact, a respective 23% and 30% of North American companies surveyed separately by Forrester Research Inc. and Meta Group Inc. said they plan to shrink their tech spending below the levels they had originally budgeted for this year.

Nearly 70% of the 700 respondents to Cambridge, Mass.-based Forrester’s survey indicated that they’re holding steady on their IT budgets (see chart). But the survey results, released this month, led Forrester to drop its overall 2003 IT spending forecast from the 1.9% average budget increase it projected in December to a mere 1.3% gain.

“If you look at IT spending from a Buy, Hold or Sell perspective right now, most companies are taking a Hold approach,” said Howard Rubin, executive vice president at Stamford, Conn.-based Meta.

The Meta study, which was completed last month and involved 500 companies, found that 41% of the respondents plan to leave their 2003 IT budgets unchanged. Rubin said the remainder were almost evenly split: 30% plan to cut their budgets, and 29% intend to increase spending.

Holding Steady

The Hold approach to IT spending maps with Corning Inc.’s plans. “At this point, we aren’t changing our full-year target,” said Richard Fishburn, CIO at the Corning, N.Y.-based maker of optical fiber, cables, photonic technologies and other products.

But Fishburn added that Corning’s IT budget called for higher spending in the first half of the year to fund ongoing productivity programs, such as the application of ISO 9000 practices at the company’s global IT shared services center. In addition, Corning consolidated help desk activities at three regional sites earlier this year. As a result, IT spending for the rest of the year will drop off from the first-half level, Fishburn said.

Genesee & Wyoming Inc., a Greenwich, Conn.-based operator of short-line and regional railroads, built a marginal increase into its IT budget this year. That’s because the company’s annual revenue is projected to grow by $20 million, and IT spending is pegged to equal 2% of revenue, said Mike Meyers, vice president of information management and technology at Genesee & Wyoming. Meyers added that he doesn’t expect any changes to be made to the budget.
CRM Vendor Adds Development Hosting

BY MARC L. SONGINI
CRM software vendor Salesforce.com Inc. has announced a hosted application development service that makes Web services technology and widely used tools like Microsoft Corp.'s Visual Studio .Net available to software developers via the Internet.

Salesforce.com CEO Marc Benioff said users of the Sforce offering will also be able to access databases, a document management system and user authentication services without having to invest in or maintain any software themselves. San Francisco-based Salesforce.com will support Sforce users with the same IT infrastructure that's used to run its hosted online applications, he said.

Sforce can be used to build homegrown systems or to customize Salesforce.com's applications and integrate them with third-party products, Benioff said. Monthly fees are $50 per user and $1 for each megabyte of data stored at Salesforce.com's data center, although the first three users and 10MB are free for a year.

Microsoft, Sun Microsystems Inc. and BEA Systems Inc. have agreed to support Sforce with their development tools, and Salesforce.com said a similar deal is in the works with Borland Software Corp. Sforce also incorporates XML and Web services standards like the Simple Object Access Protocol and the Web Services Description Language.

Sforce sounds promising to Sheldon Tkatch, a senior project manager at Garrett Aviation Service Centers, a Tempe, Ariz.-based division of General Electric Co. The provider of airplane maintenance and modification services uses Salesforce.com's applications, and Tkatch said he wants to tie them to Garrett's Oracle customer database.

Currently, linking customer data to the hosted applications is a time-consuming process that requires end users at Garrett to extract the information in batches or reports and then enter it manually. Doing the necessary integration work in-house would be "technologically prohibitive," Tkatch said. But that process looks more feasible with Sforce, he added.

Wendy Close, an analyst at Gartner Inc. in Stamford, Conn., said Sforce targets application developers with the software-as-a-service concept. The service will most likely appeal to large companies that need more functionality than Salesforce.com's applications provide, she said.

But Close added that she's not sure how much buy-in Sforce will get at first, outside of companies that plan to use Salesforce.com's applications.
Larry’s Grandstand Play

O RACLE’S HOSTILE TAKEOVER BID for PeopleSoft has sparked a flurry of media coverage in the past 10 days — predictably so. The story has the classic elements of a made-for-TV movie: a dramatic surprise attack, high-stakes finance with antitrust overtones, executive power struggles and a quirky cast of combative CEOs.

But the undisputed star of this show has been Oracle CEO Larry Ellison, an insatiable attention-seeker who obsesses over the tactics of Japanese feudal warlords and who shopped for his fourth wife on the Oprah show a few years back.

Now he’s shopping for software market share and customer body count among PeopleSoft’s thousands of enterprise users, who play the sympathetic but largely helpless victims in this drama.

Why victims? Because their fates are tied to what could become a dead-end software platform.

Larry has made it clear he has zero interest in PeopleSoft’s portfolio of applications, strategic product road maps or even the technology fueling it all. So, if he sidesteps the inevitable upgrade march to Oracle’s E-Business Suite software will begin.

When CIO Jim Prevo of Green Mountain Coffee Roaster called that prospect “a disaster” [QuickLink 38995] and predicted that Oracle ownership would “destroy much of what we value in PeopleSoft,” he was speaking for many of his peers. At a time when IT organizations are trying to standardize platforms, simplify architectures and keep budgets under control, the specter of a forced migration off strategic business software is horrifying.

But what does Larry care? On the customer relationship front, Oracle has a spotty record. The vendor has feuded publicly with its own user group, and two years ago, it was forced to vociferous customer outrage to abandon a controversial database pricing plan.

When news of the hostile bid broke, PeopleSoft CEO Craig Conway, an Oracle veteran, sputtered his outrage over “classic Larry had behavior,” which included blabbing to the media about supposedly secret talks the two had last year about merging. Just four days before Larry turned the spotlight on himself, Conway had announced a pending $1.7 billion acquisition of J.D. Edwards. That move was intended to catapult PeopleSoft over Oracle, making it the No. 2 business software vendor behind SAP, which holds 54% of the market.

That scenario now seems unlikely. Even if Oracle’s bid fizzles, it may undermine PeopleSoft’s future — especially in the eyes of potential customers. As Wall Street analysts noted, the bid increases the perception that PeopleSoft is in trouble and sows confusion and doubt among customers and prospects. Checking out a vendor’s financial stability is a standard business practice for CIOs today, and PeopleSoft just got pushed into the wobbly red zone.

I asked an expert on IT sourcing what PeopleSoft customers could do to protect themselves if Oracle has its way, and unfortunately, there isn’t much. Bart Perkins, a managing partner of Leverage Partners and a Computerworld columnist, said that the best customer protections reside in the software contract. A good one will include explicit performance metrics and service guarantees, details about promised functionality and a promise of product support for a certain number of years.

But product plans and support can blow up quickly after an acquisition, so that piece of paper may be worthless if Larry’s grandstand play succeeds. Here’s hoping it doesn’t.
Managing and Securing Mobile & Wireless Resources
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Managing and Securing Mobile & Wireless Resources

As the mobile workforce continues to grow, IT organizations turn to new tools that let them support a dizzying array of devices.

Interestingly, both vertical enterprise workers (such as healthcare, education and financial services staff) and horizontal enterprise workers (such as consultants and sales representatives) will soon make up a predominantly mobile workforce. According to research firm IDC, more than two-thirds of all U.S. employees will be classified as mobile by 2006.

Mobile workers will travel and work in various private and public environments, such as campus buildings, industrial plants, client sites, airport executive lounges, hotel rooms and their residences. They will seek wired and wireless data network access over often unreliable, unsecured and bandwidth-constrained connections to maintain their mobile productivity.

Consequently, the enterprise network will be extended into campus and mobile environments to provide these workers seamless access to their mission-critical enterprise applications, email, personal information managers (PIMs), corporate databases and other mobile resources. This means IT managers and help desk staff will have to extend their own services into the same campus and mobile environments to support not only mobile workers' data access needs, but also a proliferation of mobile and wireless devices.

According to Framingham, Mass.-based IDC, there will be over 112 million enterprise mobile devices for IT support staff to service in 2004. Many of the devices, such as personal digital assistants (PDAs) and smart phones, cost up to $500.

However, due primarily to the inefficient extension of IT support in mobile environments, the total cost of ownership (TCO) of mobile and wireless resources often equals five to 10 times the average capital cost of the devices themselves. For example, Stamford, Conn., research firm Gartner Inc. estimates the TCO for a PDA at $2,700, but that cost soars to $4,400 if the PDA is enabled with a wireless adapter.

Various mobile resource management (MRM) solutions address the data communication and computing needs of the mobile workforce and relieve related support pains. MRM refers to the "lifecycle management" of mobile, wireless and remote devices and related software, content and data, with a primary focus on enterprise applications. MRM solutions centralize mobile resource management, drive increased mobile workforce productivity and decrease the TCO for mobile resources.

MRM Market

As the mobile workforce increases and mobile and wireless devices proliferate, the MRM market is expected to grow at a proportionately high rate. IDC estimates it will top $715
Do you know where your sensitive company information is? It’s everywhere your people are—because it travels with them in mobile devices such as laptops, PDAs and smart phones.

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million in revenues by 2006, a 42.6% compound annual growth rate over $121.3 million in 2001. Similarly, Gartner forecasts a five-year growth rate of 40% in MRM market revenues, from $135 million in 2000 to $750 million in 2005.

MRM Solutions

MRM solutions implement product lifecycle management and help IT control and centralize the monitoring, recording, installing, configuring and upgrading of mobile, wireless and remote device systems, operational software and mission-critical applications. The primary MRM features are systems management, software management, data management, security management and centralized administration.

MRM solution architecture includes a server, a management console, a proxy service and a device client. The MRM platform can be integrated with legacy management systems like authentication servers (e.g. RADIUS), user directory servers (e.g. LDAP) and desktop management platforms (such as Microsoft's Systems Management Server, or SMS). Figure 1 shows a typical MRM architecture, this one from Credant Technologies' CREDANT Mobile Guardian (CMG) system diagram.

MRM Vendors

As Figure 2 shows, MRM vendors consist of heritage desktop management (e.g. Novell or Tivoli), remote control (e.g. Altiris or XcellNet) and database synchronization (e.g. Synchrologic or Sybase) solution providers—collectively known as "mobile device management" vendors—in addition to mobile device security vendors, such as Wavelink and Senforce Technologies.

Most MRM vendors have extended their heritage product features to provide end-to-end MRM solutions, including security features. These extended MRM features are added to vendors' product suites through internal research and development, cross vendor licensing and merger and acquisition strategies. For example, Novell, a heritage desktop management vendor, acquired Callisto, a heritage remote control vendor, to extend Novell's ZENworks product functionality.

Systems Management

Systems management functions allow IT support staff to deploy, manage and troubleshoot mobile and wireless systems. Key systems management functions include asset management, operating systems migration and license management.

- Asset management. Asset management functions enable the
monitoring, tracking and reporting of mobile and wireless hardware and software. The data is stored in Open Database Connectivity (ODBC) compliant data sources, such as Microsoft SQL Server, for the purposes of license management, software deployment and TCO management.

- Operating system migration.
  Operating system migration provides a pre-migration assessment of the user's software and hardware landscape, including a snapshot of the computer personality setting. Post-migration status reporting and security patching are also used after the installation is complete and the personality settings are restored. Most current operating system migrations involve upgrades of Windows 9X/NT to Windows 2000/XP.

- License management. License management functions include the auditing of user devices to determine the status of their software licenses. Software usage information is used to determine the number and type of applications, as well as redundant and unused software licenses. Additionally, software license contracts can be managed with built-in notification policies in cases in which licensing amounts have been exceeded, as often happens.

Software Management

Software management functions allow IT support staff to provide policy-based deployment, management, troubleshooting and upgrade of mobile and wireless operating software and mission critical application. Key software management functions include software installation and updates, configuration and troubleshooting.

- Installation and updates.
  Software installation and updates can be planned based on asset management information and user profiles. Queries can be used to group mobile and wireless devices that contain

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Source: MobileTrax
newly installed software or require software upgrades, and automatic installations can be scheduled. For example, Rapport Technologies' Rapport 4.0 can update the client down to the BIOS level—a new level of update capability.

- **Configuration.** Devices can be configured to ensure a standardized and authorized deployment of software and to eliminate employee-installed applications and related rogue applications. Device buttons, menus and power settings can also be configured.

- **Troubleshooting.** Troubleshooting functions include the monitoring of installed software, the detection of missing or corrupted files and the distribution of software patches and replacement of missing files—all completed in the background of a communication session.

### Data Management

Data management functions allow IT support staff to ensure reliable data transmission across various data networks, such as wired and wireless LANs and WANs and the Internet. Key data management functions include database synchronization, bandwidth management, data compression, checkpoint restart and byte-level differencing.

- **Database synchronization.** This allows for wired and wireless synchronization of mission-critical data and applications, such as PIMs and email, and includes backup and restore functionality.

- **Bandwidth management.** Bandwidth management functionality enables background diagnostic analyses, software upgrades and file transfer by allocating limits to the amount of bandwidth used during a communication session.

- **Data compression.** This is automatically implemented based on the bandwidth limitations of the wired or wireless connection.

### As a significant number of vertical and horizontal enterprise workers travel and work in mobile environments, IT support staff will have to provide them with seamless, secure mission-critical data and applications.

- **Checkpoint restart.** Checkpoint restart enables interrupted data transmissions to resume at the point of interruption when a wireless connection is lost.

- **Byte-level differencing.** This differencing enables changes and updates only (as opposed to entire files) to be transmitted during file distribution.

### Security Management

Security management functions allow IT support staff to implement data, user, device and network security based on mobile and wireless security policies. Wherever possible, the security policies should be integrated with wired security policies and should be designed to adapt to changing environments. Security management functions include data encryption, user authentication, location-aware management, theft protection and other popular desktop PC security solutions.

- **Data encryption.** Mission-critical data is protected during transmission using HTTP and Secure Socket Layer (SSL)-based encryption methods. The Advanced Encryption Scheme (AES), a U.S. government-approved data encryption algorithm (up to 256-bit key security), will soon replace other limited encryption algorithms such as the RC4 stream cipher in wireless LAN systems.

- **User authentication.** User information stored on directory servers, such as Microsoft Active Directory, can be used to grant users access to mission-critical applications and data.

- **Location-aware management.** Device security solutions should be location-aware and automatically open and close the device's adapter ports, based on the changing environment, the user's service preferences and the security policies.

- **Thief protection.** Biometric access (e.g. fingerprint reader), motion sensors and power-on passwords protect idle and unattended devices from potential theft.

- **Desktop PC security solutions.** Popular desktop PC security
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Toshiba recommends Microsoft® Windows® XP Professional for Mobile Computing.

1. Battery life may vary depending on product model, configuration, applications, power management settings and features utilized. Battery may not charge while computer is consuming full power. After a period of time, the battery will lose its ability to perform at maximum capacity and will need to be replaced. This is normal for all batteries. To purchase a new battery pack, see the accessories information that shipped with your computer or visit the Toshiba web site at www.toshiba.com. The "9 hours" were achieved with an additional Satellite® battery.
2. Wireless connectivity and some features may require you to purchase additional software, services or external hardware. Availability of public wireless LAN access points limited. 1 GB means 1 billion bytes. 3. Two months of AOL membership included with the purchase of a Toshiba Satellite or Satellite Pro P7. Availability may be limited, especially during peak times. To avoid losing Charged to Membership fees, sign up before trial hour promotional period ends. Premium services, vary unchangeable, and communication software may apply, including in Mexico, during promotional period. Members may incur Nationwide charges on their phone bill, depending on their location and calling plan, even during promotional period. Available in select member in the United States, age 18 or older; a major credit card or checking account is required. Satellite P7 and Satellite are registered trademarks of Toshiba America Information Systems, Inc., and/or Toshiba Corporation, Intel, Windows, the Intel logo, and the Intel Inside logo are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries. Microsoft and Windows are registered trademarks of Microsoft Corporation in the United States and/or other countries. All specifications, pricing subject to change without notice. Reseller pricing may vary. © 2003 Toshiba America Information Systems, Inc. All rights reserved.
solutions, such as virtual private networks (VPNs), personal firewalls and anti-virus software applications, can be implemented by IT organizations to protect the mission critical data and applications on mobile computing devices.

Centralized Administration

The centralized administration of today's MRM solutions can help IT support staff efficiently and effectively control the management of mobile resources. Centralized administration functions include console management, remote control and legacy platform integration.

- **Console management.** A management console allows IT support staff to deploy, manage and update systems, software and data from a Web-based interface.
- **Remote control.** Remote-control software enables IT support staff to view, operate, diagnose, configure and maintain mobile and wireless devices over the Internet or a wireless network using a centralized console and without user intervention. The function has traditionally been used to control remote machines, such as point-of-sale terminals, kiosks and utility meters.
- **Legacy platform integration.** MRM solutions should always be integrated with desktop management platforms in order to ensure the centralized and consistent policy-based management of both fixed and mobile enterprise resources. Legacy platforms include management servers (some examples include Microsoft's SMS and Hewlett-Packard Co's OpenView Service Desk) in addition to directory servers such as LDAP and Microsoft's Active Directory.

**Conclusion**

As a significant number of vertical and horizontal enterprise workers travel and work in mobile environments, IT support staff will have to provide them with seamless, reliable and secure mission critical applications and data. Moreover, IT organizations will be faced with the challenge of supporting a proliferation of mobile and wireless devices, remote terminals and nearly endless related operating software.

The rapidly expanding universe of MRM solutions, which include systems management, software management, data management, security management and centralized administration features, will greatly help enterprise IT organizations efficiently procure, deploy, configure, monitor, upgrade and secure mission critical mobile resources. The MRM solutions will efficiently manage and secure mobile resources, resulting in an increase in mobile worker productivity and a decrease in TCO.

**About MobileTrax**

MobileTrax LLC is a Cupertino, Calif.-based professional services firm that focuses on the mobile computing and wireless data communications markets. MobileTrax provides market research and consulting services regarding the enterprise and consumer markets. The MobileTrax Enterprise IT Service provides vendor-sponsored monthly in-depth reports regarding important mobile and wireless topics, including "What IT Needs to Know," which gives IT groups specific recommendations on what they must know to succeed in mobile and wireless deployments.

MobileTrax publishes two free industry newsletters. "Inside Mobile" provides editorial analysis and insights regarding important topics in mobile and wireless and is published on the first and third Mondays of the month. "Mobile Letter" covers insights regarding new products and services and is published on the second and fourth Mondays of the month. For more information, visit www.mobiletrax.com or call (650) 248-9366.

MobileTrax is headed by J. Gerry Purdy, Ph.D., a globally recognized authority on mobile computing and wireless data communications. Dr. Purdy is also a General Partner at Diamondhead Ventures, an early-stage venture capital firm.
Many enterprise IT support staffs aren't prepared to enforce mobile and wireless security policies; efficiently provide seamless access to mission-critical applications and data; and support the proliferation of mobile and wireless devices. MRM solutions address the mobile and wireless "pains" of enterprise IT support staffs, as demonstrated by the following deployments.

S.H. Leggitt: Centralizing the Management of Handhelds

The increased use of handheld devices by the mobile workforce presents various challenges to IT support staffs. They must manage their mobile and wireless inventories and deploy, upgrade and maintain the mission-critical applications and content from a central management console.

S.H. Leggitt is an industrial products manufacturer. The company is headquartered in San Marcos, Texas, and provides L.P gas regulators, hose assemblies, custom brass fittings and plumbing components for the L.P gas, RV and plumbing markets. Naturally, the company employs a significant number of consultants and sales representatives, many of whom use handheld devices.

S.H. Leggitt needed an MRM solution that could centralize and remotely manage its handheld device usage, licensing and memory status as well as upgrade and distribute its mission-critical documents and content to the mobile workforce. After evaluating several solutions, the company selected Novell's ZENworks for Handhelds solution to address its mobile and wireless "pains."

Novell ZENworks for Handhelds provides automated management of handheld devices to increase mobile workforce productivity and to reduce TCO. ZENworks for Handhelds provided the S.H. Leggitt IT support staff with the following benefits:

- Remote management and security of the handheld devices through a central management console.
- Systems management, including inventory tracking, software license auditing and upgrades; and system memory monitoring and upgrades.
- Software management, including the configuration of standardized buttons, menus and settings on the mobile devices and the remote delivery of PDF formatted content.

INTEGRIS Health: Managing the Security of PHI

Medical staffs use PDAs to retrieve, store and update protected health information (PHI). If the handhelds aren't properly managed and secured, the PHI stored on them may be carelessly exposed or lost.

The Health Insurance Portability and Accountability Act (HIPAA), which was enacted to enforce the privacy and security protection of consumers' electronically transmitted medical information, will impact many healthcare service providers and their ability to competitively provide managed and secured mobile and wireless services.

INTEGRIS Health is a healthcare management operation. The company is based in Oklahoma City and operates various medical facilities throughout the state.

INTEGRIS Health needed an MRM solution that would enable it to enforce its wireless security policies, support various handheld devices and comply with HIPAA. The company selected Credant Technologies' CREDANT Mobile Guardian solution to address its mobile and wireless "pains."
wireless "pains."

CREDANT Mobile Guardian (CMG) addresses security issues with centrally managed policy administration and on-device user authentication and policy enforcement. CMG provided INTEGRIS IT support staff the following benefits:

- User- and role-based mobile and wireless security policy enforcement.
- User authentication (e.g. PINs or passwords), including self-service reset options and the encryption of data residing on corporate databases, and removable CompactFlash cards.
- Automated installation and update of software during synchronization and the purging of PHI from lost or stolen mobile devices.

What IT Needs to Know

As the mobile workforce grows and mobile and wireless devices proliferate, IT support staff must provide the adequate and efficient management and security of mobile mission-critical applications and data. Key MRM strategies IT support staffers need to know are:

- Develop and implement mobile and wireless security policies that are integrated with campus and wired security policies and cover the procurement, deployment, management and security of mobile devices and mission-critical applications and data.
- Procure and deploy an MRM solution that enables system, software, data and security management through use of a central management console.
- Compare and select MRM vendors based on the relative strength of their heritage features (e.g. synchronization or device security) as well as their ability to provide an end-to-end MRM solution.

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MRM: A Mobile Worker Perspective

Mobile sales and service workers need real-time access to enterprise networks and databases to provide just-in-time sales and services based on customers' personal attributes and histories. They also need reliable and transparent troubleshooting and maintenance support. MRM solutions address the mobile and wireless "pains" of mobile workforces.

Tulsa Dental: Enabling Personalized Mobile Product Sales

Mobile sales workforces use mobile and wireless devices to provide product sales and related value-added services. These road warriors need reliable and frequently updated client information that can be accessed at regular intervals and customized to drive incremental and repeat sales.

Tulsa Dental, a division of DENTSPLY International, is a medical equipment supplier. The company is headquartered in Tulsa, Okla., and provides endodontic products to dentists. Its field sales representatives sell directly to dentists. Their broad line of offerings includes educational course enrollment, product literature, dental supplies and equipment for dentists' offices.

Tulsa Dental needed an MRM solution that would enable its mobile workforce to efficiently gather sales orders from the field, periodically synchronize the content with the enterprise database and receive updated client information.

Federated Insurance: Providing Real-Time Mobile Customer Service

Mobile service workforces require updated product or service information in order to provide the superior customer service required by enterprises seeking to compete in the challenging economy that has held sway for the past three years. Therefore,
these mobile professionals need to retrieve updated service policies, documentation and forms in real-time if they are to respond as quickly and accurately as possible to their customers' questions, concerns and needs while in mobile environments.

Federated Insurance is a mutual property and casualty insurance provider. The company is headquartered in Owatonna, Minn., and specializes in business insurance for a wide variety of vertical markets. All told, the company employs more than 200 field marketing and service staffers, who provide in-person policy sales, loss prevention education and claims resolution.

Federated Insurance needed an MRM solution that would enable its mobile workforce to efficiently access the corporate intranet and download updated policies, forms, contracts and other mission-critical content. After evaluating a broad cross-section of potential solutions, the company selected XcelleNet's Afaria solution to address its mobile and wireless "pains."

XcelleNet Afaria provides mobile and wireless systems and software management functions that bring not only greater efficiency, but also increased productivity and significantly improved user satisfaction. Afaria provided the Federated Insurance mobile workforce benefits that included the following:

- Rapid access to mission-critical documents and applications using the same Web-based intranet interface that's used by desktop PC users.
- Automated, seamless and efficient updates of mission-critical documents and software applications using such tools as byte-level differencing and checkpoint-restart functions.
- Automated Web-based troubleshooting, including the background reporting, repair and replacement of any files that are corrupted or missing.

What Mobile Workers Need to Know

Mobile workers must be able to access mission-critical applications, content and data to maintain their sales productivity and to ensure superior customer sales and service. Key MRM strategies mobile workers need to know are:

- Access mission-critical application, content and data with a Web-based interface that is integrated with and similar to their desktop management infrastructure and interfaces.
- Retrieve only the updates or changes in mission-critical documents or content through efficient data management functions, such as checkpoint-restart and byte-level differencing.
- Troubleshoot and repair mobile device systems transparently through background monitoring and maintenance functions.
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Real-time monitoring can also be a boon in fraud detection. An online music retailer was able to watch for instances of fictitious credit card generation via overseas IP addresses. The software foiled an attempt to ping the server with randomized credit card numbers by checking failed entries within a three-hour time period.

Yet another use for this technology is monitoring low-volume, high-dollar business-to-business transactions to ensure that customers are always getting the information they want. A manufacturer of drill presses is using it to keep watch on inventory, delivery dates and suborders for components.

Traditional monitoring software, akin to a closed-circuit TV camera, is still necessary, but it’s no replacement for having a live guard keeping watch. And more important, one who takes notes you can act upon.

DAVID MOSCHELLA

IT Mature? Think Again

HAS THE IT industry lost faith in itself? In April, Larry Ellison told The Wall Street Journal that the computer industry “is as large as it’s going to be.” Google’s Eric Schmidt and others are making comparisons to historical market bubbles involving canals and railroads, which were followed by relatively humid periods. Perhaps most aggressively, in a controversial Harvard Business Review article, editor at large Nicholas G. Carr argues that IT doesn’t even matter anymore, and that it’s rapidly losing its ability to deliver competitive and strategic advantage.

This type of pessimism has emerged during every prolonged IT market downturn. For example, in the late 1980s, when the U.S. economy seemed to have lost its edge, IT got much of the blame. I remember meeting with senior executives at IBM, who were pondering a study from a large management consulting firm that had concluded that IT really wasn’t such a great business to be in and that IBM should prepare itself for a low-growth and low-profit future.

But it’s been more than three years since the collapse of the Internet bubble, and it’s time for all of us to put our hair shirts back in the closet. A practical first step would be to stop referring to the IT industry as “mature,” which Webster’s defines as “having completed natural growth and development.” Does anyone really believe that these words apply to our business?

The most obvious flaw in this surprisingly widespread idea is its total lack of global perspective. The U.S., with 5% of the world’s population, accounts for some 40% of the global IT business. How could anyone use the word “mature” to describe the state of IT usage in India, China, Brazil and many other countries? Indeed, if someday the rest of the world invests in IT at even half the current per capita rate in the U.S., the global IT industry would more than triple.

I’ll give pessimists the benefit of the doubt that when they describe the IT industry as mature, they are really just talking about the U.S. and perhaps a handful of other developed nations. But even here, their arguments can’t withstand much scrutiny. Consider the consumer market, where radical changes can be expected once high-bandwidth Internet, 3G-style wireless and home network systems are widely in place.

Even in business, maturity is the wrong word. Industry researchers say IT spending now accounts for 7% to 9% of the U.S. economy. But as more business is digitized and more tasks go online, is it really so hard to imagine that in seven to 10 years, IT-based activities could comprise, say, 15% to 20% of overall economic activity? Such a shift would allow today’s U.S. IT business to more than double. And mature industries don’t double every seven to 10 years.

The reality is that IT isn’t just a separate, economically isolated sector like manufacturing, retail or insurance; it’s an increasing essential part of nearly every industry. It also remains the single largest source of business innovation and competitive advantage. IBM’s Sam Palmisano got it right recently when he said IT spending can consistently grow from roughly 1.8 to 2.3 times the rate of the overall economy. Over time, this will result in a vast new IT landscape, which will make today’s "mature" industry look primitive by comparison.

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Want our opinion?

Posed for Wide Adoption,” QuickLink 38332] gives the impression that event-driven architecture is something new and that middleware packages are just about to start to support it in earnest. On the contrary, sophisticated event brokering has been a feature of message-oriented middleware like BEA’s Tuxedo or NCR’s also BEA’s) TopEnd for decades.

More Than Techies

As a senior IT executive (CIO), I am constantly amazed at the cry for "business-savvy IT executives." [QuickLink 38198] That’s because my experience has been that when IT managers attempt to exercise business savvy, they are pitifully but firmly informed by word or deed that they are just "technical people." It is an empty cry offered by people of little insight and less business acumen. James D. Wells Jr., Norwich, Conn.

Fair Trade

The article "Group Touts Outsourcing Alternatives" [QuickLink 38170] and the related box on New Jersey illustrate the self-obsession with which American businesses and legislators view international trade in general and the North American Free Trade Agreement in particular.

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Regaining Luster

THOMAS HOFFMAN and Gary H. Antich are right on with their "tarnished image" piece [QuickLink 38043]. It has a big credibility problem in most enterprises. Combine that with offshoring and a rough economy, and the IT jobs recovery may be further off than most believe. IT’s own praise is definitely part of the solution, but so is using IT to create value for the enterprise and speaking the business side’s language to communicate that value. Somewhere along the line, many so-called IT professionals appear to have forgotten that it’s all about managing technology for the good of the enterprise. Leon Kappelman Director, IS Research Center, University of North Texas, Dallas

I WOULD BE interested in seeing whether or not companies that have IT departments with tarnished reputations have an active project management process in place and a project management office that is backed by senior management. Too many times, I’ve seen project managers bullied into fixed budgets and timelines by senior managers. This inevitably leads to projects that aren’t delivered on time or within budget. Scott Burgett Project manager, Atlanta

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Here's how two early adopters are using Web services for internal integration projects.

By Carol Sliwa

It's not hard to find companies that have dipped their toes into the water to explore how Web services might help address some of their nagging integration problems. But few have launched major initiatives of the scope at Eastman Chemical Co. and Merrill Lynch & Co.

One of the distinguishing characteristics that separates these early adopters from the mere dabblers is the systematic approach they take to building the sort of service-oriented development architecture that experts say they'll need to realize the full benefits of Web services. Some of the biggest challenges they've faced so far have been finding the right tools and establishing best practices without a well-established road map.

Eastman Chemical

Eastman Chemical, a Kingsport, Tenn.-based maker of chemicals, fibers and plastics, is plotting the rollout of a service-oriented architecture across key legacy systems to give users more visibility and control over their business processes.

To do that, the IT department is taking stock of all of the company's application servers (which run on AIX, Windows 2000 and Windows NT), assessing what the applications do, stripping off the user interfaces and exposing the application functions as services, says Carroll Pleasant, an associate analyst in Eastman's emerging digital technologies group.

"Once we're done, the [users] should be the ones deciding what the business processes will be, rather than having the applications determine the business process for them," he says.

Like a number of other companies, Eastman got started with Web services by focusing on a key project that would help its IT department learn about the new technology. Developers created a simple read-only Web service to give customers access to technical data in its product catalog.

The product catalog Web service, which went live about a year ago, eliminated the need for customers to screen-scrape data from Eastman's site or to download a monolithic catalog to spreadsheets. Customers instead can now go to the Web site and make a request that causes the system to send an XML-based message using SOAP over HTTP to Eastman's Saqqara Systems Inc. database. The latter then does the data retrieval and sends back the information via XML and SOAP.

With one successful project under its belt, Eastman's next big step was tackling an internal Web service it calls a management score card. The service lets the company's top 150 executives access financial, manufacturing and other data from several disparate internal and external systems for competitive analysis purposes.

Developers used Visual Basic 6.0 and Microsoft's SOAP tool kit to build...
Anybody who gets into this deeply will find very quickly that they need a tool set for managing services. It’s as fundamental as running your data center monitoring tools.

CARROLL PLEASANT, ASSOCIATE ANALYST, EMERGING DIGITAL TECHNOLOGIES GROUP

The interfaces to its data warehouse and other back-end systems. Pleasant notes that, in hindsight, the newer and more reliable Visual Studio is a tool kit — which Eastman developers now use — would have been a better choice, since it generates more of the low-level plumbing code. But the team lacked experience with it at the time.

To tie together the data, Eastman developers turned to Java-based server software from New York-based Droplets Inc. to deliver a client with a rich graphical user interface “that deploys like a Web application,” Pleasant says. “The user just clicks on a shortcut and points to the application running on the server,” he says.

Not everything went so smoothly. Long before the management scorecard went live last December, Eastman realized it would have to figure out how to manage its growing collection of services so that programmers wouldn’t have to do checks to make sure all the services are running.

“Anybody who gets into this deeply will find very quickly that they need a tool set for managing services,” says Pleasant. “It’s as fundamental as running your data center monitoring tools.”

Eastman experimented with tools from NextAxiom Technology Inc. in Pleasanton, Calif., and webMethods Inc. in Fairfax, Va., to create a Web services management “engine” that’s more than a mere registry for the publication of services that applications can consume. The engine also needs to manage the security model, the orchestration between Web services, debugging and monitoring of the services, fail-over capabilities, caching and data transformation, Pleasant says.

When Pleasant surveyed the project landscape, he found a variety of confusing choices from start-ups.

“There’s no consensus yet as to exactly what a Web service management tool should do or what services should reside there vs. the application server,” he says. “It’s a tough choice, because you can’t just do an apples-to-apples comparison between these guys. Each one represents some fundamentally different approach as to how you’re going to build the service-oriented architecture.”

Another decision Eastman faced was how to “chunk” its data and whether to make “little calls to services or one big one” to compensate for the performance hits that result when data is transformed into and out of XML, Pleasant says.

To boost performance, Eastman had to learn the fine points of caching data so that multiple requests for the same information don’t trigger individual calls to the database every time.

The company has done most of its work without help of high-priced consultants, although NextAxiom and other vendors have assisted with Eastman’s near-term focus to create composite applications that tie together low-level services from existing legacy “application silos” and present the data in a view that aligns with the user’s business processes. Microsoft’s support for Web services and XML will also be helpful going forward, since Eastman is a heavy Microsoft user.

But one of the continuing challenges Eastman faces is the dearth of role models, since few have done what it’s attempting to do.

“It’s going to take a long, long time for everything to switch over to Web services and a service-oriented architecture,” Pleasant says. “We see the movement going on with almost all of our vendors. We’re confident they’re going this route. But it takes time to get there.”

MERRILL LYNCH INTEGRATION HEADACHES drove Merrill Lynch to turn to Web services about one year ago as a cheaper and more efficient alternative to the middleware it uses to enable its thousands of mainframe applications to talk to its middle-tier and Web-based front-end systems.

The challenge confronting the New York-based financial services company is far more expansive than most companies will ever encounter. Merrill Lynch has 23,000 CICS programs running on its mainframes, and it’s very difficult to integrate those programs with Microsoft’s .Net development platform, IBM’s WebSphere or any other platforms or tool sets, notes Jim Crew, director of the infrastructure and data services group.

Exposing those CICS applications with language-agnostic Web services interfaces and sending data using interoperable XML, holds great appeal. So Merrill Lynch created its own tool set, called X4ML, to help its mainframe programmers build interfaces and run Web services without need of XML, Java, Visual Basic or Web services skills and without having to modify the CICS programs. “There’s nothing in the marketplace that’s nearly as advanced as what we built,” says Crew.

The tool set, which the firm continually fine-tunes, has an analyzer component that looks at a compiled listing of a Cobol program, tries to figure out its I/O and automatically produces the Web Services Description Language files that represent the interface and all of the runtime metadata, says Crew.

X4ML can be accessed either through HTTP synchronously or through IBM’s MQSeries asynchronously or asynchronously, says Dave Cohen, a vice president in Merrill Lynch’s technology architecture group. “That’s important for helping with the goal of cost reduction,” he notes.

Venkat Pillay, a vice president in the infrastructure and data services group, says his team was apprehensive about scalability going through a CICS transaction gateway. But performance testing showed that TCP/IP and HTTP listeners in CICS provided the fastest, most scalable and efficient way to get into CICS, he says.

To boost performance, Merrill also wrote its own XML parser to run in CICS, since the off-the-shelf Java-based XML parsers were too slow, says Mike Card, another vice president in infrastructure and data services.

Card says the old system drove about 19 transactions per second, but using X4ML and Web services, the figure shot to 239 per second.

Through its work, Merrill Lynch hopes to phase out many of its CICS programs. For instance, if three programs do account inquiries, only one Web service is needed to expose that function. But Crew says that’s not the ultimate objective. “The goal is lowering the cost of running the business by reusing existing resources,” he says.

Crew estimates that for every dollar spent on an application, 90 cents goes to plumbing code. “Our goal is to make sure that 90 cents on the dollar is spent on the application and 10 cents on plumbing. Web services is getting us closer to that point,” he says.

Merrill Lynch IT executives often point out that the firm cut the cost of developing an investment banking application from $800,000 to $30,000 by using Web services instead of traditional development methods.

Crew attributes the differential to X4ML’s ability to eliminate plumbing code. Cohen says reusing code should help to reduce the turnaround time for new projects, which often depended on developer knowledge of how to call a particular CICS transaction using lega-
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IT'S TOUGH ENOUGH defending the IT perimeter against spyware, viruses, worms and unauthorized intrusions. But no matter how good their defenses are, companies still risk getting hurt by those they trust most: remote workers. "If anyone wants to attack, all they have to do is drop in a Trojan [horse] and wait for the person to log in," says Dennis Peasley, information security officer at furniture maker Herman Miller Inc. in Zeeland, Mich.

Personal firewalls help, but stand-alone versions don't always protect the corporate LAN adequately. For example, Peasley initially installed ZoneAlarm from San Francisco-based Zone Labs Inc. on 900 laptops. But the distributed personal firewall installations were difficult to monitor and maintain. Peasley now uses Zone Labs' newer, server-based Integrity software to centrally manage those remote personal firewalls. "With any new system we install, the main cost is not the cost of the software, but the cost of managing it," he says. "Centralized management cuts those costs."

Stand-alone personal firewalls don't work well for corporate LAN access because end users have access to the software and tend to misconfigure it or shut it off entirely, and administrators face problems supporting and installing updates. Because the update process is time-consuming, administrators may avoid updates altogether, leaving unpatched clients open to new vulnerabilities.

"I've seen personal firewall software that was individually installed on several large computer systems, and it always becomes a mess," says Kevin Beaver, president of Principle Logic LLC, an information security consulting firm in Kennesaw, Ga. "Configurations and patches were inconsistent, and the administrators spent way too much time on the 'sneaker net,' going around to remedy problems."

The best centrally managed personal firewall systems won't let end users disable the local firewall software or change the settings, says John Pescatore, an analyst at Gartner Inc. in Stamford, Conn. "Users will just say yes to everything, so you have to centrally manage them in a way that is invisible to the client," he says.

Some tools also integrate with antivirus and virtual private network (VPN) software. Pescatore says two of the more advanced products in this arena, Integrity and Sygate Secure Enterprise, from Sygate Technologies Inc. in Fremont, Calif., include a back-end server that can act as a gateway through which remote-user access can be controlled (see diagram, next page).

Peasley uses that feature on his Integrity firewall system. The end user connects to the Cisco VPN 3030 concentrator, which directs the user session to the Integrity server to authenticate the client, checks that the client's antivirus software is up to date and provides any necessary updates before allowing access to the network.

Vendors of related security products and security suites have jumped in with their own centrally managed firewall offerings. These typically include tight integration with sister security products. The downside is that they may be weaker in terms of management capabilities, integration with existing directory structures, reporting features and even the level of security they offer when compared with dedicated desktop firewall management products.

Symantec Corp. in Cupertino, Calif., and Network Associates Inc. in Santa Clara, Calif., have added personal firewalls to their corporate antivirus software, as have VPN vendors such as InfoExpress Inc. in Mountain View, Calif., and Check Point Software Technologies Ltd. in Redwood City, Calif. Sticking with one vendor generally makes it easier to integrate the security products, and in some cases, they can be managed from the same console.

"If you are committed to using an antivirus product, see if they also have a firewall product so you don't have to write the code to get the parts to talk to each other," says Robert Hillery, principal at security consulting firm HawkSi LLC in Hanover, N.H. Having a single vendor for both products also

Personal firewall management systems allow centralized control and enforcement of security settings for remote users. By Drew Robb
Personal Firewall Plays Central Role

eliminates finger-pointing, he says. Most organizations like to stick with familiar vendors and leverage what they already have. When the city of El Paso, Texas, needed to buy 1,000 firewalls as part of its Health Insurance Portability and Accountability Act compliance program, it chose Network Associates’ McAfee Desktop Firewall, in part because the city already used McAfee VirusScan.

"We can manage the firewalls through the same interface as the antivirus software," says Francisco Sepulveda, the city's information security officer. "This makes it easy to operate and to deploy updates."

Although this ability to remotely deploy personal firewall policy updates is a key feature, not everyone chooses to make use of it. For example, a West Coast beverage company uses InfoExpress’ VPN software and recently installed that company’s CyberArmor personal firewall on 500 new laptops before sending them out into the field. The company uses InfoExpress’ CyberGatekeeper to enforce policies, but it uses Novell Inc.’s ZENworks to deploy and manage them.

"We roll out policy updates through ZENworks, not InfoExpress’ management server, because we didn’t want to have multiple products out there updating different things on the laptops," explains the company’s network engineering, who declined to be identified.

Most personal firewall management products are fairly easy to use. But administrators need to decide not just what policies to enforce on which machines, but also how to apply those policies in different contexts. For example, the way in which a given user connects to the network may vary.

"People use a docking station when in the office, cable or DSL [Digital Subscriber Line] at home, wireless hot spots on the road, and dial-up when nothing else is available," says Pescatore. "The firewalls need different policies for each of these situations."

For this reason, some products support multiple sets of location-specific policies on a single laptop. Wells Dairy Inc., a privately held $700 million dairy processor in Le Mars, Iowa, uses that feature with its 400 remote users running Sygate’s personal firewall software.

"We can have multiple policies per user, per machine, per location. These fluidly change as the machine moves from location to location," says network architect Jim Kirby.

Even companies with a small group of remote users will benefit from centralized management, Kirby says, since administering firewalls on even a small number of remote systems is cumbersome. "If you have more than 10 laptops, you need a central control console. You will kill yourself trying to do it any other way," he says.

Another factor to consider is how much access to the firewall software to grant to users. The general rule is not to allow users any access, but there are exceptions. Kirby sets up his so that users can’t even tell that the software is running; laptops at Herman Miller have a status icon for diagnostic purposes. But in both cases, users still can’t shut off the software or change any settings.

By contrast, El Paso’s users have the option to turn off the firewall. "We allow users to shut it down if they are not connected to the network, since some people use it on their personal computers at home," Sepulveda explains. But they can’t log back onto the VPN without restarting the firewall.

The Next Generation

Vendors and analysts say the next generation of products will offer even tighter integration between firewalls and antivirus software so that administrators have to touch the desktop only once. Kirby says he’d like to see greater integration between firewalls and other products as well.

For example, Sygate offers simple check boxes to allow access to Windows networking and file sharing instead of having to configure multiple policies or rule sets. But it doesn’t offer such a setup option for its Cisco VPN hardware. Similarly, the Cisco Systems Inc. hardware has a pull-down menu to activate support for firewalls from Atlanta-based Internet Security Systems Inc. and ZoneAlarm, but not for its Sygate system.

Gartner’s Pescatore expects to see greater application awareness. Although many firewalls can block unauthorized applications from running, they don’t block that application from doing things it shouldn’t.

For example, although a firewall may let Outlook run on a laptop, it should block an application from e-mailing copies of itself to everyone in the user’s Outlook directory. Pescatore doesn’t expect to see that feature until 2005, but he doesn’t advise waiting for it.

“Every laptop needs a personal firewall,” he says. "It is not a luxury you can afford to do without."

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Q&A
Managed Objects Inc. CEO Siki Giunta says her McLean, Va.-based company is looking to "set a table" at which senior IT managers have a place alongside other corporate decision-makers. Giunta claims that with business service management (BSM) software and methods, CEOs and CFOs have a way to accurately align their IT systems with their business needs. According to Giunta, BSM allows IT managers to assess which pieces of technology are most critical to any given business process, and to monitor them accordingly.

Giunta spoke to Computerworld technology editor Tommy Peterson about why she thinks BSM is not just another fleeting three-letter acronym and the imperative for IT to be more closely focused on business goals.

What is business service management? It is a method and an approach so that our customers can see technology from a business point of view. When I buy a piece of technology, I should know what part of the business it's going to impact. And if that piece of technology is not available, how the end user and the business is going to be affected. It allows our customers to maximize what they really have and at the same time to deploy new technology in pieces and for the most important business processes.

Big corporations have 10 or 15 different processes that comprise 90% of the revenue. But IT people don't think in that way — they think in terms of metrics, they think in terms of servers or databases or even the applications themselves. They don't see technology as a continuum and at the same time they don't realize that IT availability really affects business availability. We provide a methodology and software that changes the way IT people think about managing technology. It makes them realize quite clearly the service they provide to the business.

Can you be more specific about the technologies involved? Business service management is the climax of a series of ways of doing technology. In the '90s, after we decided, "Let's get out of the mainframes and let's go buy lots of client/server technologies," the connectivity and the network — that's the first thing people would think was most important. In the '90s, people were thinking that the network was the big thing and they bought a lot of network managers. But they realized the network was only the connectivity piece — there are a lot of things in the middle, like servers, so they went and bought the frameworks and agents that would monitor the box. But that, too, would only provide another piece of the puzzle.

What it did create was a lot of double screens to watch. They had to screen the network and they had to watch a filter and alarms from metric managers and then they had to watch another product that would view the system. So people said, "I want to go to a single console," so they bought MOM, meaning manager of managers. What a MOM really does is just take the screen away — it allows you to filter the event, and probably you're trying to find some common events that are really affecting the business. Still, everything is in the hands of the people who understand the event list, people who can say, "Oh, I know that when this server goes down, business is affected."

What we do with BSM is we provide an integration to these two layers. We include the security and storage that impact the business. And we say instead of filtering the events, why don't you use an object layer. It has more power to all the instrumentation that you've done, because when you instrument, if you have an object environment, you can have configuration, you can have graphical design, you can have command and control.

Instead of writing scripts to filter events, why don't you actually isolate each of the elements supporting an application and use them as objects and start building the relationships among the objects? That way you can say that one server in a business process is probably more important because, say, it hosts the databases.

What does that mean in terms of action, and in terms of the other technology? You start thinking not just availability and up or down, you start thinking in terms of state-of-the-business process. And the good [state-of-the-business process] reflects good service that IT is providing to the business. Obviously, when you're out of a good state, you're in a critical state and the service is deteriorated.

We're finding that the customers are starting to see IT from an end-user and an application point of view because obviously the end user is the element that is impacted first, and they've done a lot of testing and end-user performance and application monitoring. In fact, I would say people will see that the application is the business. Technology is actually getting nearer to the business. BSM is the totality of all the elements of technology — network systems, databases, end user, applications — and how you correlate all of that to determine a good state of the business and relate that to the optimum service that IT delivers to the business.

Your technology would seem to put IT back into the role of a support service, yet it spotlights the jobs of IT managers as crucial to making the business run better. Which way do your customers see this as cutting?

What Managed Objects provides is a dinner table where the IT people can talk to the line-of-business people. We provide enough technology and scalability for the IT people so that they benefit from what we provide. At the same time, we conflate their terminology into business terms in a way that the line-of-business understands it. The line-of-business talks about volume and talks about day and time and calendars. And those concepts can be applied to our formula so the IT people can represent them for the line-of-business.

Managed Objects' CEO tells how business service management software helps IT and business managers see eye to eye.

Lining Technology Up With Business

Managed Objects' CEO tells how business service management software helps IT and business managers see eye to eye.
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ON THE INTERNET, nobody knows you're a dog. Or a rogue robot program stealthily gathering personal information from chat rooms or registering for thousands of free e-mail accounts from which to blast out spam.

One way to stymie such bots is to use a captcha. Short for "completely automatic public Turing test to tell computers and humans apart," a captcha is a program that can generate and grade tests that are easy for humans to solve but very difficult for computers to crack.

Examples include words that have been precisely distorted by computers (see "Shark Attack," at right), images overlaid with other images or audio clips with background noise.

By including a captcha as part of the registration process for a free e-mail account, for instance, it would be relatively easy to establish whether the registrant is a human or a robot program.

"The human visual system and all of our experience in reading makes it possible to read images of text which computer vision systems at their best cannot do reliably," explains Henry Baird, a principal scientist at Palo Alto Research Center Inc. (PARC) in California.

The concept of using programs like captchas to deal with bots and spam on the Internet has been around since 1997. A team of researchers at what was then Digital Equipment Corp. was working on a way to deal with bots that were trying to influence the way certain sites were ranked on the company's AltaVista search engine. Researchers at the company developed and patented a character-recognition test that was used during the AltaVista registration process to weed out automated programs.

In September 2000, Pittsburgh-based Carnegie Mellon University's computer science department started developing similar programs in response to a request from Yahoo Inc.

Like AltaVista, Yahoo was grappling with rogue programs that were invading its chat rooms and illegally marketing products, stealing personal information and spamming users. "The idea was to create a computer program that could distinguish bots from humans. The program would have to serve as a sentry, but it couldn't itself pass the very test it gives," says Manuel Blum, a professor of computer science at Carnegie Mellon.

The result was Gimpy, a captcha containing seven words chosen at random from a dictionary of 859 words and then distorted and overlaid with clutter via software. Passing the test required identifying at least three of the distorted words correctly.

A simpler one-word version of Gimpy, called E-Z Gimpy, is currently used by Yahoo on its Web site to weed out humans from bots during the registration process.

Meanwhile, researchers at the University of Hong Kong are working on a captcha that overlays audio clutter on top of a voice reading out random numbers and letters. PARC is using its optical character recognition (OCR) expertise to write programs that can break captchas.

As a result, PARC is getting a quantitative idea of the circumstances under which OCR fails. Programs capable of overcoming captchas can help build machines that are better able to recognize characters than current machines are.

PARC's captchas, called BaffleText, rely on words that have been mutilated and distorted to the point where even the best computer vision technology can't decipher them, though humans can.

"Imagine a word that has undergone a shark attack. If you do the engineering carefully, then the characters are largely destroyed. However, there is enough left that people just look at it and see the whole word," says Baird.

Ironically, although captchas could play a useful role in dealing with rogue bots and spam, the effort to break them could prove even more valuable in the long term, Baird says.

Captchas present an interesting challenge to the artificial intelligence and computer vision communities, and research that goes into breaking them could benefit these fields enormously, he says.

Since captchas are designed to defeat the best computer vision technology that is available today, any program that is capable of defeating captchas will contribute to better vision systems, says Jitendra Malik, a computer vision specialist at the University of California, Berkeley.

Captchas present researchers with many of the same complexities found in the real world, but in a somewhat more controlled fashion, he says. "For example, we have learned what kind of background noise is more difficult to deal with and what is not," says Malik.

Computer vision systems often try to recognize an object in a cluttered field. That could mean being able to recognize a face in a crowd or a particular piece of furniture in a room, crowded with other pieces of furniture, regardless of lighting, contrast or other conditions, he says.

Malik has written programs to crack both versions of Gimpy, and that has helped him understand how to deal with background noise in an image. He says he hopes that research will yield breakthroughs in computer vision.

A similar goal is driving PARC's research, Baird says. "In a quantitative way, we will know exactly under what circumstances machine vision fails and use that to build better ones," he says.

CAPTCHA CAPABILITY
Creating captchas isn't easy. Find out why.
Security Sweep Reveals Access-Token Violations

An after-hours walk-through uncovers an array of security problems, including an unguarded token with the passnumber clearly written on it. By Vince Tuesday

The Terrorism Alerts over the past few months have dramatically increased management's focus on physical security at our company. My team doesn't directly cover physical security, but our scope does extend to all of information security, not just IT or computer security. This means we're responsible for protecting information that's printed out or in transit, as well as data that resides within our information systems.

This can lead to overlap with the physical security team as well as security gaps, so we work very closely with the other team to try to avoid these problems. They focus on guarding people, buildings and property. They also have stronger ties to law enforcement and the government. So while they deal with things like detecting phone taps and meeting-room bugs and handling the disposal of confidential materials, we cover information labeling and disclosure processes. While they stop social-engineering attackers from talking to our people, we handle social-engineering attacks via the telephone or e-mail.

Making a Sweep

Given the increased awareness about physical security, I decided to have my team carry out one of our regular sweeps of the building. I wanted to measure the access available to malicious intruders or insiders in search of confidential information or intellectual property.

The results would be anonymous (not to mention the current level of exposure and to make sure that we would be included in future awareness-raising activities).

First, we had to agree on procedures that wouldn't put users at risk of disciplinary action, and I needed to find a way to protect my team.

People have a high level of attachment to their workspaces. They see the space as theirs and are fiercely protective of it. Our tests might result in someone blaming us for theft or claiming that we damaged their machines.

So I put a few simple ground rules in place. The first rule was not to touch anything. That meant no lifting keyboards and no opening drawers. However, the staff could take photographs, so there would be no debate about what was discovered. And to make sure we didn't get busted for snooping, we had a physical security team member with us at all times. I knew we wouldn't find everything, but at least we could do a swift, repeatable exercise and track our success at changing attitudes over time.

The good news is that only about 3% of work areas had problems. The bad news is that the problems we discovered were pretty bad. Also, I had expected problems to be concentrated within specific departments. But the security policy violations we found were evenly spread across the company.

Password Problems

Password policy violations were the most common vulnerability. One person was writing passwords on Post-it notes on his wall, crossing out old ones as they expired and adding new ones. I might expect that he would have at least thrown away the old notes once he had filled them with passwords, but six password-filled Post-it notes covered his wall, all focused on a sports theme. We also found a password list that included Jennifer, Jennifer2, Jennifer3 and so on. You'd think that if Jennifer was changing only one number on her password, she wouldn't need to write it down.

In another area, we found several sensitive documents sitting unattended in printer output trays. These included project plans, delivery dates and internal memos. All had been clearly marked "confidential," although I can't be sure if the documents were just incorrectly marked or a true information security risk.

More troubling was the discovery of several two-factor remote access tokens that users had left sitting on their desks. The technology is designed to cope with this eventuality, since you need both the changing code displayed on the token and a passnumber to gain access. I don't think the devices have any resale value, so the risk of theft is low. But at $75 each, they shouldn't be just lying about.

The most frightening thing I found was an access token that had a four-digit passnumber written on the front. I can only assume that was the passnumber for that token. A thief would still need to know the user name to do anything malicious, but our user names follow a standard pattern, and anyone could easily figure out whose desk this was, guess the user name and gain access to our high-security systems with the token. Considering the risk, I decided to break one of our ground rules and confiscate the token.

So how did we do overall? Worse than I expected, but better than I feared. I can't help but keep an eye out for this sort of thing when I visit other companies, and I'm surprised at how many violations I see. And though I'd like to think that security vulnerabilities are more frequent elsewhere, I was shocked at the type and distribution of problems at our company. No group was unaffected. I clearly need to do more awareness work. I suppose it's time to start nagging again.

WHAT DO YOU THINK?

This week's journal is written by a real security manager, "Vince Tuesday," whose name and employer have been disguised for obvious reasons. Contact him at vince.tuesday@hushmail.com, or join the discussion in our forum QuickLink a1590.

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NICHOLAS PETRELEY

Inside Story From The SCO Mailbag

SOMETIMES THE STORY behind a high-profile news story can be pieced together from the correspondence of the major players. I thought I'd take a peek into SCO's mailbag to see who's writing CEO Darl McBride, VP Chris Sontag and attorney David Boies and find out what they're saying about SCO's claims that it owns the legal rights to Unix and maybe even Linux.

Dear Mr. Boies, Mr. McBride and Mr. Sontag: This letter is to let you know that I have signed and returned the NDA. While I appreciate your offer to pay for my travel expenses, there's really no need for me to fly out to your location to view anything. I just "know" there are definitely hundreds, if not thousands, of instances where Linux programmers illegally incorporated SCO intellectual property in their code. I will be glad to report this information at your request. Let me know if and when you need anymore expert testimony.

Sincerely,
Jayson Blair, formerly of The New York Times

Dear Mr. Boies, Mr. McBride and Mr. Sontag: We are concerned about our current investment in Unix licenses. It has come to our attention that SCO does not actually own the copyrights and patents for Unix. Since we paid considerably more money than the normal fees, we are concerned that our investment may be affected by your misrepresentation of said copyrights and patents. Obviously, it is better for all concerned to be discreet on this matter, so we have elected not to pursue legal means of recovering our investment. Instead, we would like to invite all of the management at SCO to a vacation retreat in Hawaii in order to discuss this matter further.

We have arranged all the transportation and will send a black limousine to your headquarters to pick you up on Thursday at 9 a.m. Please have all your corporate officers waiting outside on the sidewalk for this ride, preferably lined up side by side so that we can get a clear view of everyone at once when the limousine arrives.

Sincerely,
Bill Gates

Dear Mr. Boies, Mr. McBride and Mr. Sontag: This is to notify you that we cannot comply with your request to forward your letter to its intended recipient because said recipient is fictional. I did take the liberty of discussing the issues you raised with our corporate lawyers, however. They advise me that it is extremely unlikely that a judge will agree with your charge that the name "Scooby Doo" infringes on the SCO trademark and has damaged your business as a result. While you are correct that the two names share three consecutive letters, we are confident that customers are able to distinguish between an operating system and a cartoon dog with a speech impediment.

It is quite true that Velma is the kind of character that would work with an advanced operating system, and that might mean something if the characters were real. Regardless, we are not in a position to dispute what your experts under NDA saw in your "source code" since we are unfamiliar with the term source code. But we are quite certain that our fictional characters Velma and Shaggy did not misappropriate the words jinkies or zoinks from anything owned or created by SCO. Final-
Management

Quote of the Week

Achievement is a blend of intelligence, motivation and personality, and that blend makes the difference between A and B players rather than talent per se.

~ Vineeta Vijayaraghavan, consultant, Katzenbach Partners LLC

Dashboard Democracy

desktop business-intelligence displays used to provide financial data to executives. Now they're finding a new home in the cubicle — where real work gets done — says Deb Masdea (right), director of business knowledge services at The Scotts Co. Page 40

Opinion

A Reality Check
On Going Offshore

Columnist Bart Perkins provides a checklist of issues to consider — from U.S. privacy and security laws to the employee backlash — before taking the offshore IT plunge. Page 42

Knowledge Center

E-Business

NOBODY LIKES BEING RIPPED OFF. But for online retailers, the pain of being ripped off by unethical consumers, identity thieves and bogus-card gangs has been magnified by what they consider to be the not-my-problem attitude of credit card issuers and card associations like Visa and MasterCard.

Tom Mahoney, a network administrator at Franklin & Marshall College in Lancaster, Pa., recalls vividly the shock he and his wife felt shortly after they launched their own mom-and-pop e-business in 1997 and discovered not only the threat of fraud but also the double whammy from the credit card companies.

“We thought from the beginning something was fishy — getting orders for herbs and personal care products with U.S. credit cards, all ... for shipping to Yugoslavia,” says Mahoney. He recalls that his card processor had assured him that if he had an authorization number for the transaction, then “all was well.” But then the chargebacks started coming in, and banks refused to honor the transactions and added penalty fees for Mahoney's business.

Mahoney says he called some of the banks and was shocked to discover that many of the credit card numbers in question had never even been issued to cardholders, yet they were granted authorization numbers. “That’s when I learned that something was wrong with the system,” he says.

Today, credit card fraud is pegged as a $160 million annual problem for just the top 25 online retailers, according to Gartner Inc. in Stamford, Conn. But there are some glimmers of hope for improvement.

One encouraging sign is that Visa International Inc. and MasterCard International Inc. recently started full-scale marketing of credit card systems that require online purchasers to supply additional passwords or security codes (Verify by Visa and MasterCard’s similar SecureCode). It’s an attempt to provide an online equivalent of the in-store signature. Even more important, from the retailers’ perspective, merchants that join the programs will finally be freed from most of the liability and onerous charge-

By Alan R. Earls

The Visa and MasterCard programs won't solve all the problems. They are just one tool in the arsenal.

Web retailers are teaming up to fight online credit card fraud and take back the e-neighborhood.

By Alan R. Earls
Possible Signs of Fraud

- **Country of origin.** Orders from Romania, Macedonia, Belarus, Pakistan, Russia, Lithuania, Egypt, Nigeria, Colombia, Malaysia and Indonesia have a very high incidence of fraud and often have unverifiable addresses.

- **Untraceable e-mail address.** In many fraudulent orders, the customer's e-mail address is provided by a free e-mail service, which is relatively untraceable.

- **Express shipping.** Most fraudulent orders specify overnight or one-day shipping.

- **Shipping address differs from billing address.** If you are selling valuable items, it’s a good policy to ship only to the billing address of the credit card holder.

- **Suspicious billing address.** If the billing address is something generic like 123 Main St., the order could be fraudulent. Use Internet mapping tools to see if the address can be verified.

- **Request to leave at door.** Someone placing a very valuable order who specifies that the package is to be left at the door could be using an unwitting person's house as a drop-off point. You should require a signature upon delivery.

**Merchant Fraud Squad**

This secretive group of merchants, which has hundreds of members, shares tips and tricks for combating online fraud. It recently changed its name to the Merchant Risk Council.

Founding members:
- **American Express Co.**
- **Barnesandnoble.com Inc.**
- **ClearCommerce Corp.**
- **Expedia Inc.**
- **First Data Corp.**
- **Starwood Hotels & Resorts Worldwide Inc.**
- **Quint Inc.**

**Antifraud Resources**

The following Web sites can provide information and help in preventing online card fraud.
- [www.cardcops.com](http://www.cardcops.com)
- [www.computercrimes.](http://www.computercrimes.com)
- [www.cardwatch.gov](http://www.cardwatch.gov)
- [www.earlywarning.org.uk](http://www.earlywarning.org.uk)
- [www.visa.com](http://www.visa.com)
- [www.mastercard.com](http://www.mastercard.com)
- [www.ach.com](http://www.ach.com)
- [www.cardcops.com](http://www.cardcops.com)

**How One Merchant Battles Fraud**

Even small and midsize online merchants that lack the clout of big businesses can do plenty to defend themselves from credit card fraud. A case in point is Computerized Horizons, a small software company in Worcester, Mass. R. Scott Perry, the company's technology specialist, says that some bad experiences with card fraud a few years ago — compounded by chargebacks and chronic inaction on fraud from card companies — compelled his organization to act.

"Since we deal primarily with businesses, all of whom have their own domain name, one of our main tools to help detect fraud is to see if the billing address for the credit card matches the address that is listed in the Whois record for their domain or is nearby," says Perry. (Whois is a domain directory at [www.networksolutions.com](http://www.networksolutions.com).) Like many other methods, this is inexact and subjective. Mismatches just raise questions about the buyer's legitimacy and, taken with other indicators, could lead Computerized Horizons to turn down the sale.

Another tool calculates the distance between the area covered by a ZIP code and the area usually associated with the customer's telephone numbers. Again, mismatches raise questions about the legitimacy of the order. Even the IP address from which an order is placed can help hint at fraud.

"At the very least, this will show the country that the IP address is registered to the customer's telephone numbers. Again, mismatches raise questions about the legitimacy of the order. Even the IP address from which an order is placed can help hint at fraud."

"As a result, they've been flocking to third-party services and consortia.

For his part, Mahoney launched an organization called Merchant 911, which provides its members with a confidential forum to share fraud-prevention methods and air gripes about banks and credit card companies. Mahoney also makes available a selection of databases and anti-fraud tools.

Meanwhile, on the West Coast, IT veteran Dan Clements has set up an organization called CardCops.com that provides a forum for merchants and consumers to share information about what he calls "compromised" credit cards. Shoppers who think their card may have been stolen or misused can e-mail him at NeighborNetWatch@CardCops.com.

But Clements, CEO of the Malibu, Calif.-based organization, says some of his best information comes from "the underground"— IT professionals at merchant companies who are privy to information about cards that may have been hacked by thieves, a problem that merchants are often reluctant to report.

Clements says his staff of 12 also hunts out bogus or suspect cards by doing targeted Google searches and visiting chat rooms where, he says, cards are often first tested by crooks.

But perhaps the most significant fraud-fighting effort is the Merchant Risk Council, which until recently was known as the Merchant Fraud Squad. "We are organized much like a neighborhood watch," says Cathy Black, a board member of the nonprofit group and the director of fraud prevention at American Express Co. in New York.

The Merchant Risk Council has scores of members, including many large corporations. It’s secretive about its work and methods because, as Black explains, whenever a story comes out about a fraud-fighting strategy, the "bad guys" learn how to bypass their methods. However, she says the focus is on sharing emerging trends and information in a secure environment.

For example, at the group's annual conference in March — which was closed to the press — there were presentations on "global trends in cybercrime," "predictive models for fraud" and "emerging fraud schemes," according to the group's Web site.

The group is also powerful enough to lobby vendors to change their practices. For instance, Black says the Merchant Risk Council persuaded some delivery companies to watch for suspicious activity such as unusual shipping patterns.

But, as Black notes wryly, fraud isn't going away, no matter what merchants and card companies do. "There is no magic bullet — all the fraud solutions have a shelf life — we will always have to continue to migrate toward new solutions," she says.

Earls is a freelance writer in Franklin, Mass.
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Nurture the B Team

IT stars get all the glory, but your supporting actors get the job done.

It's always about the stars, the A players on the fast track to bonuses, promotions and glory. IT leaders will do nearly anything to get them - and keep them. But what about the rest of us? In this month's Harvard Business Review, Vineeta Vijayaraghavan and Thomas J. DeLong posit that a company's long-term performance and even survival really depend much more on the B players, those steady, capable performers outside the spotlight. Vijayaraghavan, a consultant at Katzenbach Partners LLC, an organizational strategy firm in New York, talked with Kathleen Melymuka about the vital contributions of these "best supporting actors" and how to make sure you're not taking them for granted.

Who are the B players? Those that, in a rough ranking, are neither fast-track - in the top 10% - nor struggling in the bottom 10%. Intuitively, most managers can tell you who they are.

You say being a B is more about temperament than talent. Explain? Oliver Wendell Holmes said that F.D.R. had a second-class mind and a first-class temperament. Achievement is a blend of intelligence, motivation and personality, and that blend makes the difference between A and B players rather than talent per se.

Tell me about the B players who are "recovered A" players. At Microsoft, one of the top 20 performers was an A player who burned out and went rock climbing. He later came back, but to a smaller group - a think tank for new-product development. We call him a "recovered A" because he comes from that world. He maintained calling cards from that world. He knows how it works, and he can move in and out of that world.

Other B players are "truth tellers." Can you give me an example? These are people who have a zeal for the truth. They're not necessarily "company types," which A players tend to be. They're willing to tell the truth even at a cost to their standing in the company. One was a manager in charge of building a technology infrastructure for his trading division. He discovered that someone with status had paid more than the going price for a system. No one had dared raise a question, but he wasn't cowed and spoke up and saved the company millions of dollars.

Some B players are "go-to" people. What does that mean? Those aren't functional experts, but they have an extraordinary feel for the processes and norms of the company. They can make connections and go across departments and divisions to get things done. They're familiar with who really has the power, even if it's not the person in the formal role.

Aren't there B players who are really just plain mediocre performers? Yes, definitely. Those we categorized as middling. Some B players are "truth tellers." Can you give me an example? These are people who have a zeal for the truth. They're not necessarily "company types," which A players tend to be. They're willing to tell the truth even at a cost to their standing in the company. One was a manager in charge of building a technology infrastructure for his trading division. He discovered that someone with status had paid more than the going price for a system. No one had dared raise a question, but he wasn't cowed and spoke up and saved the company millions of dollars.

Managing B Players

Advice from Vineeta Vijayaraghavan:

Pick the right manager. "Leaders tend to be A players, so they're not always the best managers for B players. They have to learn to accept differences and manage B players differently. If they're not the best mentors in the organization for the B players, find others."

Give them your time. "A and C players tend to be the squeaky axles. B players just get the job done. Make sure you talk to all your direct reports, including those who don't initiate contact."

Nurture their careers. "Recognize their contributions, and give them choices. Have conversations with them about career paths. Consider what you can do to keep good performers who don't want to go through the traditional route."

What else do B players do for the company? They're less affected by shake-ups because they're less likely to be tapped for promotions or be fired. They provide continuity and pass on knowledge. They provide ballast in bad economic times because they stick around. They're not just there for big bonuses. B players in an IT department are critical for mentoring new people and assimilating them into the corporate structure. They provide cultural support and informal management while management is in transition.

Don't B players get tired of holding things together with so little credit? Yes, absolutely. They will only stay for so long if not recognized. Managing them takes more time than managers give them, but still a tenth of the time it takes to manage stars. We're urging managers to spend that time. It's a small investment compared to time they spend with A players.

Melymuka is a Computerworld contributing writer. Contact her at kmelymuka@yahoo.com.
See old apps combine with new apps.
See customers connect with partners.
See today’s stuff click with tomorrow’s.

Can you see it?

WebSphere Business Integration is far and away the leading integration software for the on demand era. Open and flexible, WebSphere lets you model, integrate and manage all of your business processes. WebSphere delivers an infrastructure that quickly responds to change, meeting business demands, on demand. For an Integration InfoKit and case studies, visit ibm.com/websphere/seedit

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HE EXECUTIVE INFORMATION SYSTEMS (EIS) of the 1980s stayed in the executive suite and provided fancy pie charts of financial data. But now these business-intelligence tools have found a new home in the cubicles.

They've also found some new names: "dashboards and scorecards," says John Hagerty, an analyst at AMR Research Inc. in Boston. "We are now seeing them all over the enterprise, and for a variety of reasons." Hagerty says more than half of the 135 companies he recently surveyed are implementing dashboards, which are also spreading into various nonfinancial departments (see chart, next page).

Dashboards aren't just for financial data anymore. "At Southwest Airlines, they call them 'cockpits,' and they're specialized so that the guy in charge of putting peanuts on airplanes gets a different view than the guy who's in charge of purchasing jet fuel," says John Kopcke, chief technology officer at software vendor Hyperion Solutions Corp.

The Bottom Line
The payoff is that delivering dashboard data to frontline workers puts business intelligence in the hands of people who can exploit it to make money-saving decisions on a daily basis.

Motorola Inc., for example, deployed business-intelligence software from Informatica Corp. in Redwood City, Calif., last year to about 200 desktops in various purchasing offices. Falgun Patel, senior manager for sourcing systems at Schaumburg, Ill.-based Motorola, says his dashboard gives him unprecedented access to purchasing information.

"We got the system up and running in mid-2002," says Patel. "Prior to that, we had to pull information from a variety of spreadsheets and custom databases from locations all over the globe." In fact, this is still the case, but now Informatica's software does the pulling, and sourcing officers like Patel can get instant access to sophisticated metrics.

"It used to take 20 days for one of our indirect purchasing officers to collect global stats," says Chet

Dashboard Democracy
Desktop business-intelligence displays are moving from the executive suite to the cubicles, where the ROI is even better. By Mark Leon
Phillips, IT director for business intelligence at Motorola. "Now it takes minutes."

Patel says the result is smarter, faster decisions. "On my dashboard, I can immediately see our global spend with a particular supplier," he explains. "I can slice the data in a number of ways — various charts, historical records, purchases by departments, etc. This gives me exactly what I need to negotiate a better deal with the supplier."

He says the dashboard also allows him to be more proactive. "By combining the purchasing analytics on my desktop with current market conditions, I can determine whether it is better to negotiate for a commodity or go ahead and lock in a supply," Patel says.

The result is a fabulous return on investment. "We estimate that this system saved us about $15 million a month in 2002," says Phillips.

Reality Wins

One reason for the democratization of business intelligence is that reality finally caught up with perception. "So often it is the high-level executive who is seduced by the 'Wow! Cool!' appeal of an EIS," says Deb Masdea, director of business knowledge services at The Scotts Co.

But when new dashboards started popping up on desktops throughout the company, that data monopoly vanished. "Suddenly, that manager's boss, and some of his employees, had instant access to all those reports," she says.

It was a tough sell, and it took time to get those managers to release their grip on the information, but Masdea says two things made the transition successful. "We had to show managers how they have control over their data," she says. "By giving up control, they also reduced their workload because they no longer had to spend time managing all that data," she says.

The other strategy was to sell the system from the business rather than technical side of the house. "We had analysts — superusers from the manager's own business units — do the training," says Masdea. "These were not techie types, so they could talk to the managers in their own language and clearly show them the benefits of the system."

At real estate firm CB Richard Ellis, senior project manager Sue Willess used similar approaches to make sure a new PeopleSoft scorecard system didn't fail by the wayside. Plus, she shrewdly started deployment with office managers who she knew would be most resistant to change. "Our experience is that it is easy for people to criticize the thing they know the least about," says Willess. "But these potential detractors will also be your biggest supporters if you can get them on board early."

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The Daily Snapshot

One place where dashboards are making inroads is in sales departments. At Honeywell Inc.'s Specialty Materials Division in Morristown, N.J., dashboards give everyone in sales a clear view into business performance — every day.

In September, the division finished installing 100 dashboards from Cognos Corp. throughout the sales department. "We wanted everyone to see the same information at the same time," says Jane Booth, director of data and knowledge management at the division.

Access is truly democratic. "Sales reps can see their own sales stats, but they can also see how the other salespeople are doing," she says. "And managers have access, too."

Booth says she likes the results. "We moved quickly from a monthly or quarterly view to a daily snapshot of what is going on. A big benefit for us is that now we have a common definition and view of all this information."

In a Glass House

Dashboards can have a big effect on communications — and company politics — in the organization.

Booz Allen Hamilton Inc. in McLean, Va., is rolling out Hyperion's performance scorecard to its 1,200-person global operations team. Sophisticated analytics will allow the human resources department, for example, to "call up stats on turnover ... correlate these with training and possibly deduce that more departmental training is needed," says John Monczewski, manager of the consulting firm's balanced scorecard project.

And in the spirit of democratization, Monczewski says employees will be able to look at scorecards for all departments in the team. "I would say that 90% of the information is available to everyone," he says.

"We want people to see as much as possible."

"Why? It is not enough to optimize your own performance," Monczewski says. "You need to see if this comes at the expense of someone else on the team."

We don't want people to get locked into the notion that this is just a dashboard on personal metrics."

At CB Richard Ellis, a giant commercial real estate company in Los Angeles, desktop scorecards from PeopleSoft Inc. are used by 64 U.S. office managers to determine which brokers deserve to get perks or additional resources, based on the revenue they bring in.

Previously, that process lacked precision, says Sue Willess, senior project manager. "Now the office manager can quickly see revenues, expenses and salaries for each brokerage team," says Willess, and then determine whether a broker's request for, say, an additional office assistant is really justified.

In addition, managers can see the numbers for every other office. This kind of wide-open scorecard probably wouldn't work in some environments, but it's perfect for sales, where everyone thrives on competition, Willess says, adding, "Our office managers like to say now that 'you can run, but you can't hide.'"

There is a potential downside to this plethora of information: AMR's Hagerty calls it "metric madness."

"Dashboards and scorecards are about measuring," says Hagerty. "If measures are too broad and diverse, then dashboards can be a distraction. So, not surprisingly, the democratization of business intelligence comes with responsibility. It requires management discipline," Hagerty says, "so you can focus on only those measures that really matter to the users."

Leon is a freelance writer in San Francisco.

OUTSIDE LOOKING IN

Dashboards aren't just for employees inside the company. A Web-based dashboard can also be a tool for providing valuable data to customers in the supply chain. QuickLink 38769 www.computerworld.com
A Reality Check on Going Offshore

YOU'VE HEARD THE HYPE about how going offshore can save you big bucks on IT expenses. Your CFO thinks it's a great idea. You've completed a baseline of your IT portfolio. Now you're ready to develop your sourcing strategy and determine which work to outsource and whether you want any of it done offshore. In addition to the concerns that go along with outsourcing any function, some special considerations need to be addressed as part of the offshore decision:

- **Intellectual property.** Determine to what degree any intellectual property you either take offshore or develop offshore will be protected in the courts. Some countries don't offer the same levels of legal protection found in the U.S. and Western Europe.
- **Privacy and security.** Laws such as the Health Insurance Portability and Accountability Act and California's Cyber-Security Act mandate the way data must be handled and the actions that must be undertaken in the event that data is compromised. European Union law regulates where data must be physically stored and what data can be transmitted across country borders. Lower-cost countries follow U.S. and European law to differing degrees.
- **Geopolitical risk.** War or terrorism could hurt the ability of your offshore provider to operate. While 9/11 proved that the U.S. isn't immune to terrorism, each part of the world has its own risks. The U.S. Department of State maintains a Web site (http://travel.state.gov) describing the potential risk of terrorist activities by country.
- **IT infrastructure.** Lower-cost countries don't always have the same capabilities we take for granted in highly industrialized countries. When I was CIO at Dole Food, we had to remove several PCs from remote Philippine farms because the locals stole the telephone wires to sell the copper.
- **Communication.** Both the sales staff and the technical staff at the outsourcing vendor need to have excellent English skills. You don't want to have to use an interpreter whenever a problem arises. Moreover, if your provider is in a different time zone, find out if they'll work when you work (even if it's the middle of their night). If your workdays overlap for only a few hours, communication will be difficult. And your crisis will never occur during the overlap!
- **Culture.** Cultural differences need to be understood and leveraged. It's easy to inadvertently insult offshore partners if you aren't careful. Greetings, forms of address, gestures, value systems and punctuality vary widely around the globe.

For example, Americans tend to glorify the hero and question authority. But, according to recent diversity studies, some Asians do what they're told even when they disagree with the approach. Study the local customs carefully before venturing abroad.

- **Political backlash.** Many of your employees are unhappy with the number of jobs going offshore. Be prepared to address negative publicity and, in some cases, staff sabotage.

Going offshore presents unique challenges. Addressing them directly as part of your initial offshore decision will mitigate your risk and increase your chances of success.

BART PERKINS

**BRIEFS**

**Documentum Issued Records Patent**

Documentum Inc. has been issued a U.S. patent for its records management technology, which automates and streamlines the classification of electronic records. The technology is a key component of the Pleasanton, Calif.-based company's Records Management Edition and Records Services for Email. The system handles many requirements of the Securities and Exchange Commission's Rules 17a-3 and 17a-4, the Health Insurance Portability and Accountability Act and the Sarbanes-Oxley Act.

**Mpower Hires Exec**

Russell A. Shipley started last week as the new-technology officer at Mpower Communications Corp. in Pittsfield, N.Y., a provider of broadband Internet access and telephone services to business customers. He will work on improving Mpower's integrated data and voice product and the company's facilities-based network. Shipley held senior positions at Global Crossing Ltd. and Frontier Communications Corp., where he led the planning, engineering and construction of the nationwide fiber-optic network shared by Frontier and Qwest Communications International Inc.

**BPO Market Will Grow, Gartner Says**

The global business-process outsourcing (BPO) market is expected to grow 10.5% to $122 billion in 2003, up from $110 billion in 2002, according to Gartner Inc. Large companies will expand outsourcing to entire lines of online products and services, such as payroll and transaction processing. North America is predicted to represent 57% of the total BPO market, or $68 billion. Growth is estimated at 10.9%, or $27 billion, in Western Europe and at 7.8%, or $8.7 billion, in the Asia-Pacific region.

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**BEFORE YOU GO . . .**

Read Bart Perkins' previous column on preparing for the offshore experience.

QuickLink 37545

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Find out when Computerworld publishes the results from our 17th Annual Salary Survey of IT Professionals!

How much are other IT professionals with your experience and credentials earning? With help from you and your IT colleagues across the country, Computerworld will answer those questions with results from our 17th Annual Salary Survey.

Please take our survey now and enter a drawing to win a $499 gift certificate from Amazon.com. **Our survey period closes on Thursday, July 3 at 5:00 p.m.**

Survey results and feature stories that offer practical career advice will be published in the October 27, 2003, issue of Computerworld. The issue will offer detailed information on average salaries and bonuses, by title, industry and region. You'll be able to compare your organization's compensation plans with those of other organizations and find the hottest areas of the country for IT pay.

To take the survey, and qualify for the drawing, go to: [computerworld.com/ss2003](http://computerworld.com/ss2003)
LAN ADMINISTRATOR: Duties include: Applying advanced knowledge of computer systems, networks, and databases to perform computer system backups and restores. Monitor and respond to complex technical problems, and troubleshoot systems that utilize a variety of software testing tools and techniques. Develop and implement system documentation, network management, and service policies as well as maintain, manage data center operations, and support computer systems.

GIS DATA ADMINISTRATOR: Duties include: knowledge of a variety of geographic information systems, and the associated data management systems and applications. Familiarity with common GIS software, and a background in geographic data management, analysis, and visualization. Experience with various GIS applications and data management systems, and the ability to support and maintain these systems.

JAVA Design & Architecture Engineers and Analysts: Duties include: Design, implement, and maintain Java-based applications and systems. Develop and maintain Java-based software and systems. Participate in the design and development of Java-based applications and systems.

Database Administrator: Duties include: Manage, maintain, and perform routine maintenance on the Oracle/Sybase DBA's databases. Provide technical support and assistance to users. Participate in the design and development of database management systems.

DATA ADMINISTRATOR: Duties include: Knowledge of computer systems and networks, and the ability to troubleshoot and resolve complex technical problems. Experience with various computer systems and network management applications, and the ability to support and maintain these systems.

Web Developer: Duties include: Design and develop web applications and systems. Participate in the design and development of web applications and systems. Develop and maintain Java-based software and systems. Participate in the design and development of Java-based applications and systems.
Web Portal Employee Opportunity: M/T/F/TH/NT/NA/Others

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Siemens: Computer Science, an associate’s degree or its foreign equiv. in Comp. Sci. May be used on a related field. 2 years exp. in the job offered or as a related occupation.

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Computerworld + June 16, 2003
Oracle Users See Benefits in Takeover

PeopleSoft and J.D. Edwards users seem to be widely opposed to Oracle's proposed buyout bid, but the unsolicited offer is getting a better reception from IT managers who use Oracle's applications.

Several users said last week that they see potential benefits from having some of PeopleSoft's technology embedded in Oracle's E-Business Suite IIi. Applications for example, Oracle users can gain useful functionality from PeopleSoft's human resources and payroll software, said Arthur Hunt, president of the Independent Oracle Applications Users Group (OAUG) in Atlanta. "I'm very upbeat about it," Hunt said, who is also operations manager at Yale University.

In New Haven, Conn., Melanie Bock, a San Francisco-based Oracle consultant and a past OAUG president, said she also thinks an acquisition of PeopleSoft would be good for Oracle users in the long run. A combination of the two companies would mean a broader base of customers, which would widen user networking opportunities and potentially affect a larger number of skilled consultants and staffers, Bock said.

However, she added that Oracle initially would likely have to purge and merge operations, which could mean a loss of resources for its support and development teams. "Short term, I would see a negative impact for everyone," Bock said.

One Oracle user who doesn't like the proposed takeover is Frank Milano, CIO at Terncon Inc., an engineering consulting firm in Lenox, Kan. Milano said there's no synergy between PeopleSoft and Oracle and that he uses the buyout offer as an attempt by Oracle to defend itself against PeopleSoft, which would become the second-largest business applications vendor if it buys J.D. Edwards.

"Five billion dollars is a lot of money to eliminate a competitor," Milano said. He added that a takeover could also drain Oracle's software engineering resources, since it would have to invest in development of two separate product lines.

Oracle CEO Larry Ellison said our offer is designed to disrupt PeopleSoft's strong momentum in the market. I'm not sure why [software sales dropping 39%] is strong momentum.

LARRY ELLISON, CEO, ORACLE CORP.
A Virus Checklist

BUGBEAR. KLEZ. SOBIG — that’s the one that appears to come from Microsoft.com. This summer, the virus hits just keep coming. It’s as if, for the past month, the virus world has been softening us up for Microsoft’s announcement last week that it’s getting into the antivirus business.

Will Microsoft’s arrival really help? Probably not. Antivirus subscriptions make for a steady revenue stream, and Microsoft is big on steady revenue streams these days. But the company isn’t likely to add much new in the line of virus-protection technology.

Besides, except for software security holes, the real virus problem today isn’t about technology. It’s about people.

People who get sucked in by interesting e-mail subject lines. People who click to open mystery attachments. People who visit Web sites or download files that they shouldn’t. People who work their way around firewalls and virus shields. And yes, people who fail to keep firewalls and virus shields maintained.

Virus writers use “social engineering” — clever psychological tricks — to help their payloads get through. They leverage human curiosity, vanity, fear and foolishness to defeat even the best antivirus technology.

You’ve got the technology you need. Now, in this long, hot summer of virus attacks, it’s the perfect time to make sure you have a handle on the people part of the problem, too.

Start by making sure antivirus software is actually running on all your PCs. You probably can’t afford a machine-by-machine sweep right now. But make sure every time a support tech touches a PC, that tech checks its antivirus logs, confirms that virus scans and definition downloads are running on schedule, and verifies that settings are correct.

Remember, users are clever. If antivirus software gets in the way, they’ll turn it off or work around it — and then tell they’re co-workers how they did it. So if you spot a problem machine with scans turned off or settings changed, there’s a good chance that nearby PCs will be that way too.

Keep track of your biggest problem users — both the clever ones who change settings and the dumb ones who open every attachment. Talk with them. Explain the problem. Ask why they break the rules. They may show you legitimate issues that you can help with. You may persuade them to play it safer. In any case, you’ll want to recheck their PCs often.

Leverage news reports about virus outbreaks. When you see one, send a short message to your users — say, six or eight lines — telling them that “CNN is reporting” or “the local newspaper has a story” about the virus. Remind them once again to be careful about e-mail attachments, downloaded files and unfamiliar Web sites. Give them a few details, but be sure to keep it brief. It’s really just reinforcement, not a full explanation, and users have short attention spans.

Go hunting for the ways users find to circumvent your antivirus systems. Home computers that connect to company systems, Web mail, unauthorized modems and wireless hubs, and nonstandard Internet applications are the usual culprits. But don’t limit yourself to that short list. Remember, users are creative — and they may think what they’re doing is safe because you’ve never told them not to do it.

Finally, do a little social engineering of your own. Practice looking alarmed in a mirror, then trot that expression out when you discover dangerous user habits. Express concern about the work they’ll lose, not just the safety of your systems. Say “We need to be careful,” not just “Don’t ever do that!” Tell them their ways around the firewall are clever, but very dangerous. Flatter them, cajole them, guilt them — but convince them.

If that sounds a little silly, well, maybe it is. But it’s no sillier than waiting for Microsoft to save you from Sobig, Bugbear and Klez.
Got Outsourcing Questions?

Computerworld's New IT Executive Summit Series Has the Answers

If you're an IT executive in an end-user organization, apply to attend Computerworld's upcoming complimentary half-day summit on IT Outsourcing: The Offshore Alternative.

Robust global communication technologies and state-of-the-art security tools have made IT outsourcing an increasingly viable option to achieve ROI. Part of Computerworld's new IT Executive Summit Series, this invitation-only, 4-hour summit will explore how companies are realizing tangible benefits from outsourcing IT application development, integration and management.

Seating is limited, so apply today!

Los Angeles, CA
Thursday, June 26, 2003, 8:00am to Noon
Hyatt Regency

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<td>9:00am to 9:30am</td>
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<td>Evaluating Your IT Sourcing Options</td>
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<td>Bart Perkins, Managing Partner, Leverage Partners (an IT consultancy)</td>
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<td>9:30am to 10:00am</td>
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<td>Leadership Strategies in Offshore Outsourcing</td>
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<td>▪ Greg Schuerman, Vice President and CTO, Mercury Insurance Group</td>
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For information, call Chris Leger at 888-299-0155 or to register online, visit www.itexecutivesummit.com/outsourcing
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