IS managers can take their cue from The Money Store’s Bob Schillato (at left): Emphasize software quality. Managing, page 75

Users caught in Java cross fire

> Although they want a cross-platform standard, many worry about supporting their Windows PCs

By Sharon Gaudin and Laura DiDio

The escalating cross fire between Microsoft Corp. and Sun Microsystems, Inc. over the future of Java has customers pinned down. While their hearts may be with Sun and its efforts to standardize the popular programming language, users interviewed last week acknowledged that, in the end, they may have to support two separate environments.

Many users want a platform-independent application development language that can take them across the Internet and back into their legacy applications. But they also need to work with their huge Windows installed base, and Microsoft appears bent on offering a different route to cross-platform accessibility.

WORLDS APART

The breach-of-contract lawsuit that Sun filed against Microsoft last week only highlights the growing distance between the two worlds (see story, page 16) at a time when users are pressing for unity.

Several users, including Mary Lasky, supervisor of information over seven months.

Software could spoof-proof domain names

By Sharon Machlis

IN AN EFFORT to cut down on spoofing and spam attacks, a group that oversees part of the Internet infrastructure soon will release free software designed to make domain names more tamper-resistant.

DNSsafe, donated to the Internet Software Consortium by cryptography company RSA Data Security, Inc., uses RSA’s digital signature technology to verify Internet domain names. The idea is to prevent hackers from messing with databases that match names, such as bank.com, with specific IP addresses. The consortium hopes DNSsafe will be deployed across much of the Internet within a year.

Postage due for E-mail

By Barb Cole-Gomolski

Phil Usher recently sent out an unpopular memo informing business units that they would soon pay extra depending on how much E-mail they kept in private mail files.

But since the memo went out, results have been promising.

"We’ve seen a reduction of more than 40,000M bytes of old electronic mail," said Usher, senior vice president of messaging at Countrywide Home Loans, Inc. in Calabasas, Calif. That’s enough mail to fill a server.

Usher isn’t alone. Messaging E-mail, page 112

Russian coders shine, fill IS talent gaps

The former Soviet Union is overflowing with underemployed software engineers, not to mention assorted rocket scientists and Ph.Ds. That’s good news for labor-hungry U.S. firms, which can snap up these superprogrammers.

Many Russian programmers have advanced degrees, mathematical prowess and a resourcefulness that comes from working with primitive hardware. And some are eager to flee a culture of anti-Semitism and corruption.

But be warned: There are some management challenges, including language barriers and culture shock.

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Lotus says Domino and Notes 5.0 won’t ship until mid-1998. Page 2

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Handheld hell
Point-of-sale proliferation adds support burden to IS departments. Page 12

ALPHA BET MAKES USERS FRET
C/0 survey shows Digital customers worried about Intel chip deal. Page 32

Leonid Z. Batkhan launched a start-up in the former Soviet Union but decided to come to the U.S. rather than pay bribes.
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Informix rallies users with database revamp

By Craig Stedman

FOR SEVEN months of damaging financial disclosures and management shake-ups, Informix Software, Inc. is trying to put the focus back on its database technology.

Sources said Informix is lining up users to beta-test an upgrade of its flagship OnLine Dynamic Server that is due for release early next year.

Despite its status as Informix’s biggest seller, OnLine Dynamic Server earlier this year was relegated to second fiddle behind the new object-enabled Universal Server—a marketing faux pas that took much of the heat for the company’s ongoing financial meltdown.

By year’s end, Informix also is expected to ship a version of its analysis-oriented OnLine XPS parallel database with new support for Windows NT. And the

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Industry sources said Informix is looking at packaging each of its databases as a core engine with a menu of optional add-on products. Informix officials wouldn’t comment directly but confirmed that the company’s product lineup will become less fragmented than it is now.

Meanwhile, the upcoming OnLine Dynamic Server 7.3 upgrade is expected to include features aimed at making it easier to learn for developers and database administrators who are familiar with market kingpin Oracle Corp.’s software.

“The flexibility it’s adding is something that we’ve been looking for from Informix for a long time,” said Janice Richardson, manager of the systems and operations division of the city of Aurora, Colo. “It’s not as hard to find Oracle developers as it is to find people who know Informix.”

INFORMIX’S DATABASE ROSTER

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Menlo Park, Calif., company is putting the finishing touches on a product repackaging aimed at reducing the distinctions between its different databases and simplifying purchases for users.

Taking some confusion out of the buying process would be a good way for Informix to start repairing its image with users, said Mike Baxter, assistant division chief of database management at the Maryland State Highway Department’s planning office in Baltimore.

MIND-BOGGLING

“I’ve been a customer of theirs for years, and even I don’t understand [the packaging] at times,” Baxter said. “Everything comes in pieces, and there are too many of them floating around.” Baxter’s office uses OnLine Dynamic Server to run traffic monitoring and highway management applications.

A successful technology rollout would send a needed signal to users and application vendors that Informix “is still out there,” said Richardson, who is a member of the International Informix Users Group’s leadership council.

Most of the publicity Informix has had since April has been financial in nature and bleak: The company reported a $250.6 million loss for the first half of this year, and it acknowledged last month that nearly a third of last year’s software sales might be wiped away as part of a financial results reinstatement that will reach back into 1995 [CW, Sept. 25].

Informix needs to show users that it isn’t “sitting around and wringing its hands,” said Carl Oleffon, an analyst at International Data Corp. in Framingham, Mass. “They’ve got to get people looking at their technology again.”

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End the free ride

It's time for Microsoft to start charging for its Internet Explorer. The move is inevitable, so why not do it now and stem the growing alarm over Microsoft's march to Internet dominance? Six states are investigating Microsoft for antitrust violations. Consumer advocate Ralph Nader last week announced with much fanfare a conference to bash Microsoft's business practices. Sun is suing.

The concern is warranted. Microsoft's efforts to use its wealth and market power to buy its way into browser supremacy are working. A Computerworld survey late last month showed that Microsoft stands to overtake Netscape in corporate market share sometime next year. Internet Explorer 4.0 is so intertwined with the Windows operating system that rival Netscape can't hope to keep up. Feature for feature, Netscape is chasing Microsoft and charging for it.

Netscape can't possibly win this battle. The deep in the company's stock has depleted its capital resources, and it faces considerable competition in the server market. Its recently announced initiative to drive 100 million copies of Navigator to market can't possibly work and smacks of desperation. Netscape is being driven further into a niche.

If Microsoft succeeds in dominating both the desktop and the window to the Internet, the government will have no choice but to intercede. And its case will be so good that even the most concerned about the reaction of Notes users to the 5.0 client, which abandons the familiar Notes tiles and presents information to users in a way that closely resembles a Web page.

"[Notes 5.0] will be a big leap," said Michael McGhee, director of administrative computing at the University of Las Vegas, which has a campuswide license for Notes. McGhee said he doesn't mind the delay because he expects to use the Notes 4.6 upgrade and "doesn't want to throw too much at end users at once."

DOING IT RIGHT

Most customers here said Lotus is moving in the right direction by making its client software easier to use and better integrated with the Internet Explorer browser. "But that new user interface will be a big change, and some end users are very resistant to change," said Alexander Lahoski, a Notes developer at Pratt & Whitney in East Hartford, Conn.

But the 5.0 products are sure to be a boon for developers because the releases are the first that will let developers write one application that can run on Web browsers or Notes clients with virtually no changes.
NC drive continues; users still waiting

By April Jacobs

PLUCKY VENDORS in the young network computer market last week announced hardware and applications software, but many corporate IS managers are waiting for the market to mature.

Officials at Acorn Group PLC in Cambridge, England, said it will introduce a network computer based on Digital Equipment Corp.'s SA110 StrongARM processor, which runs at 233 MHz.

Dubbed the Concord, the minitower machine includes infrared keyboard support, a smart-card interface and embedded support for Java.

But users will have to wait for the hardware. Like other network computers, including Sun Microsystems, Inc.'s JavaStation, the Concord won't be commercially available until OEMs adopt the design.

Meanwhile, Oracle Corp. spin-off Network Computer, Inc. in Redwood Shores, Calif., announced it will ship a version of the StarOffice application software suite with its network computer server software (see story, page 66).

Sun's JavaStation hasn't hit the streets, but Sun has announced some major customer wins, such as last week's contract with the New South Wales Roads and Traffic Authority in Australia. The agency next month plans to install 896 Java-Stations across the state.

Analysts agreed that vendors are jumping in on the network computer market but said it is a limited niche and will remain so until more off-the-shelf applications are available. A recent study by Zona Research, Inc. in Redwood City, Calif., found that only 17% of the 157 IT buyers surveyed plan to deploy thin-client architectures in the next three years.

IBM gives 'net boost to OS/2 Warp

By Laura D'Incecco

IBM LAST WEEK released a new version of its TCP/IP software that provides OS/2 Warp Server users with performance boosts of up to 60% and enhanced security.

IBM TCP/IP Version 4.1 was unveiled at last week's Networld/Interop '97 trade show in Atlanta.

Version 4.1 for the first time can detect conflicts in TCP/IP router addresses that can shut down the router, said John Albee, IBM's OS/2 Warp program manager. That can't happen because TCP/IP 4.1, which automatically detects redundant IP addresses, sends the user a pop-up message and prohibits him from logging on with a duplicate address.

"That sounds wonderful," said Doug Mitchell, an attorney and network administrator at Dickerson, Dickerson, Consul & Pocker, Inc. in Las Vegas.

"I've never actually had a router go down, but I have had conflicts with TCP/IP addressing. In general, I try to keep as much network control as possible. But users are ambitious creatures, and stuff happens. It's nice to know IBM has eliminated many of the causes of those problems in OS/2 Warp 4 with the new TCP/IP stack," Mitchell said.

IBM also included first-time support for Virtual Private Networking and data encryption within TCP/IP 4.1, which protects intranet and extranet data transmissions from would-be hackers.

WARP ENHANCEMENTS

TCP/IP Version 4.1 software for OS/2 Warp Server 4:
- Has a 20% to 60% performance increase
- Automatically detects TCP/IP address conflicts
- Reuses the last Dynamic Host Configuration Protocol address in the event of a server crash
- Includes support for data encryption over virtual private networks
- Has a domain name server proxy that automatically links TCP/IP addresses with a host name
- Is available now
- Costs $499 for a single server license, $249 for a single client

Features of Acorn Group's Concord
- 233-MHz Digital StrongARM processor
- Infrared keyboard support
- Smart card interface

IBM TCP/IP Version 4.1 for OS/2 Warp Server 4 is shipping now. It is available as a free software download from IBM's World Wide Web site (www.ibm.com).

SAP adds object orientation to R/3

By Randy Weston

SAP AG's Backshop R/3 business software soon may be a little less like concrete and a little more like Lego building blocks.

The German software maker, with U.S. headquarters in Wayne, Pa., last week announced the next generation of its programming language — ABAP Objects — which will incorporate object orientation for the first time.

The programming language is meant to make it easier for developers at SAP, third-party software vendors and R/3 users to modify R/3. Business rules will be encapsulated in the objects, so programmers can reuse the blocks of code when building new functional-

Marketing wisdom

After three decades in IT, Gordon Clark, 62, found it tough to crack the youth-oriented Silicon Valley job market. That's until he joined Senior Staff 2000, a database designed to match older IS pros with companies in need. Now Clark is among 7,000 programmers and systems analysts who are poised to bring their experience to bear on year 2000 projects.

SAP's object-oriented programming language will make it much easier for SAP developers to enhance R/3 functionality. ABAP Objects will be available with the release of R/3 Version 4.0 next spring. SAP officials said objects written in ABAP Objects code will work with R/3 Version 3.0 or later.
Retailers Slow to Check Out Year 2000

By Thomas Hoffman

Philadelphia

A LOT OF JINGLING CASH REGISTERS could turn silent if retailers don't begin accelerating their year 2000 projects.

With less than 15 months left to fix critical merchandising and in-store systems before the recommended year-long testing phase begins in January 1999, many retailers are only just beginning to act.

Eight of seven percent of midsize retailers ($500 million to $2 billion in revenue) still have noncompliant retail management systems, according to a new study released by the National Retail Federation at its annual Retail Information Systems Conference held here last week.

Rick Amari said he is less concerned about the time constraints than he is about securing enough staff to fix The Limited, Inc.'s systems and getting the company's business units to buy in to the project.

Amari, vice president of merchandising systems at the Columbus, Ohio-based apparel retailer, said his group has just started to identify year 2000 problems with its systems and plans to replace its legacy merchandise system with Comshare, Inc.'s Arthur system.

"We'll make the year 2000 deadline," Amari said. "If we don't, you'll be talking to someone else."

The industry's delay in reacting to the problem is complicating decisions that retailers typically work off of thin profit margins. As a result, IS departments generally are "the last place money goes into," said Amin Shadihi, a principal at Kurt Salmon Associates, a retail consultant in Los Angeles. And the cost to fix the year 2000 problem already is eating into data warehousing and other strategic projects, he said.

Retailers also will have to improve upon their track record of allocating information technology staff effectively to critical projects, said Shadihi and several chief information officers at the conference. Retailers "have got to decide where to place the people [they] have and where to outsource other functions — it's a matter of survival," said Joseph A. Smialowski, senior vice president and CIO at Sears, Roebuck & Co. in Hoffman Estates, Ill.

NOT RESPONSIBLE

Also at issue is the ripple effect that noncompliant suppliers might have on the retail supply chain. Some larger retailers, such as Sears, are working with their suppliers to ensure that they reach compliance in time.

Others, such as Toys R Us, Inc. in Paramus, N.J., have decided they can't be responsible for what all suppliers are doing — to make their systems year 2000-compliant, said Tom Reinebach, senior vice president and CIO at the toy retailer.

Because the date change arrives after the hectic holiday shopping season of 1999, Toys R Us should be able to work around any systems snafus that might occur if a single supplier goes down, Reinebach said.

To help with the supply-chain problem, the National Retail Federation is working with a handful of electronic data interchange (EDI) vendors and value-added networks to fix EDI transaction "sets" for invoices, purchase orders and acknowledgments, said Cathy Hotka, vice president of IT at the Washington-based trade association.

Hotka said the group hopes to ship a set of "vanilla" transactions for value-added networks to vendors with their clients by January.

Retailers "have got to decide where to place people [they] have and where to outsource — it's a matter of survival" said Joe Smithowski, CIO of Sears.

IBM's RS/6000 gains 64-bit power

By Tim Oulette

IBM's RS/6000 and AS/400 divisions are sharing chip manufacturing operations as a way to lower costs and speed processor upgrades in the highly competitive high-end Unix server market.

As a result, IBM next month will begin shipping a new RS/6000 server, the 705, that runs the 64-bit PowerPC Apache chip, the same chip found in IBM's newest AS/400E midrange systems.

And IBM said it expects to double the performance of the 64-bit chip in the first quarter of next year with an upgraded Apache chip.

But the newfound cooperation between the AS/400 and the RS/6000 might not be enough to dramatically boost IBM's Unix sales or clear up the confusing marketing messages users get from competing divisions.

The best thing would be for IBM to clearly define the target users for its various servers, said Tom Bittman, an analyst at Gartner Group, Inc. in Stamford, Conn. (see chart).

That would simplify users' buying decisions for products such as the 570 and the AS/400.

But such a move is hard for IBM, Bittman said.

"While the mind is willing among the IBM leadership, the body is still a bunch of divisions," he said.

On the plus side, John Young, an analyst at The Clapper Group, Inc. in Wellesley, Mass., said "The internal efficiency [of co-producing the Apache chip] will let IBM keep the RS/6000 price-competitive with anyone else in the Unix marketplace."

The 705 packs more punch than any of the high-end RS/6000 machines that came before it, with prices starting at $125,000 for its four-, eight- and 12-way systems. It also will ship bundled with IBM's 64-bit AIX 4.1 Unix operating system.

Although 64-bit systems can show some improvement in the performance of existing 32-bit applications, analysts said 64-bit offerings aren't yet deal breakers at most shops. That is actually good news for IBM, which has trailed other Unix vendors, including Digital Equipment Corp., Sun Microsystems, Inc. and Hewlett-Packard Co., in 64-bit Unix offerings.

Still, users said there is comfort in knowing that 64-bit systems bought today will support the high-octane needs of the future.

"We are in the process of a very large data warehouse project, and its size and usage will require a very high performance environment," said Mark Davydo, director of new technology at Edison Brothers Stores, Inc. in St. Louis. He has an $8 million order.

Packaged tools ease users into data warehousing

By Randy Weston

A lot of companies aren't even looking at data warehousing technology because they are afraid of the complexity and cost," said Henry Morris, an analyst at Data Corp. (IDC) in Framingham, Mass.

"But the idea of a packaged data warehouse is appealing to people," he said, citing a recent IDC survey.

In Technologies, Inc. is the latest application vendor to join the bandwagon. The Irving, Texas-based maker of supply-chain management and forecasting software announced last week it will embed Arbor Software Corp.'s Essbase online analytical processing (OLAP) engine in its product line.

12 joins application vendors SAP AG, Oracle Corp. and PeopleSoft, Inc. in making OLAP tools and data warehousing a standard option in its products.

Rockford Corp., a $100 million Tempe, Ariz.-based maker of audio components such as speakers and headsets, uses Oracle Applications Data Warehouse with the full suite of Oracle applications.

INTEGRATION ADVANTAGE

David Richards, vice president of information technology at Rockford, said getting data warehousing capability from application vendors makes sense because most of a user company's data resides in the large packaged applications.

You gain the advantage of integrating all your applications," he said.

Richards said the Oracle package gave his company a lot of data warehousing functionality that otherwise would have been too costly or too time-consuming to create.

Don Zimmer, database administrator at publishing firm Harcourt Brace & Co. in Orlando, Fla., said packaged analysis tools are a perfect way to introduce users to the power of data analysis while companies plan larger data warehousing projects.

Building a data warehouse from scratch can cost $1 million or more and take 18 to 36 months.

But the prepackaged data warehouses that come with application packages are less expensive and come with analytic tools at no extra charge.
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Users clamor for inexpensive high-speed WAN connections

By Bob Wallace

Some large users said cost and capacity have made wide-area networks a major impediment to the deployment of applications and technologies that can improve how they do business.

Local networks run at speeds as high as 1G bit/sec. Frame relay and other WAN services are slower and typically run at 56K bit/sec. or 1.544M bit/sec. That creates a bottleneck that strands high-bandwidth applications that run fine locally.

**High Costs**

Carriers offer one or two high-speed services, but they are exorbitantly expensive. Many users aren't willing to spend more on or learn a new technology, such as Asynchronous Transfer Mode (ATM).

"We'd like to run WAN services such as frame relay at LAN speeds," said Joseph Farrelly, executive vice president and chief information officer at snack food giant Nabisco, Inc. in Parsippany, N.J. "We'd like to run 128K bit-frame-relay links at 16M bit while getting the costs of WANS down."

That would let Farrelly extend new object-oriented applications across the company's network.

There are affordable WAN services such as frame relay, which cost a few hundred dollars per month but offer a small fraction of the bandwidth of the lower-speed 10M bit/sec. (ATM) Ethernet LAN. A 1.544M bit/sec. T1 private line costs several thousand dollars per month but only provides one-tenth of a 10M bit/sec. Ethernet LAN — the slowest LAN.

Faster 45M bit/sec. T3 private lines cost $47,000 per month and still provide less than half the bandwidth of a premium 100M-bit/sec. Fast Ethernet LAN.

**About ATM**

ATM connections, which run at 155M bit/sec., exceed Fast Ethernet LANs but cost far more than T3. And ATM has only one-sixth the bandwidth of leading-edge 1G bit/sec. Gigabit Ethernet networks.

"The network is keeping us back from developing technology we'd like," Farrelly said. He cited digital cellular services as one example.

Carriers said a solution is available if users can bear the cost.

"We have service like 155M-bit ATM that they could use to connect high-speed campuses, but the question is, do they want to pay for it?" said Ray Kang, director of broadband marketing at MCI Communications Corp. in Reston, Va. When asked if prices on such services would come down, Kang said it was unlikely because they are expensive to provide.

"I expect a group of little-known carriers to eventually provide services that link campuses at the same speed on the WAN as they're running on the LAN. That will wake up the big players," said Mike Zboray, an analyst at Gartner Group, Inc. in Stamford, Conn.

The services those users seek are called transparent LAN services and are available from a few telephone companies in limited geographic regions.

"The more bandwidth carriers can give us, the faster we can implement video and voice over IP in our corporate WANS," said Timothy Regan, advanced information processing manager at Federal Express Corp. in Memphis.

"We'd like to archive videos of people talking on different topics and provide access to them from anywhere on the WAN," he said.

Gartner warns of 75% failure rate for enterprise management projects

By Patrick Dryden

Grand Enterprise management projects can be more bogoodnagle than a boon, warned analysts speaking at Gartner Group, Inc.'s TCMpo 97 conference last week in Orlando, Fla.

Integrating the management of systems, networks and applications through a central tool kit can cost 10 times the price of the software.

Such software is typically UniCenter from Computer Associates International, Inc. in Islandia, N.Y., or the Tivoli Management Environment (TME 10) from Tivoli Systems, Inc. in Austin, Texas.

Fees exceeding $10 million are common for corporate licensees.

**Project Failure**

Three-fourths of these projects fail in the first 18 months of rollout, doomed by rising cost, blurry goals, a shortage of expertise and lack of progress, according to Ray Paquet, an analyst at Gartner in Stamford, Conn.

"Buying an [all-in-one] enterprise management tool is in vogue right now, but it's harder to implement one and see results than to apply individual best-of-breed tools that solve specific problems," Paquet said.

"Think tactically," he advised.

Information systems managers agreed that the cost of staff training to consulting services and tool implementation is high.

But the struggle is worth it, they said. Integrated management pays off in improved efficiency — if you don't get overwhelmed on the way.

"We've already reduced total downtime 24% so far this year," said Larry Dial, a senior systems integrator at Barnett Banks, Inc. in Jacksonville, Fla.

Through Tivoli's TME 10 framework, the bank's 15 operators can detect problems with systems and networks quicker, respond automatically and share a single documentation resource, Dial said.

But getting this far required leaping more political obstacles than technological hurdles, he said.

"Most IS organizations are built of groups focused on particular components, so they can't understand that their real job is to satisfy business needs," Dial explained.

That means they must view the failure of a router or server in terms of the impact on loan processing, for example.

**American International Underwriters' Mike Altiero:** "You'll get discouraged if you take on too much"

A few weeks into the rollout of CA's UniCenter TNG, Altiero realized he had to take a point-product approach to implementing the suite. "Success or failure depends on your planning," he said.

Vendors and some users said they couldn't believe Gartner's research revealed such a high failure rate.

"I can't grasp anyone just walking away entirely from a big dollar investment in enterprise management," said James Brown, senior vice president of network operations at NationsBank Corp. in Charlotte, N.C.

"I made the mistake of wanting to do it all and lost focus," said Mike Altiero, network services manager at American International Underwriters in Livingston, N.J.

Echoing Altiero, he said experience with big projects warns him to take the tactical approach of delivering tangible success for the business early on — and step by step.

But at Blue Cross/Blue Shield of North Carolina, a steering committee must constantly review goals and progress of its TME 10 rollout to prevent "scope creep," in which managers and users seek to take advantage of additional functions, said Harry Reynolds, IS vice president in Durham, N.C.

"None of this is easy, yet we've tempted to do too much," Reynolds said. "You have to stay focused or you're going to burn out."

Victory is still possible

Most enterprise management projects are doomed, according to Gartner Group research. But users offered these implementation caveats:

- Shift from technology to business focus: Which user applications suffer when one piece acts up?
- Break down walls between specialists: It isn't your problem, it's our problem.
- Plan strategically: Map out exactly what to accomplish.
- Implement tactically: Apply one tool at a time to avoid being overwhelmed.
- Keep deadlines short: Deliver tangible benefit at each step for morale, buy-in.
- Involve field engineers: Show how centralized tools can help remote support staff — Patrick Dryden

WAN Forecast

- Charges will remain the largest nonpersonnel IT budget item
- Usage will rise between 300% and 600% in North America over the next five years
- Prices will fall 25% to 30% in the U.S. and 40% in Europe over the next five years

Source: Gartner Group, Inc., Stamford, Conn.
Our Software Secures More Corporate Data Than All Our Competitors Combined.

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Sun shrugs off Java threats

FRANK HAYES

Sun says Microsoft violated its Java license. Microsoft refuses to add the Java interfaces and libraries Sun demands. Java is doomed, intranets and the Web will collapse into confusion.

Oh, the humanity!

What's that? You don't hear any wailing or teeth-gnashing among your users or Java developers or network managers or webmasters?

OK, so it's mostly analysts and pundits worried about a forthcoming fight with Microsoft.

Yet the human race itself is endangered — mortal and vulnerable.

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Nortel, Inc. and a British utility have developed what could be a breakthrough technology that provides consumers with high-speed Internet access over power lines.

The system, which separates data signals from electricity, was designed to deliver data traffic at 1M bit/sec., nearly 10 times faster than an Integrated Services Digital Network (ISDN) line.

Customers would need to install a small box next to their electric meter to send and receive data. The technology doesn't transmit voice or video. The box would be linked to a PC with a standard coaxial cable. The hardware would cost $300 — about as much as an ISDN card — and service costs would be up to individual utilities.

Nortel jointly sponsored a trial at 20 households with United Utilities PLC in London. Officials at the utility said their year-long trial was successful.

Although the technology could be a boon for utilities eager to leap into the Internet service provider market, industry observers said similar attempts have failed in the past.

"This has been tried before, and I don't think it has gone anywhere," said Tina Barber, chief information officer at Brooklyn Union Gas, a natural gas utility in Brooklyn, N.Y., which is planning to merge with Long Island Lighting Co. in Hicksville, N.Y.

Barber referred to a similar 1995 effort by Novell, Inc. and UtiliCorp United.

Although the technology could be a boon for utilities eager to leap into the Internet service provider market, industry observers said similar attempts have failed in the past.

That project failed to yield any substantial results, leading UtiliCorp to terminate its partnership with Novell and file a lawsuit against the Provo, Utah-based networking vendor for "failing to live up to the terms of the agreement," said a spokesperson at the Kansas City, Mo.-based utility. The lawsuit was filed in a Kansas City circuit court last month.

Despite its fallout with Novell, UtiliCorp hasn't soured on the potential for power-line Internet connections. If the United Utilities/Nortel venture meets expectations, "we'll be real interested," the spokesperson said.

EUROPE FIRST

UtiliCorp may have to wait a while. The current technology has been designed to work across the power grid in the U.K., where there is one transformer for every 100 to 300 customers. In contrast, the North American power grid sports one transformer for every eight to 12 customers, leading the developers to focus on the European market first because deployment of the technology is more cost-effective there, a Nortel spokesperson said.

Nortel in Brampton, Ontario, is still evaluating deployment in North America, although it hasn't yet set a timetable, the spokesperson said.

Several U.S. utilities have plotted different paths to expand their offerings. One is Entergy Corp. in New Orleans. Last February, it formed a joint venture with Hyperion Telecommunications, Inc. in Coudersport, Pa., to offer competitive telephone services to commercial customers in Little Rock, Ark., Jackson, Miss., and Baton Rouge, La., using fiber-optic cable.
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INVENTORY is one of the ADPAC SystemVision family of products.
User craze for handhelds gives IS a headache

By Kim Girard and Gordon Mah Ung

EXCESS BAGGAGE?

The handheld arena is hopping this month, with IBM embracing the PalmPilot, Hewlett-Packard adding management features to its refreshed palmtops and Microsoft Corp. boosting its Windows CE operating system.

But handhelds may be a tough sell to corporate America. While vendors scramble to offer these new gadgets, some users shun the idea of carrying yet another piece of equipment.

"I carry a beeper, a cell phone and a laptop," said Mike Caretto, a regional IS manager at PacificCare Health Systems. As for the handheld? "I just haven't found it that useful."

Nonetheless, vendors are forwarding hand- helds and new capabilities into devices they are pushing from the consumer market into corporate ranks.

Recent announcements include the following:

•IBM's agreement to sell 3Com's popular PalmPilot under a new name, WorkPad. WorkPad weights 6 oz., has 16M bytes of storage and costs $399. With the IBM brand name, analysts said they expect corporations to quickly snatch up WorkPad, particularly if the devices are marketed as a partner to the company's laptops.

•HP's addition of management software, called TopTools, to its 320LX palmtop computers, which run Windows CE. The software gives IS more control over the device when it is used on the network. But analysts said the devices often are used off-line and render such software ineffective.

•The recently announced Windows CE 2.0. The operating system upgrade includes Pocket PowerPoint and support for E-mail attachments and Ethernet. HP and other vendors are expected to roll out Windows CE devices at Comdex/Fall '97. Those machines will feature color screens and a larger form factor, among other attractions.

By Kim Girard

MINI NOTEBOOKS HIT THE FALL RUNWAY

By Kim Girard

BOOSTED BY THE POPULARITY of Toshiba Corp.'s tiny Libretto notebook PC, competing vendors are expected to roll out more powerful mininotebooks this fall.

Mitsubishi Corp. is selling a 2.4-lb. mininotebook, Amity CN, which has a 133-MHz Pentium processor, 16M bytes of memory and a 124-byte hard drive. Hitachi Ltd. is expected next month to announce a similar, 2.7-lb. mininotebook.

Toshiba, not standing still, plans to unveil at Comdex/Fall '97 an upgraded Libretto with more memory and power than its Libretto 50CT. The Libretto 50CT costs about $2,000 — the same price as the Amity — and has a 75-MHz processor and 16M bytes of memory.

Compaq Computer Corp., which may announce its own mininotebook as well, analysts said, is weighing in at about 2 to 3 lb, mininotebooks are positioned between laptop PCs and the new Nokia 9000 — a combined telephone/minicomputer — is a start, it doesn't easily fit in a pocket, he said.

But some companies aren't convinced of the handheld's value at all.

"That will change when capability of the palmtop reaches where the laptop is today," said Ernest Andalucio, director of worldwide medical affairs systems at Bristol Meyers Squibb in Princeton, N.J. "People love the convenience of the palmtop, but capability is such a letdown from the laptop."
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Compare that to other approaches which rely primarily on slow and expensive manpower...assuming you can find qualified people in the first place.

Time is running short, but we can get you to compliance before the year 2000. Call us at 1-800-632-6265 today.
NCR CORP. last week said it will bundle SAS Institute, Inc.'s data analysis tools with its data warehouse platforms. Such bundling is aimed at easing integration and implementation hassles for users who are building decision-support systems.

Under an alliance between the two companies, Dayton, Ohio-based NCR will bundle and resell SAS Institute's data warehouse software, including extraction and transformation tools.

Meanwhile, NCR last week introduced two servers to its WorldMark line of scalable servers. The WorldMark 4700 targets the small data marts market. And the WorldMark 5150 will replace the 5100 model as the highest-end database server for the company (see chart).

**TIME-SAVER**

"The SAS alliance basically gives users one-stop shopping" for data mining and decision-support tools, said Brian Murphy, an analyst at The Yankee Group, in Basking Ridge, N.J.

It is going to cut some of the systems integration and implementation time" for customers, he said.

And the hardware additions give NCR a faster-processing headroom for application growth at the low and high ends.

"The 5150 provides the migration path beyond my existing architecture," said Mark Frazier, staff manager of financial systems at Lucent Technologies, Inc. in Basking Ridge, N.J.

And because the server offers backward compatibility, "it will allow me to expand without having to revamp my existing platform," Frazier said.

The telephone equipment manufacturer currently uses NCR's WorldMark 5100 platform to run a financial data warehouse.

Pricing for the WorldMark 4700 starts at $158,000, and for the high-end WorldMark 5150 starts at about $500,000.

NCR's latest moves — particularly its alliance with SAS and its new low-end server — are part of the vendor's attempts to broaden the appeal of its data warehouse offerings.

For example, NCR has rolled back prices on Teradata by more than half in the past 12 months, and the company is working with Microsoft Corp. to port Teradata to Windows NT.

### WorldMark Line

**WorldMark 4700**

- Four 200-MHz Pentium Pros per node
- Up to 8 nodes can be clustered, supporting up to 600G bytes of data

**WorldMark 5150**

- Scalable up to 128 connected nodes
- Can support from 600G bytes of data to more than 100T bytes

### Software stops hackers

**CONTINUED FROM COVER 1**

By inserting false information into a domain name database, hackers can divert World Wide Web surfers from legitimate sites to their pseudo sites, where the hackers collect credit-card numbers by posing as a store, for example. That is the cyberspace equivalent of hijacking the main telephone number for an airline or catalog company and getting credit-card information from unsuspecting consumers trying to buy goods.

"This is excellent news," said Chris Byrnes, an analyst at Meta Group, Inc. in Stamford, Conn.

"It's been very, very clear that the infrastructure needed improved security."

Proponents of the software also hope it eventually will boost electronic-mail integrity by allowing new E-mail software that can demand that incoming addresses be properly verified before a message is accepted. That could cut down on messages that pose as coming from a legitimate address and block junk messages with unverifiable return addresses.

"It stops most spoofing attacks," said Carl Malamud, chairman of the Internet Software Consortium, a volunteer organization that disseminates free versions of important Internet implementation software.

"It has the potential to prevent all IP address and domain name spoofing. It doesn't handle the most severe problem: people using simple, clear-text passwords, which allows somebody to take over their account."

To effectively impact the Internet, DNSSafe needs to be adopted by top-level domain authorities such as InterNIC, an organization that controls .com addresses, among others, and its international counterparts. Officials at Network Solutions, Inc. in Herndon, Va., which oversees InterNIC, were unavailable for comment on the software.

But Malamud said InterNIC and similar organizations.

### U.S. unprepared for cyberterrorism

"The potential for disaster is real," says commission chairman Robert Marsh

"We're prepared," Godin said. Without federal legislation, "neither government nor us; we're protected," Godin said. "(Most companies'] management feels, 'It doesn't pertain to us; we're protected,'"

"The potential for disaster is real," said Robert Marsh, chairman of the President's Commission on Critical Infrastructure Protection, at a government security conference here last week. "Neither government nor industry is prepared to deal with these threats."

In a report slated for release this week, the commission outlined several suggested actions, including one that corporate America has long been loath to do: share information about computer security breaches.

"The potential for disaster is real," said Robert Marsh, chairman of the President's Commission on Critical Infrastructure Protection, at a government security conference here last week. "Neither government nor industry is prepared to deal with these threats."

"It is going to cut some of the systems integration and implementation time" for customers, he said.

By John Kinkel, senior security analyst at the TRW Command Support Division in Fairfax, Va., said the report is "much stronger and comprehensive than I had anticipated." There has been more serious work this year on security at a federal agency he contracts with than in prior years, Kinkel said, in part because of the commission's yearlong work of meeting with government and industry officials.

The report also recommended the following:

- Federal research into computer security should be doubled to $500 million next year and increased 20% per year several years after. "Market demand is insufficient" to spur development of needed real-time detection and response tools, Marsh said.
- All federal offices should comply with "best practice" security standards to be set by the National Institute of Standards and Technology and the National Security Agency.
- A national infrastructure advisory council composed of CEOs at companies such as banks and utilities should be set up regularly with U.S. cabinet officers.
- A curriculum should be developed from grade to graduate level that teaches the importance of information security.

### DNSsafe software

- **Donated by RSA Data Security to the Internet Software Consortium**
- **Uses RSA digital certificate technology to authenticate domain names**
- **Aimed at preventing spoofing and some spam**
- **Will be incorporated in the BIND domain-name server (DNS) implementation by the end of the year**
- **Available to other DNS developers**

DNSSafe was designed for use with DNSSEC, the Domain Name System Security Extensions protocol proposed in January by the Internet Engineering Task Force, an international group that sets network standards. Now, the Internet Software Consortium plans to use the new software from RSA to implement the DNSSEC protocol within the domain name system (DNS).

The Internet Software Consortium expects a beta version of Berkeley Internet Name Domain (BIND), its implementation of the BIND with the new security feature by the end of the year.
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Suit puts users on standby

CONTINUED FROM COVER 1

Potentially derail Java," said George Xu, a project leader at Brampton, Ontario-based Nortel Canada Ltd. "If Java is going to die, we need to find another tool to replace it. It will be difficult to estimate the loss."

If Microsoft is going to take parts of Java and not utilize it in the way it was originally designed, then that's a subset of Java — it's Microsoft Java — and that adds a layer of incompatibility to the picture, which I think will affect any end user," said Christopher Crocker, senior network engineer at Danvers, Mass.-based Restaurant Consulting Services, Inc., an independent outsourcing arm of Daka International, Inc. "[And that means] this affects me because it's now difficult to say that something is completely cross-platform if it's [written in] Java."

Despite a consensus that Microsoft shouldn't tamper with the Java standard, few users said they expected that to happen. "My intuition is that Microsoft will get what it wants, and it will get things done its way no matter what the consequences are for the little guy," Crocker said.

Paul Soares, vice president and general manager at the Alden Buick Pontiac dealership in Fairhaven, Mass., is part of a General Motors Corp. committee that recommends products for and oversees the Windows NT intercommunications network among GM and its 8,500 dealerships nationwide. "In these turf wars, it's always the users who get hurt the worst. We've already piloted [Internet Explorer] 4.0 for GM Access dealership network. But this lawsuit could put our plans to roll out Internet Explorer 4.0 on hold until the dispute is resolved," he said.

At last week's Gartner Group Inc. ITxpo '97 in Orlando, Fla., where executives from the warring companies aired their views, Gartner analyst Scott Winkler told users not to "get caught up in that uncertainty."

He said he doesn't see an end to this war in the near future and cautioned that users had better figure out what they are going to do. "If you are using Java for platform-independent development, go forward keeping in mind Java's strengths and weaknesses."

Susan Schweizer, senior vice president of technology, architecture and planning at Fleet Bank Corp. in Albany, N.Y., said she is hedging her bets. "When vendors of their stature go to war, we, as end users, have to figure out what their strategies will be in one-upping each other as opposed to figuring out the best technical solution for our business model," she said. "If we can afford to wait until the dust settles, we will. If not, we'll be forced to make a choice."

FAQ: Standards war moves to court

Q: What is Sun's complaint?
A: Sun says Microsoft intentionally changed its version of Java to damage Java's cross-platform capabilities, left out key pieces of Java technology and used the Java trademark on Internet Explorer 4.0, which failed Java compatibility testing.

Q: What pieces of Java are missing from Microsoft's Internet Explorer 4.0?
A: Sun says Microsoft failed to ship two key components in Internet Explorer 4.0. The first is the Java Native Interface, a set of functions that enables Java programs to access peripheral devices such as printers, modems and fax machines. The second is the Remote Method Invocation, another set of functions that will let two Java programs share data with each other but doesn't require the use of the Windows operating systems.

Q: Why does Sun believe that Microsoft's actions are illegal?
A: Sun and Microsoft signed a five-year Java license agreement in March 1996. Sun says Microsoft has breached that contract.

Q: What is Sun asking for?
A: Termination of Microsoft's Java license, no future claim by Sun and its 8,500 dealerships nationwide.

Q: Why does Sun believe that Microsoft's actions are illegal?
A: Sun says Microsoft failed to ship two key components in Internet Explorer 4.0, which failed Java compatibility testing. Microsoft doesn't want a vendor battle to replace it. It will be difficult to estimate the loss.

Q: What is Sun's response?
A: Sun says Microsoft's suit is "outrageous" and claims that Sun made false statements about the terms of the license agreement in the lawsuit.

Dueling CEOs

There was plenty of free advice at IT Expo 97... only it didn't come from Gartner Group consultants. Scott McNealy and Bill Gates traded barbs while offering up the following to attendees:

Scott McNealy's response to Microsoft's suggestion, before Sun's lawsuit, that the Java logo be put into the public domain:
"It was kind of Microsoft to tell us how we should run our company, put Java logo in public domain. That's kind of like Mike Tyson giving culinary advice."

McNealy's advice for the Gates audience on how to send a message to Microsoft:
"You all tell Microsoft to cut it out. Get with the 1990s. Get with the Web. Get compliant. Don't try to make it a 'write once, run on Windows' environment. We need your help to get this done. The best way you can do that is to go purchase Navigator. A browser without Java is like a car without a steering wheel. They just ripped off the steering wheel."

Bill Gates' response to criticism he should fully back Java:
"We look to drive our own destiny. You should clearly label a product proprietary if it is not really an open standard. Yet they [Sun] use terminology like standard and open... like HTML."

Gates' response to McNealy's pitch for Navigator:
"You shouldn't be spending any money on browsers, because they are free. We thought about how to price it, and we're pretty low. So we thought, 'Let's keep it there.' Discount? It's a 100% discount."
Users fear true cross-platform will be casualty of Java war

By Sharon Gaudin, Laura DiDio and Matt Hamblen

JAVA MAY BE the battle cry of this war between Sun and Microsoft, but the battleground is over an open environment.

Although Microsoft Corp. is just one of 117 Java licensees, the Redmond, Wash.-based company is the only one to have compliance issues, according to Sun Microsystems, Inc. CEO and President Scott McNealy. Fanning the flames of discontent, Microsoft officials recently said the company won't support the standard Java Foundation Classes and they are pushing dynamic Hypertext Markup Language as a rival means of producing cross-platform accessible-applications.

At the center of the dispute between Sun and Microsoft is the Java language, which was designed to let developers write once and run over many platforms. Microsoft's petulance is driven by fears that "Sun will do to them what Microsoft did to IBM by putting Windows on top of DOS," said Scott Winkler, an analyst at Gartner Group, Inc. in Stamford, Conn.

"I cannot look at what Microsoft did as anything but a direct attack on portability." - Rick Ross, The Java Lobby

Things came to a head last week when Sun filed suit against Microsoft, charging that the recently released Internet Explorer 4.0 browser isn't Java-compatible. Sun alleges that Microsoft has been trying for months to splinter Java and retard its momentum because it offers a choice to users who were once locked in to the Windows platform.

Microsoft fired back in a written statement, claiming that it "has delivered the most compatible implementation of Java in the marketplace and is well within the terms of its agreement" (see related story, page 16).

USERS SPEAK UP

The heated war of words between Sun and Microsoft might seem to be just a vendor wrestling match. But the outcome will strongly affect user development plans and budgets, and in interviews last week, there was no shortage of opinions on the subject.

"McNealy and [Microsoft Chairman Bill] Gates should shake hands, end their differences and fix the problems," said Dean Johnson, a senior technical specialist at Freudenberg-NOK General Partnership in Bristol, N.H.

"If I had Gates and McNealy in front of me, I'd slap them both and say, 'Wake up, and get real. The ocean is big enough for everyone to catch a lot of fish,'" said Paul Soares, vice president and general manager of Alden Buick Pontiac in Fairhaven, Mass. "As it is, though, all I can do, as a user, is stand aside and wait and see what happens when the dust clears." Soares is a member of a General Motors Corp. committee that will decide on a Windows NT migration strategy for more than 8,500 GM dealerships nationwide.

"It's nice to see Microsoft dinged once in a while," said Michael Bachert, LAN manager at Columbia Gas System Service Corp. in Columbus, Ohio. "The truth is somewhere between Gates and McNealy."

"[Internet Explorer 4.0] is not true Java. I'm sticking with Navigator," said Rick Ross, founder of The Java Lobby, an independent organization comprised of Java developers. "I cannot look at what Microsoft did as anything but a direct attack on portability." Ross claimed that The Java Lobby swelled from 1,000 members three weeks ago to nearly 7,000 at the end of last week. 😎
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of networked systems and services? Same reason your company can count on us: at www.digital.com/liftoff, or call 1-800-DIGITAL. And get ready to win in a networked world.
Analysts urge caution in long-term MCI negotiations

By Matt Hamblen
Orlando, Fla.

WORLDCOM, INC.'s $30 billion bid to buy MCI Communications Corp. has thrilled equity analysts and MCI stockholders, but some industry observers are advising MCI business customers to exercise caution.

"I'm not saying to not sign MCI contracts, but consider [if the deal goes through] that there might be departures of key executives at MCI and consider there will be likely delays of global deployment" of merged networks and services, said Gartner Group, Inc. analyst Ken McGee to a crowd of telecommunications managers at Gartner's IT Symposium here last week.

McGee said telecommunications managers in negotiations with MCI should extend their current MCI agreement only for a year "until we get more answers" on how a WorldCom purchase would work. Meta Group, Inc. analysts issued similar warnings.

"This feedback emphasizes the need not to jump quickly" in contract discussions with MCI, said William Lazarus, director of telecommunications at Horizon/CMS Healthcare Corp. in Albuquerque, N.M. "I would not recommend to my company any long-term commitment [to MCI] past two to three years."

In response, WorldCom Senior Vice President Josh Howell said he "couldn't disagree more strongly" with the analysts' advice. Howell said that the MCI/WorldCom integration would be "smooth" and that WorldCom has experience in making mergers work. In fact, WorldCom's top 20 executives include 16 who came on board through mergers, he said. MCI officials had no comment.

"I'm not saying to not sign MCI contracts, but consider that there might be departures of key executives at MCI and ... likely delays of global deployment."

— Ken McGee, Gartner Group

Horizon/CMS is about to merge with HealthSouth, Inc. in Birmingham, Ala., and Lazarus will oversee the merger's telecommunications planning, including which vendors are used. HealthSouth uses MCI in Washington for all its telecommunications services, and Horizon/CMS uses Sprint Corp. in Kansas City, Mo., for frame-relay network services and AT&T Corp. in Basking Ridge, N.J., for a majority of its voice services.

"My perception of WorldCom is that they're not all that high-tech," Lazarus said, based on his experiences and those of colleagues. He said it doesn't always use redundant central office switches to protect its networks and has had problems restoring service after outages.

Gartner analyst Eric Paulak said Gartner is concerned about WorldCom's performance in integrating past acquisitions, including UUnet Technologies, Inc. in Fairfax, Va. "This is a good deal for stockholders, but not necessarily for [MCI] customers," Paulak said.

He said interviews with some board members indicated the MCI board will vote against the WorldCom bid within two weeks. But observers also are speculating that stockholders, seeing a good increase in their investment, will try to overrule the board.

MCI's ongoing merger with British Telecommunications PLC is more in the long-term interests of MCI customers, especially to the large multinational firms that want to go global, both Gartner analysts said. O
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Storage takes on modular flexibility

Vendors promise easier building-block approach

By Tim Ouellette

Storage vendors are starting to give users more wiggle room. Symbios Logic, Inc. this week will announce its line of MetaStor subsystems, made with modular hardware and software building blocks.

The move by the Fort Collins, Colo., company follows IBM's plan to deliver its storage systems based on a similar modular architecture called Seascape (CW, June 23). Digital Equipment Corp. also is adding modular features to its StorageWorks line.

Vendors are offering more flexibility because as users tackle big projects, storage is becoming a larger part of the cost of buying new servers (see chart).

And with changing storage and networking technologies — such as upcoming Fibre Channel support — users want to avoid the high cost of constantly replacing disk subsystems, which can run into the millions of dollars.

"People are looking for modular approaches to solving their problems," said Rick Westerman, an analyst at Meta Group, Inc. in Stamford, Conn.

Symbios Logic's MetaStor systems, which will ship in November, include command modules, drives, host adapters, tape libraries and storage management software that can be mixed and matched in various configurations as needed.

More in store

Users expect storage demands to continue to grow this year and are seeking flexible ways to upgrade their storage systems to meet those needs.

- What will your storage growth rate be in 1997? 22%
- How will nonmainframe storage grow in 1997? 39%

"MetaStor will let us become much more versatile for multithreading on the same devices and scaling the amount of storage," said Paul Cioni, a storage manager at ServiceNet, an Andersen Consulting subsidiary in Minneapolis. "In our current environment, we had to size our database engine [servers] to the amount of storage we had."

With MetaStor, users can scale from small, departmental systems to data center devices in the same box.

"Because a lot of projects [especially data warehouses] start out very small, when the project takes off, storage devices that can scale from the low-end can get their foot in the door," Westerman said.

Some larger shops may choose to buy excess storage capacity on data center disk systems.

For example, storage giant EMC Corp. in Hopkinton, Mass., has kept its high-end Symmetrix subsystems in use for up to five years by constantly offering firmware upgrades to add features and technology support, company officials said.

But in the future, flexibility in moving storage hardware as companies grow and reorganize may take on more importance.

And although IBM's Seascape promises to allow users to change the system controllers without requiring a forklift upgrade of the box, the company has yet to deliver, said John McArthur, an analyst at International Data Corp. in Framingham, Mass.

Such a disk system is in the works for the coming months, IBM officials said.
Christian Murphy was non-verbal. He lived with a wall between himself and the world.

This is Christian. He was born with autistic tendencies that cut him off from the world around him.

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*This result was based on a 16 processor, HP 9000 7220 running Sybase's Adaptive Server Enterprise 11.0.
Year 2000 legal issues, staffing are top worries of state CIOs

By Patrick Thibodeau
Williamsburg, Va.

CHIEF INFORMATION OFFICERS for state governments claim that their year 2000 projects are well under way, but two worries linger: legal liabilities and staff defections.

States with computer snafus related to the year 2000 problem could be sued for everything from malfunctioning traffic lights to missing benefit checks, officials said. And staffing problems could slow the repair work.

At a recent gathering of state CIOs, Gartner Group, Inc. analyst Ian Temple said about half of all government agencies in North America won't solve the year 2000 problem in time, so "you have to plan for failure." He spoke at the National Association for Information Resources Executives conference here.

SHAPING UP

But talk to almost any state CIO, such as Tennessee's Bradley Dugger, and you will hear much confidence about the repair effort.

"We feel like we're in good shape. We're planning to party — a year 2000 party," Dugger said. The state has completed fixes on 65% of its code, he said. Acknowledging the possibility of a less-than-successful year 2000 repair effort could eventually come to haunt a CIO in court, according to one state CIO who has researched the issue.

The problem is that any memos or statements that predict a system failure could be exploited to show that the state knew about the problem in advance and didn't fix it. "Be cautious of year 2000 documentation that you may have, especially predictions of doom," advised Charles Gerhards, director of the Central Management Information Center in Pennsylvania. Such statements are the equivalent of a smoking gun, he said.

Gerhards also recommended that information systems officials meet with legal counsel "to review your state's vulnerability, as well as your own." Nevada has taken steps to immunize itself against year 2000-related litigation.

The state passed legislation that puts year 2000 failures on par with "acts of God," said Purcell. The state's CIO in Austin said the program's success has been limited. "People are getting signing bonuses [elsewhere] that sort of make that lump puny," she said.

"There are agencies in Texas that tell me that they have had 100% turnover [of technical staff] in the last year," she said.

Microsoft project management pack wins over users

TOP ISSUES OF STATE CIOs

* Automating welfare reform. It will cost $1.3 billion over the next five years.
* Exodus of IT talent to private sector, which is impacting year 2000 efforts.
* IT outsourcing.
* Federal IT mandates, especially welfare reform.

> Overhaul adds groupware-like abilities

By Gordon Mah Ung

MICROSOFT CORP. this month will release a completely revamped project management package that features groupware-like abilities such as messaging to team members over corporate intranets.

Using Microsoft Project 98, project managers can post the status of a project to an intranet and team members can update their progress, for example.

Project 98 also adds advanced management features such as project merging and task splitting. The package costs $499 for new users, and upgrades are $199.

FIRST IMPRESSION

Analysts and users said their initial impressions of Microsoft Project 98 have been positive.

"The new program is very easy and intuitive to use," said Jim Brennan, first vice president of Information services and technology at Waterhouse Securities, Inc. in New York.

Brennan has been beta-testing Project 98 since this summer and has used it to manage everything from 24-hour production processes to two-month projects to produce and track custom er statements.

"It's a good management tool," he said.

Ray Pennisi, project manager of product development at Sy mitar Systems, Inc. in San Diego, said he looks forward to using the upgraded Project, but he said he hit a snag trying to use the workgroup messaging feature on a trial version he downloaded from Microsoft's World Wide Web site.

According to Microsoft officials, the problem Pennisi ran into appears related to the configuration of his mail server and isn't a problem with Project 98.

Pennisi said that despite the problem he had, he expects his company, which processes data for credit unions, will eventually adopt Project 98 because of its advanced features and close integration with other Microsoft products.

BRAND SPANNING NEW

"This is not just an incremental improvement; this is really a new product," said Matt Light, an analyst at Gartner Group, Inc. in Stamford, Conn.

Light said that with Project 98, Microsoft has attained feature parity with longtime project manager vendors in the desktop market, including Primavera Systems, Inc. in Bala Cynwyd, Pa., and Scitor Corp. in Menlo Park, Calif.

The previous iteration of Project could walk, but not run, said Light. "Now I would say it's up to speed."

According to market research firm PC Data in Reston, Va., Microsoft has more than 70% of the desktop project management software market.

Microsoft's new Project 98 is expected to be about $300 for a single user and $1,000 for multiple users, with more than 100 users.

"This is an entry-level product, and we still have $1 million of the market, and the average cost expected to be about $500,000 to link to 20 partners," said Marlene Lockard, the state's CIO in Carson City.

Taxpayers are already paying enough to correct year 2000 problems, "and they should not be asked to pay any litigation costs as a result of any suit," Lockard said.

TALENT DRAIN

Despite the veneer of confidence about year 2000 repair efforts, keeping key technical staff on the job has become as tough as running a race for some states.

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Middleware links systems over the 'net

By Randy Weston

Middleware bridges are beginning to hit the market, designed to link server computing systems don't turn companies into islands upon themselves.

The latest product is from start-up CrossRoute Software, Inc. in Redwood Shores, Calif. Its software links enterprise resource planning systems from different companies over the Internet. The goal is to improve cooperation among companies and their suppliers by letting different systems work together to plan deliveries as well as manage inventory.

CrossRoads Software, Inc. in Burlingame, Calif., earlier this year launched a similar product designed to link disparate systems within a single company [CW, July 21].

Analyst Scott Lundstrom at Advanced Manufacturing Research, Inc. in Boston said the market is ripe for such products. "Users don't want to own source code," he said.

Adaptec, Inc., a $1 billion adapter card maker in Milpitas, Calif., recently released its $1 billion software system to manage its business processes. Two of its suppliers use R/3, and a third runs System Software Associates, Inc. [SBC] software.

Adaptec uses CrossRoute's product to link its R/3 systems as well as manage inventory.

"This automates the manual process that happens today, the faxing and mailing between purchasing groups and suppliers," said Steve Robinson, electronic-commerce manager at Adaptec. It was taking four to six days to get an order to a supplier in Asia, but it now takes five minutes, he said.

So far, CrossRoute has built links for SAP, PeopleSoft, Inc., Oracle Corp. and The Bank Co. Links are customized for other systems.

The product is scheduled for release by year's end. Pricing ranges from $250,000 to $1 million, and the average cost expected to be about $500,000 to link to 20 partners.
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"Corel designed the product to take advantage of the Pentium MMX processors. On MMX PCs, the applications blaze through formerly daunting tasks, especially Presentations 8 programs."

Government Computer News
July 21, 1997

Get the edge you need. Get Corel® WordPerfect® Suite 8. And get there faster.
DEC/Intel talks may bite users in future

CW survey shows worries about weaker Digital

By Saikumar Vijayan

IF DIGITAL Equipment Corp. unloads its much-marketed but little-sold Alpha chip technology on Intel Corp., the short-term prospect for users is good. But for the company, and possibly users in the long-term outlook is less rosy.

A deal with Intel could attract more software development activity to the Alpha platform and possibly result in lower prices. The move also will pump a lot of immediate cash into Digital's coffers while helping it get rid of a costly — and failing — business, observers said.

ALPHA STRATEGY

CEO Robert Palmer has positioned Alpha as the centerpiece of his turnaround strategy. But any arrangement involving Intel raises serious questions about Digital's continued commitment to the platform. It also raises questions about Digital's strategy going forward. Fifty-nine percent of 102 users surveyed by Computerworld expressed concern that selling the Alpha chip business will make Digital a weaker company, and 63% said they don't want Digital to focus on becoming a services company.

Analysts expect that Digital will go forward with a dual-architecture strategy during the next couple of years and then quickly migrate to the IA-64 architecture. But Intel is said to be jointly developing with Hewlett-Packard Co. That could mean a forced and potentially disruptive migration to 64-bit Intel technology during the next few years, observers said. But the deal would also leave 43% concerned that Intel might drop support for Alpha and would have 48% concerned that Intel might try to force them onto Intel's platform.

"Digital is not stupid enough to kill off the Alpha," said Rob Young, VMS manager at Alpha user BDP International in Philadelphia. "But we won't be surprised if they transition everything to Intel in four or five years."

But all this is speculation. Digital and Intel are reportedly on the verge of hammering out a deal that would bring a stunning conclusion to the negotiations said Digital will sell one of its chip plants to Intel for about $600 million.

Intel reportedly will license the Alpha technology for an additional $100 million to $200 million and gain rights to use Alpha technology in its own chips. Digital would win discounted purchases of up to $100 million annually on chip purchases for the next seven years and continue to control new Alpha designs that Intel will make.

"I think it is a way of legitimizing the technology outside of the Digital installed base. I imagine it will give the Alpha a new lease on life," said Ronald D. Freed, MIS manager at Hatfield Quality Meats, Inc., in Hatfield, Pa.

In the immediate aftermath, though, a sale of its underutilized chip fabrication facility to Intel means Digital will get rid of what has become a huge albatross for the company during the past few years.

Although the 64-bit Alpha chip is widely regarded as being among the most technically sophisticated in the industry, the chip has so far been an abysmal failure for Digital in the mass market — last year, Alpha accounted for only 0.1% of worldwide chip sales, according to Semico Research Corp. in Scottsdale, Ariz.

Observers doubt that Intel will agree to any arrangement without getting something in return, especially because HP has said it will not go forward with a dual-architecture strategy if Intel is involved in the negotiations said Digital will sell one of its chip plants to Intel for about $600 million.

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Although it is being criticized for its slow action, the U.S. Department of Justice is investigating several Microsoft acquisitions and practices, including its recent investment in RealNetworks, Inc. (formerly Progressive Networks, Inc.) and its purchase of Vatreme, Inc. Both are multimedia streaming companies. In July, several senators requested the Justice Department look more closely at Microsoft's business practices, but the department declined.

Microsoft is also feeling some heat from five state attorneys general who have launched investigations into Microsoft's business practices.

Do you feel that selling its Alpha chip business would make Digital stronger or weaker, or would it remain the same?

Based: 102 Alpha users
Source: Computerworld Information Management Group, Framingham, Mass.

If Digital bought Digital's Alpha technology, would you be worried about your investment in Alpha?

4% May
3% Don't know
73% No
20% Yes

Base: 102 Alpha users
Source: Computerworld Information Management Group, Framingham, Mass.

Ralph Nader eyes Microsoft business practices

By Stewart Deck

CONSUMER ADVOCATE Ralph Nader, saying he has heard a slowly building chorus of discontent about how Bill Gates and Microsoft Corp. intimidate customers and competitors, decided it is time something was done about it.

Nader has called an industry conference for Nov. 15-14 in Washington to take a look at Microsoft's business practices and their societal impact. Some Microsoft foes, including Scott McNealy, chairman of Sun Microsystems, Inc.; attorney Gary Reback of Wilson, Sonsini, Goodrich & Rosati; and Roberta Katz, general counsel at NetScape Communications Corp., are expected to speak at "Appraising Microsoft and Its Global Strategies." Sun last week warned Microsoft for breach of contract (see story page 1).

INTIMIDATION

According to Gates strongly encouraging him to attend. "Self-Censorship brought on by the detailed fear of Microsoft retaliation ... is not healthy in any economy," Nader said in the Oct. 2 letter. "Thoughtful people in the business world who would otherwise have the position, energy and resources" to speak out are afraid to do so, Nader added. He also wrote that Microsoft is a "leading candidate for antitrust action if only the enforcement agencies had the up-to-date knowledge, willpower and resources" to take such action.

Mark Murray, a Microsoft spokesman, said Gates most likely would decline the invitation.

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Novell®
Alpha inside “If Alpha fails, DEC is dead” was how one analyst put it years ago when Digital proudly unveiled the linchpin of its turnaround strategy: the superfast 64-bit Alpha chip. That quote kept rattling around in my head last week as stories trickled out about Digital’s no-longer-secret negotiations with Intel.

The companies are hammering out an out-of-court settlement of Digital’s high-profile patent-infringement lawsuit against Intel (see story, page 31). The deal reportedly will have Digital walking away with a fistful of cash and some significant discounting arrangements with Intel, which gets to take over the floundering Alpha manufacturing plant in Hudson, Mass.

Intel — looking for all the world like a guilty party after all — is slated to get licensing rights to Alpha, which happens to be a major rival to its upcoming Merced chip (circa 1998/99). Whether Intel will muck around with adding Alpha design points to Merced probably falls into the “Who really cares?” category for most users.

But is this move really such a savvy business deal? In the short term, it could lead to a resurgence of application development around the Alpha chip and maybe even lower prices for customers.

But in the long run, I think the deal signals a depressing denouement for a once-great computer manufacturer. Digital is destined to become little more than an Intel clone reseller and integrator of other companies’ technologies. As Ross Perot would say, that’s just sad.

Our exclusive survey last week of 102 Alpha users showed that the majority (65%) emphatically don’t want their vendor focused on becoming a services company. And half of them already were worried that if Alpha withers on the Intel vine, users will end up force-marched into a disruptive migration.

Has Alpha failed? Is DEC dead? Certainly not yet. But no one said it would be quick and painless.

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OPINION

**Users offer the scoop on TCO**

Thanks so much for cheerying up my day with Editor Paul Gillin’s Up Front column, “Fun with TCO” (CW, Sept. 1). I laughed all the way to my coffee pot, esp. sun tea in the fridge.

Incidentally, if you are looking for lower total cost of ownership, try sun tea. The sun does all the work and never has to be replaced.

The only extra cost here is the annual dental bills for yellowed teeth!

Lori Scheinid Murray
Public relations manager
Tangram Enterprise Solutions, Inc.
Cary, N.C.
www.tesi.com

Paul Gillin’s piece on TCO got me thinking. It seems that this notion became epidemic after the great Tinker Toy binge, also known as TCB (total cost of the box). Technology sseers were suggesting that organizations could do their computing on a bunch of Intel boxes connected by networks. Big, expensive mainframes would disappear, probably within months.

Read the fine print of Microsoft/Sun agreement

The hype about Java today is only eclipsed by hype over the “fracturing” or splitting of the language into two camps. Although any Microsoft vs. Sun story is always a draw for readers, tales of anyone stealing away Java are drawn from pure ignorance.

Microsoft licensed Java from Sun. If Microsoft chooses not to embrace all of the constructs and application programming interfaces that are part of Java as stated by its creators, then Microsoft will lose its license to Java. Microsoft will then be left with something with Java-like qualities but will not be able to call it Java. In fact, it will be Windows and ActiveX, which is not what the public wants.

Microsoft should reexamine why it licensed Java in the first place. You and your staff should read the fine print of the Java licensing pact Microsoft signed with Sun.

Dan Pacek
Jefferson, Mass.
dpacek@tesent.com

I’m not sure how a Mississippi Riverboat went down the Thames either, but it sure looks inviting.

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**Technical abilities a must**

I concur 100% with Computerworld columnist Leilani Allen: CIOs must be technologists, first and businesspeople second (“CIOs wanted: amateurs need not apply,” CW, Sept. 8). A CIO who doesn’t know technologies — regardless of how business-smart he or she is — is much more dangerous than one who is a technical expert but weak on the business skills.

Yet in my work with CIOs, CIOs and senior IS professionals in Silicon Valley, I have yet to see a CIO lose a job over technical abilities. Most often, it’s a lack of business understanding. A group of CEOs and CIOs have helped put together an IS educational program that covers the soft business skills that CIOs say are needed. Our enrollments are high in these programs.

Keep up the great articles!

John Blumenson
Executive Development Center
Santa Clara University
Santa Clara, Calif.

jblumenson@mailer.scu.edu

Letters should not exceed 200 words and should be addressed to Maryfran Johnson, Executive Editor, Computerworld, PO Box 9171, 500 Old Connecticut Path, Framingham, Mass. 01701. Fax number: (508) 878-8933; Internet: letters@cw.com. Please include an address and phone number for verification.

Maryfran Johnson, Executive editor
internet: maryfran_johnson@cw.com
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Novell revisited

Brett Arquette

A year ago, I wrote an opinion piece for Computerworld called “Does Novell have any pulse left?” Judging by the flame mail I received, I’m sure of some you remember that column. (And by the way, were the comments about my mother necessary?)

At the time, I knew the article would irritate some Novell devotees. After all, Novell reported revenue of $550 million that quarter — someone must have been buying NetWare.

But none of the five network and system managers I had interviewed recommended Novell over Windows NT.

OF DIFFERENT MINDS

Of the mail I got on the subject, about 10% fell into the “I love NetWare, and you’re a $5/$1 jerk” category.

Another 10% fell into the “I love NT, and you’re wonderful” category.

About 30% of the mail fell into the “NetWare is better than NT because . . .” category, with an equal amount going into the “NT is better than NetWare because . . .” category.

The thing that surprised me most was the number of responses I placed in the “We run NetWare and are migrating to NT” pile.

Believe it or not, out of all the E-mail I received, I didn’t get a single response from anyone running NT and migrating to NetWare. True, at the time NT was relatively new, but many of the people who wrote were running both platforms.

Now, more than a year later, there are still several things that bother me about Novell’s stability.

Sure, the $50 million in revenue Novell posted this quarter — a $122 million loss — doesn’t instill a great sense of confidence.

But there are other factors that make me shake my head and wonder, “What the heck are those people thinking?”

MIGRATION STRATEGY

For example, Novell will give away an $800 migration tool (RexxWare) from Simware, Inc. to entice users to migrate from NetWare 3.x to 4.x. I think that’s great news.

Any company that comes out with a new version of software should supply a free migration tool.

What bothers me about the whole thing is: a) Why did Novell wait so long to do it? and b) Why did another vendor write the migration software?

Think about it.

At last count Novell had more than 4,800 employees. Are you telling me that they all sat around for a year scratching their heads, watching the stock nosedive, wondering how to get people to upgrade to Version 4.0, while another company was busy writing the migration code?

Why didn’t Novell write the code and give it away while the product was still hot? You would think if the upgrade is that nasty, the migration tools would come bundled in every version of NetWare 4.0.

The other thing that bothers me is that in all the time since that original column, I still haven’t encountered an organization that chose to install NetWare over NT.

Granted, I’m swamped with the day-to-day operations of running an information systems shop and don’t have a chance to contact as many associates as before. But out of the 10 shops I know that have cranked up client/server platforms recently, all went with NT.

I’m past the point of wondering which product is better. Both have their specific strengths and weaknesses. But a year later, the question still remains: Does Novell have any pulse left?

Arquette is manager of IS at 9th Judicial Circuit Court in Orlando, Fla. His E-mail address is barq@iag.net.

Will the dinosaurs take over Internet commerce?

John Gantz

A lightbulb went off in my head during, of all times, a recent presentation by Keith Todd, CEO of ICL — once the sole mainframe vendor from England, now a Fujitsu subsidiary.

Todd was speaking about major Internet applications his company had helped customers implement.

His presentation was one of many I have heard in the past four weeks — first at Internet Commerce Expo in Los Angeles, then two weeks ago at my company’s conference, Internet ’98. I saw scores of serious Internet-based business applications paraded before various audiences.

BIG BUSINESS

Internet commerce, or “E-business,” as IBM likes to call it, is past the experimental stage. It may even be past the early-adopter stage. My company’s forecast that $233 billion worth of goods and services will be purchased over the Internet in 2001 (most of it business-to-business transactions) looks secure, maybe even conservative. That’s been the major theme of the past month.

But there’s an implication that suddenly became clear as I listened to Todd. For all this E-business to occur, users will have to integrate an awful lot of legacy systems, heterogeneous databases, and multicountry/multicompany information and transactional systems. That integration will easily cost more than the basic underlying hardware and software platforms. It could quickly change the decision criteria for choosing vendors.

An International Data Corp. (IDC) survey of U.S. businesses earlier this year confirms that the No. 1 problem with implementing Internet applications is lack of staff for ongoing support; next on the list is integration.

If you’re hooking up a bunch of transactional databases, networking with suppliers and building a complex enterprise-wide application, would you rather deal with a systems vendor that’s worked this street for 30 years and maybe even has its own global network, or with a vendor organized to design and market shrink-wrapped software?

I know Microsoft is behind a lot of major Internet applications, for example, at Barnes & Noble, where a major switch from Unix to Windows NT took place. But for the average risk-averse multinational that needs to mix the Internet with transactional systems, can Microsoft and its resellers offer the same integration and service support as a full-line systems company?

Many of the users I talked to in the past month have told me that now that Internet (and intranet) applications have spread like weeds in various departments of their companies, they are trying to bring some enterprise-wide order to them.

If information-centric departmental applications drove Internet and Web technologies adoption in the past several years, it will be transaction-centric applications that drive it going forward. Sorry, but I don’t think this shift in application design focus plays to the strengths of the vendors — such as Microsoft, Netescope and Sun — that have dominated Internet applications until now.

The bottom line is that all those companies once considered dinosaurs — the IBMs, Digitals, CAs and ICLs of the world — have skill sets that match almost perfectly what users will need to make the great leap to Internet-based computing. IBM’s announcements this week of a bunch of E-business services are a recognition of that need.

Anyone who has built a house or a home addition can tell you: The finish work takes a lot longer and costs more than the framing. The next wave of Internet buildup is like that finish work. Keep that in mind when choosing an Internet vendor. You want one with a well-trained, well-managed crew that can handle the job start to finish.

Gantz is senior vice president at IDC in Framingham, Mass. His E-mail address is jgantz@idcresearch.com.
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IS vets organize to beat job bias

> Database markets year 2000 wisdom

By Julia King

THOUGH HE HAS more than 30 years of experience as a computer programmer, Jim Wick lists his experience as "three-plus years."

On job applications, he doesn't fill in the grade he attended school. But he learned that the hard way.

"Whenever I put down my graduation year, I never got an interview," said Wick, who graduated in 1963 from San Francisco State College. "I never got an interview."

The database is the brain of Bill Payson, a 73-year-old management consultant in Campbell, Calif. It was designed to match older but still, Wick said, he couldn't land contract programming work in youth-conscious Silicon Valley. Eventually, he found and accepted a five-month programming job at a mortgage software company in Indiana.

Wick, who retired in 1995 from General Electric Co. in San Jose, Calif., is among the 7,000 or so programmers, systems analysts, designers and testers who have registered with Senior Staff 2000, a database of downsized, retired and other over-50 information systems professionals with Cobol and other mainframe IS skills.

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Business needs force deals with shaky firms

By Craig Stedman

THE THOUGHT of taking a chance on a struggling vendor or a product with an uncertain future may not be very appealing. But IS managers often find they have little choice.

When business needs point them toward a specific product or vendor, information systems executives may be forced to bite the bullet and buy, even if the purchase adds a dash of risk to their jobs.

For example, Private Healthcare Systems, Inc., a managed-care systems group, has inherited a database of more than 100 names are added daily to the database.

Retired project manager Gordon Clark says high-tech companies are more interested in up-and-comers than retirees with just 26 months left until the year 2000, "you have to go outside of the conventional Retirees, page 40

Railway lays track for new processes

By Jaikumar Vijayan

TWO YEARS INTO a sweeping reorganization, the IS department at the Canadian Pacific Railway is learning to cope with change.

Fueled by a 20% information systems staff cut, employee relocation, increased reliance on automated business practices and a gradual move from mainframes to distributed computing, the railway's IS group and consultants at Hewlett-Packard Co. are developing a new systems management blueprint.

A $2.8 billion railway that has 17,500 route miles across Canada, Toronto-based Canadian Pacific went through a reorganization that was completed last year. The company laid off more than 1,000 employees, trimming the payroll to 21,000.

It consolidated management functions from five geographicRailway, page 40

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Top five industries that will employ IT workers in 2005

Computer services 44%

Computer and office equipment 18%

Telegraph and communication services 14%

Search and navigation equipment 8%

Life insurance 8%

Percentage figures reflect pattern of growing demand in the computer and information technology business. Source: Bureau of Labor and Statistics and Department of Labor, Washington.
Avon's IT makeover
CONTINUED FROM PAGE 39

change cycles can typically slash one-third the time and cost it takes to complete the effort, said Lillie Broek, co-founder of Interchange International, Inc., a Falls Church, Va., change-management consultant.
Mcilmurray, who joined Avon in December 1995, said operations at the New York-based cosmetics maker "were very functionally stovepiped." Systems supporting manufacturing and sales and marketing were poorly integrated, and critical systems such as billing were running on a kludgy IBM DOS/VSE PC-to-mainframe system.
To make matters worse, many of Avon's 350 IT staffers had worked in the same building together for "17, 18 years and didn't know each other. It was a very distrustful environment," said Mcilmurray, who spoke at the Society for Information Management International's annual conference in Boston last month.
Mcilmurray said he spent his first six months at Avon gaining the trust of the staff. That approach made the staff "more willing to take risks," he said.
Several members of Avon's help desk wouldn't comment on the department changes. Programmers, meanwhile, were sent into the field to work with end users during the company's fourth quarter -- a move that raised some eyebrows because Avon historically generates 40% of its annual sales volume at year's end. "That's the best way for our [IT] staff to learn about the businesses in the trenches," Mcilmurray said.
The results: Internal surveys showed end users are more satisfied with help desk services than before, and programmers have a better understanding of the business, Mcilmurray said. Since the effort started three years ago, Avon has slashed its IT costs 16%. This is due in part by having a more productive technical staff, Mcilmurray said. Most of the savings came from consolidating Avon's IT operations, he said.

Railway lays track
CONTINUED FROM PAGE 39
locations into two. And it lost staffers who didn't want to change locations.
The goal of the process overhauled is to improve the availability and manageability of the railway's IS operations in the face of all this change, said Jane St. Germain, a management consultant.
That was the message Drummond planned to take back to his 4,000-employee company, which builds and installs robotic-assisted automotive welding systems. Drummond began working on the year 2000 problem about a month ago, after the company received letters from several big automakers asking about his company's efforts.
PLANNING AHEAD
Urging management to plan for possible year 2000-related business disruptions, such as delays in processing orders, is one of the jobs of information systems leaders, said Leland G. Freeman, a management consultant based in Framingham, Mass. "You need to start broadening the thinking on the management of the project," he said.
But most companies haven't not only added staff or money to address the problem, said consultant Ken Orr of the Ken Orr Institute in Topeka, Kan. "Many of our systems are dead -- they're already dead," he said.
IS officials were told to concentrate instead on saving their businesses. "It's not the applications anymore that are important; it's the services," said year 2000 consultant Peter de Jager in Brampton, Ontario. "What services cannot fail?"
To focus a company's resources on fixing its year 2000 bugs, de Jager recommends a form of "triage," shutting down systems that aren't critical.

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Canadian Pacific Railway
The objective: Improve management and process control across IS, increase reliability of core systems.
The driving force: An increased reliance on automation, fewer support staff and a move from mainframes to client/server architectures.
How it is being done: Overhauling all IT operating procedures and processes, including new policies, roles and responsibilities for IS staff.

Retirees work to beat job bias
CONTINUED FROM PAGE 39
workforce in order to meet the manpower needs. And the single largest untapped source of skill and talent is the retired community," Payson said. But to hear older professionals tell it, many companies — especially high-tech enterprises in Silicon Valley — have little, if any, interest in hiring them.
In the past few years, "I probably sent off 1,000 resumes, and it became very apparent that I was something to go away and sit on the shelf," said Gordon Clark, a 62-year-old retiree and part-time consultant who has more than 20 years of project experience in the aerospace and 10 years experience as CEO of his own software company.
"In the high-tech areas, they want what they believe to be the up-and-comers, and they don't understand there's a skill set out there that could get their companies on track and real quick," said Clark, who joined the database.
The exceptions are companies such as System Partners, Inc., a Los Altos, Calif., consulting that has agreed to hire Senior Staff 2000 workers who have completed a programming and year 2000 brush-up course sponsored by the University of California at Santa Cruz.
"In this business, clients want somebody who's very skilled, but they want somebody who has done [programming] for 20 years up until last Tuesday," said System Partners Vice President Steven Laine. Laine said many of the Senior Staff programmers "were very experienced people, but they were away from the workplace" for between six months and five years.

WORKERS INTERESTED
So far, Payson said 20 Senior Staff workers representing more than 30 years of programming experience, have paid $25 each to complete the brush-up course, which was held for eight hours per day on three consecutive Saturdays. Between now and December, two other brush-up courses will start in Orlando, Calif., and at the University of California at Los Angeles.
"We've completed the course," Laine said the older professionals can expect to earn between $45 and $55 per hour.

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Business needs force deals with firms

CONTINUED FROM PAGE 39

Care services company in Waltham, Mass., early this year chose a set of administrative and analysis applications designed for health care firms. The rub: The software ran only on databases made by Sybase, Inc., which had just returned to profitability after three straight losing quarters.

"We could have decided at the 11th hour that we didn't want to go that way," said Jim Poole, vice president of enterprise support services at Private Healthcare. But the chosen applications were the best fit for its business requirements. So, after long talks with Sybase, Poole and other IS executives were convinced the Emeryville, Calif., vendor was on the road to recovery and Private Healthcare went ahead with the deal.

Many companies with urgent technology needs find there simply are no safe havens in which to seek shelter. That forces them to settle for vendors or products that are encountering rough weather and then to hope for the best.

SETTLING FOR WHAT THEY HAVE

Multicare Cos., a health care provider in Hackensack, N.J., wound up in that position last year when it was looking for integrated directory and messaging software for LANs.

Banyan Systems, Inc.'s StreetTalk directory turned out to be "the only show in town," according to Tony Macaluso, Multicare's director of information technology, who was moving the company away from Novell, Inc.'s NetWare. The problem was that Banyan was already well into a financial slide that has yet to let up.

Multicare did get away from Banyan's Vines networking software and onto Windows NT once StreetTalk ran natively on NT. But Macaluso still doesn't see an alternative to StreetTalk. That's life, he said. "The software works for us, and I basically figure they'll be around in one form or another."

The city of Aurora, Colo., expects to buy Windows NT server software from Citrix Systems, Inc. that lets dumb terminals become virtual PCs. These plans are taking shape even though Aurora officials fear the whole setup will have to be redone because of a recent licensing deal between Microsoft Corp. and Fort Lauderdale, Fla.-based Citrix.

Microsoft plans to resell the software with its own communications protocol rather than the one Citrix uses. That could force changes if Microsoft's version becomes dominant, said Janice Richardson, manager of Aurora's systems and operations division.

"I worry about what the 800 million-pound gorilla is going to do to me," Richardson said. "But you can only make a decision based on the technology that's available when you need it. I need it today, and Microsoft isn't there."

MOVING ON

But some users hope their reliance on certain technologies will be short-lived. For example, Covance Laboratories, Inc. in Madison, Wis., this year bought Digital Equipment Corp.'s OpenVMS operating system, which has a huge installed base but doesn't attract many new users.

Covance, which analyzes food products and other items, had little choice because the chromatography application it chose runs only on OpenVMS. But the lab hopes to be able to convert its Digital box to Windows NT by mid-1998.

"We didn't buy it because we were in love with OpenVMS," said Patricia Prime, director of information services at Covance. "We really hope this is just a stepping-stone."
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Is this a great time, or what? :-)

MCI
Feds hit Web

The U.S. government plans to invest $15 million in a Wide Web site for agencywide purchasing. The Defense Information Systems Agency signed a five-year contract with Digital Commerce Corp. to improve the FedCenter site (www.fedcenter.com); the goal is to turn the site into a one-stop electronic procurement center.

Firewall management

Raptor Systems in Weltham, Mass., will begin offering third-party content-management software with its Eagle firewalls and plans to integrate that product into Eagle within six months. The move to incorporate MIMEmiprover from Integrity, Inc. in Kirkland, Wash., is aimed to let systems administrators set up scans for viruses, hostile Java or ActiveX code and key phrases in electronic mail from within the firewall control panel.

Auto-refute

TenFour US, Inc. in Reston, Va., announced TFS WebWaiter, software that lets users retrieve information from a Web site without surfng the Internet. The software, an add-on option for the company's TFS Gateway interface among disparate mail systems, delivers information from the Web either to a user's desktop or E-mail in-box.

TFS WebWaiter will ship in the fourth quarter.

BOOK REVIEW—Netizens

‘Net is rich in history and impact

By Johanna Ambrosio

This book is a must-read for anyone even remotely connected with or to the Internet. And that's true whether you agree with the authors' prediction that the Internet will bring far-reaching social and technological changes to the world — or their belief that it already has started to.

Part philosophical tome (inspired by the writings of Thomas Paine and Jean Jacques Rousseau), part social science and part history, Netizens is worth the price of admission solely for its look at some of the Internet/Arpanet pioneers.

The worthwhile part isn't just a discussion of how the technology developed, but what the inventors were thinking at the time.

J. C. R. Licklider, director of the Department of Defense's ARPAnet Information Processing Techniques Office, co-wrote a paper in 1968 that defined how computers could help people create knowledge by sharing information rather than just passing data back and forth.

Licklider and Robert Taylor, his co-author and ARPA colleague, viewed communication as an interactive creative process. That was way before the whiz kids of the Web came up with their various spinning whirligigs and whirling thingamabobs.

TOO MUCH?

Netizens also delves into the evolution of Usenet, time-sharing computers, the Unix operating system that is the foundation of the Internet and other precursors to the World Wide Web that most of us use today.

Where the book falls down is in all the other topics it tries to take on: the 'net and politics, the 'net and the media, expanding one's horizons on the Internet, and the 'net's future. The authors — and the numerous 'netizens they quote — certainly make valid and important points about each of those topics. But the book's structure suffers as a result of trying to do too much.

There is also too much opinion, especially in those latter portions of the book about the media and other topics. For example, statements such as "Only

By Barb Cole-Gomelsky


The publisher last month launched InterScience, a Web-based service that gives customers access to more than 400 scientific and professional journals. The company also will continue to publish its journals in print.

Wiley's technical readership — scientists, doctors and researchers — is on the Internet long before the Web became popular for electronic commerce.

"We faced a sea of authors who were saying, 'What's taking you guys so long to get on the Web?" " said Gregory St. John, director of new media development at Wiley. Authors wanted to transmit articles via the Web, and readers wanted a searchable format that included the full text of articles, he said.

In the past, the company made only tables of contents and abstracts of articles accessible over the Web. In contrast, InterScience includes approximately 40,000 full-text articles per year, complete with graphs and charts.

"PEER REVIEW"

The system also will let Wiley's authors submit articles and have them reviewed electronically by peers. And the company said InterScience will be a springboard for new services and products.

Wiley turned to Zuno, a Mitsubishi Electric Corp. subsidiary in London, for an application to organize, manage and publish InterScience subscriptions will.

Panel: Don't let extranet fall to IT

Extranets are just too important to completely trust to the IT department — not on technical grounds, but because of cultural issues. That was the consensus of a panel that included three extranet implementors, one of whom hails from an information technology group.

The panelists agreed that the "legacy" mind-set of some IT departments just won't map to extranet requirements.

These include business process re-engineering and dealing with business partners and customers who have complex organizational and technological issues of their own.

Geri Spieler, a research analyst at Gartner Group, Inc. in Stamford, Conn., defined an extranet as two or more intranets linked together. They are membership-based and limited to trusted partners. They offer bilateral security and are based on virtual private networks.

"Our extranet came from a high-level senior management group that embraced the vision and then did it" with the help of many groups, including IT, said Ralph Liniado, senior vice president of business development at Manheim Auctions, a huge auto auction house in Atlanta. But, Liniado said, the original idea "couldn't have come from IT."

Liniado and the other panelists made their comments during the Intranet/Extranet conference, hosted by Gartner Group hose last month.

One participant said the extranet development at his organization was going along fine until it landed in the IT group.


Cannon helped develop the Extranet controls, page 50
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Readers: Wiley, get online! Extranet controls urged

CONTINUED FROM PAGE 47

get a personal home page on which they can activate automated searches and store articles. Each journal also will have its own Web site with detailed information about the journal and links to related products and sites.

With Digital Publisher, load their documents into a secure repository. A Production module handles page loading and version control, and a Charge module lets companies charge for access. "Today, we need to have a way to permit access rights to a large group of people that we don't interact with," St. John said.

With Digital Publisher, Wiley can sell 25 access licenses of a journal to a university library, for example. It also can decide on a journal-by-journal basis which abstracts are considered current.

Don't mess with the millennium bug—take your best shot! Here's your automatic weapon.

CONTINUED FROM PAGE 47

by seeing many points of view can one figure out his or her position on a topic,


**NO EXPERIENCE**

The IT group at the DLA was an IBM mainframe shop. The Web site was set up on a client/server system that the IT group had no experience with or, apparently, any desire to take on.

"The IT people do not want to host the hardware; the IT people do not want to look at the new development requirements. They want to know why this can't be done in Cobol," Cannon said. Even the lone IT representative on the panel agreed there can be a cultural disconnect when it comes to extranets.

"It used to be in IT, then I resigned from IT to do the Web work," said Sherman Woo, director of global commerce at US West Communications, Inc. in Boulder, Colo.

"When we began to succeed, the CIO invited me back into IT," Woo said. But, he said, "I'm comfortable at the moment because IT is beginning to change" culturally.

Part of the change includes mixing new technology with old, as US West will do next year, when it begins hosting Web sites on MVS mainframes, Woo said.

**TIPS FROM THE PANEL**

• Don't assume that the partners you are linking up have their data acts together.

"3M, as an example, has data strung out among many divisions," Cannon said. So now 3M has a $34 million project under way to produce this internal network, he said.

• Keep a close eye on any external development partners.

"You have to make yourself important enough so that you'll meet your deadlines and meet your goals," said Ralph Liniado, senior vice president of business development at Manheim Auctions. Originally, Manheim had used a games developer to build its Web site. But it brought development in-house when the partner started, well, playing games.

• Contrary to popular belief, Web technology can be up to the task of delivering complex applications.

US West sells 3,000 telecommunications products and services in 14 states. Its Web site — essentially an order-entry site — brings up different rates, schedules and business rules, depending on what is ordered and in what state the customer resides. The site "demonstrates the agility of using Web techniques to build very sophisticated applications," said Sherman Woo, director of global commerce at US West Communications.

• Don't underestimate the effort required.

"It's not easy. You're trying to use your legacy systems and extend your core business," Liniado said. "The biggest surprise was just how damn hard it is."

Book explores history of 'net
Windows NT Workstation: Is it right for your size business?

Inside:
In the market for a new business PC? Why pre-installed Microsoft Windows NT Workstation is your best business move yet.
If there's one thing to be learned from the explosive growth in the number of small businesses, it's that size and success aren't necessarily related. Given the right tools, a small business can perform just like a big business. The bottom line? You don't have to be big to do big things.

Keeping that in mind, Microsoft—with our PC partners Dell, Digital, IBM, and others—has created a business computing solution that can change the way businesses of all sizes work and succeed. It's Windows NT pre-installed on new PCs.

We can guess your next question: "Isn't Windows NT just for enterprises?" The fact is, no it's not. We believe Windows NT is the world's most powerful business operating system. And small businesses everywhere are using this power on new PCs with big results. Why did they choose Windows NT Workstation? Here's what they told us.

"Windows NT allows my small company to do the work of a large company."

—Arabian, Hypnotic Fx

**Windows NT Workstation is dependable.** "Small businesses are no different from big corporations in one important respect," says Alton Loe of OSI. "Our computers need to run just as dependably. That's why we like Windows NT. It's bulletproof." Greg Hillenbrand of Fourth Shift concurs. "For us, running Windows NT on IBM ThinkPads was a no-brainer. We've been using ThinkPads for four years—but with Windows NT, we were suddenly able to do things we'd never done before. Windows NT is safe. It's stable. It doesn't disappoint us."

**Windows NT keeps your data safe and secure even under the very toughest conditions.** Ever accidentally leave your laptop in a cab? Or find out that someone who shouldn't have accessed your files did? We have, too. That's why Windows NT includes integrated security. This way more than one person can use the same personal computer, but each has access only to his or her individual files. "The key reasons we had Windows NT pre-installed on our new PCs was its security and scalability," says Mike Stone, Stan Wiley Realtors. "In our business, data integrity is paramount. Windows NT allows us to guarantee complete customer privacy, as only agents with a need to know can access customer information—even on our shared PCs."

**Windows NT is not complicated.** Windows NT features the same familiar user interface that is in the Windows 95 operating system. "The Windows NT user interface makes everything easy," says Leoung O'Young of Digimata. "We just finished a project that, just a few years ago, we couldn't have even attempted. But now that we have a Digital Personal Workstation running..."
Windows NT, we can take on big projects and really deliver.” Jan Denson of Pillsbury Madison Sutro LLT agrees, having recently migrated the firm to a Dell OptiPlex PC and Windows NT environment. “It hasn’t been hard at all to learn Windows NT—and we’ve got people here who, five hours before they got their system, didn’t even know what a mouse was. A little bit of training, and they’re up and running. That’s how easy Windows NT is.”

**Windows NT is a multitasking wonder.** What about doing multiple tasks at once? Windows NT preemptive multitasking allows you to work fast and furiously in several applications at the same time without worrying about overloading the system. “Windows NT task switching is … bam! It’s immediate,” says Loe. “Windows NT runs every application in a separate memory space, so it’s like having a virtual machine for each task.”

**Windows NT turns you into a brilliant manager of files, folders, applications—and time.** Hate filing? That’s okay. Windows NT presents a view of information that makes browsing and managing files, drives, and network connections easy—and your time even more productive. “We’re able to get more work done in less time; we know the status of everything. And with our Digital Personal Workstation, the 3-D work really screams,” says Arabian, owner of Hypnotic Fx.

**Windows NT saves big bucks.** Industry analysts report that running Windows NT costs a lot less than running Windows 3.1.* And don’t forget the time saved by not calling technical support and how much more work your firm can accomplish—and bill—due to increased productivity. “When you consider the return on investment,” adds Loe, “you’ve really got to ask yourself, can I afford not to go with Windows NT?”

**Windows NT is the best way to move your business into the future: a 32-bit world.** Besides increased security, better performance, bulletproof reliability, and reduced costs, what else can a 32-bit operating system like Windows NT offer? Well, how about the satisfaction of a secure investment? As Denson points out, “We did the research, and it was clear to us that 32-bit was the only way to go. This was a strategic decision—our goal was to buy on the forward edge of technology.” What did their research tell them? “All indicators pointed to a 32-bit environment running Windows NT.”

**Windows NT has a way of helping businesses of all sizes accomplish one important task: success.** “It’s funny,” summarizes Arabian. “A lot of people think Windows NT is just for large businesses, but I think it’s actually the other way around. Windows NT is the way in. Being successful has little to do with size and everything to do with how quickly you move. And I can tell you this much: With Windows NT, we’re moving pretty fast.”

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*Gartner Group, 1990; Forrester, 1997.*
From our partners

Dell: built for your business. At Dell, we talk with thousands of business customers every day, and this is what we’ve heard. You want a powerful machine that won’t become obsolete within a year (or even five). You want it configured for your specific needs. And you want it at a fair price. How do we respond to these requests? With one word: OptiPlex.

The OptiPlex system, like all of our other offerings, isn’t something we pull from stock. We build it in the exact configuration you want, fully loaded with the software you spec, from the ground up. Today, more businesses are requesting OptiPlex computers pre-loaded with Windows NT Workstation than ever before, and we think that’s smart. Windows NT is a powerfully robust system, and we should know—our validation lab puts it through its paces every day. But our partnership with Microsoft goes well beyond meetings and tests. We’re also working with it to create a computing road map designed to give you the ability to see further. Like all the way to the future. Long before it arrives.

Digital: approaching warp speed. At Digital, we see a tremendous opportunity for businesses of all sizes to sharpen their competitive edge by moving to powerful Windows NT-based workstations. Built for the demanding design professional, our Digital Personal Workstations can drive down costs, improve productivity, and help you harness the latest, most innovative 32-bit applications. And the results are impressive. Digital Personal Workstations unleash the true power of Windows NT Workstation to help users visualize their creations faster and more realistically. At the same time, they offer access to state-of-the-art office and personal productivity tools. It all adds up to faster time to market. Even better, the combination of Digital Personal Workstations and Windows NT offers a total cost of ownership that is 39 percent lower than that of UNIX workstations, according to a study conducted by Deloitte and Touche. See what we mean? Impressive results. And exactly what you would expect from a powerful alliance between two market leaders: Digital and Microsoft.

IBM: think smart. At IBM, we’re dedicated to helping our customers get the most out of their computing solutions, and our ThinkPads are a perfect example. Working closely with Microsoft, we designed all our ThinkPads to take on the very real challenge of running Windows NT Workstation on a notebook computer—and we’re happy to report that the long hours have resulted in a smashing success.

Today, while all our ThinkPads run Windows NT, the IBM ThinkPad 770 provides what we believe is the industry’s premier Windows NT Workstation implementation in a mobile platform. Every ThinkPad 770 features, among other things, full power management, Ultrabay Plug and Play, and hot plug PC Card support. Bottom line? Our customers can take advantage of Windows NT security, scalability, and reliability at 35,000 feet as easily as they can on their desktop system back at the office. Flexibility through partnership. At IBM and Microsoft, it’s what we think small businesses need to succeed.

For more information on Microsoft’s partnership approach to Windows NT business computing, visit: www.microsoft.com/windows/newtech/...
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The Enterprise Network

E-MAIL EXPLOSION

Worldwide E-mail software revenue is projected to grow from $1.1 billion this year to $2.1 billion by 2001.


Read me my mail

Two companies recently shipped messaging products that integrate E-mail and voice mail. Los Angeles-based Concierge, Inc. is shipping Personal Communications Attachment, software that reads electronic mail, faxes and voice messages that are stored on a PC over the telephone. The software costs $99.95. And Big Sky Technologies, Inc. in San Diego is shipping Remark Messaging Assistant for Notes, which lets users listen to E-mail from a Touch-Tone telephone. It costs $1,995 for 300 to 400 users.

92K bit/sec. speed

MultiTech Systems, Inc. in Mounds View, Minn., has demonstrated its new device that can send data at up to 92K bit/sec. over two dial-up analog telephone lines. Using the ConsolePilot server, MultiTech splits a data stream in half, with each half carried over a separate analog phone line. At the user side, the two halves are both plugged into the PC communications ports. The PC must be equipped with two Kylifon modems. The chips are made by Lucent Technologies, Inc. in Basking Ridge, N.J.

Managing the OS

Fastlane Technologies, Inc. in Halifax, Nova Scotia, recently released Enterprise Final, software that enhances the deployment and manageability of Microsoft Corp.'s Windows NT and Iansys Systems, Inc.'s Vines networks. It consolidates network administration functions, which lets administrators automate routine tasks such as synchronizing account information among networks.

The recent expansion of a six-month alliance between Microsoft Corp. and Cisco Systems, Inc. continues a long-standing trend of high-profile technology pacts among networking vendors. But the success of these alliances often is fickle at best.

Microsoft at its Professional Developers Conference last month announced an alliance with Cisco, with support from 20 other vendors. Under the alliance, the two plan to develop a specification that would let Microsoft's upcoming Windows NT 5.0 Active Directory manage applications, users, network devices and services. Jim Allchin, vice president of Microsoft's personal and business systems group, said the alliance will give businesses a unified mechanism to administer all network components and users — thereby reducing the staff and applications needed to manage large networks.

The spec will provide a standard scheme for collecting, storing and exposing network status information. Allchin said the deal complements the Desktop Management Task Force's (DMTF) Common Information Model spec and uses the Lightweight Directory Access Protocol (LDAP)/Microsoft, page 56

Polaroid 'net strengthens business links

By Bob Wallace

Polaroid Corp. is using its sophisticated mesh of networks to support its technologically demanding users and to create a path to large customers and suppliers.

The company is building an expansive extranet that gives suppliers limited access to its databases and makes 40% of its U.S. sales over an electronic data interchange (EDI) service.

"We use the extranet to build new or better relationships with some business partners and suppliers by providing them access to our inventory control database," said George Deyett, telecommunications operations manager at Polaroid in Waltham, Mass. "It gives them access to information they need without opening up our entire network to them."

Polaroid has used EDI for two years and has connections to many major customers, including Wal-Mart Stores, Inc. Deyett said he is considering running EDI over the Internet to make electronic connections simpler.

But the extranet wouldn't be possible without a solid WAN/LAN foundation that includes wide-area network segments in eastern Massachusetts, a domestic network and an international network.

"The [WAN] also enables us to better support our workforce, which is rapidly becoming more mobile," Deyett said. "We have many small remote sites. Some are networked, and some still aren't. Supporting them is a big project."

Polaroid was among the first to use Synex Corp.'s Fiber Distributed Data Interface service. The service lets sites more quickly transmit bandwidth-intensive computer-aided design files between locations, Deyett said.

The system lets Polaroid link LANs at sites throughout eastern Massachusetts at 100M bit/sec., which means bandwidth doesn't drop after data leaves the campus network.

Polaroid needs the high-speed connections for applications such as videoconferencing, which helps far-flung sites

No early payoff from Cisco/Microsoft pact

"There are fantastic synergies, and both companies have the resources to really promote standards."

Mike Sidell

Charles Schrab

By Laura DiDio

Alliance shows promise, benefits are year off

The recent expansion of a six-month alliance between Microsoft Corp. and Cisco Systems, Inc. continues a long-standing trend of high-profile technology pacts among networking vendors. But the success of these alliances often is fickle at best.

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The spec will provide a standard scheme for collecting, storing and exposing network status information. Allchin said the deal complements the Desktop Management Task Force's (DMTF) Common Information Model spec and uses the Lightweight Directory Access Protocol (LDAP). The Interface enables a few of Plat-
Monthly fee rebate offered to large companies

By Matt Hamblen

MCI Communications Corp. has announced guaranteed door-to-door Synchronous Optical Network (Sonet)-based data service for large companies in 22 metropolitan areas. MCI Broadband Connections service, which combines MCI's long-distance network with new MCI local facilities, will let the carrier provide standard service guarantees that analysts said are unique in the industry.

If a customer's network fails for more than one minute in a given month, MCI will rebate half the monthly fee; if the service is out for more than an hour, MCI will rebate a full month's fee, officials said.

Also, MCI will guarantee to hook customers up to the service on a certain date. If service isn't connected by 30 days after that date, a customer will receive a refund equal to double the presubscription fee. That fee could be $20,000 for setting up T3 services, making the refund worth $40,000.

Analysts said the guarantees are part of a recent trend among telecommunications companies, which are turning service-level agreements designed for valued individual customers into standard commercial offerings. Users should expect to see guarantees become more common as the network service industry gets more competitive, analysts said.

"This service is for companies obsessed with two things: ultrahigh speed and ultrahigh reliability," said Mike Smith, an analyst at Probe Research, Inc. in Cedar Knolls, N.J.

MCI, in Washington, couldn't identify any customers, but Mike Smith said there might be a pool of only 100 to 200 large companies willing to spend tens of thousands of dollars per month on the service. "The potential pool of customers is fairly limited, but it's not an insignificant offering," he said.

The guaranteed service will cost about 15% more than monthly costs for existing, nonguaranteed service, MCI officials said. As an example, officials said a Sonet T3 guaranteed connection will cost $542.472 per month from New York to Chicago, about 12% more than the service currently available.

MCI Broadband Connections makes data connections at 45M to 155 M bit/sec. It is based on installations of fiber facilities in major cities and is directly connected to more than 8,000 buildings so far.

Sonet is a transmission protocol that dictates transmissions of data across fiber-optic cable. It can combine voice, data and video transmissions on a single channel.

Platinum integrates tools in ProVision

**CONTINUED FROM PAGE 55**

"ProVision promises quicker response, more convenience and less duplication of effort," said Platinum user Mike Mueller, a senior systems analyst at Northwestern Mutual Life Insurance Co. in Milwaukee.

The systems administrators and database administrators who care for 30 Unix servers at Northwestern will see the same alarms and share automated responses, not work in isolated consoles, Mueller said.

Lack of integration bothered Jerry Burgen, systems and database administrator at D and I Transport in Wayne, Mich. Burgen said Platinum could offer only a developer's kit to help him link six tools his company had acquired.

"Now I look forward to putting aside my handwritten scripts to let my Platinum tools talk to each other," Burgen said.

Users said they want all their chosen tools to work together as soon as possible. But Platinum has more than 100 product tools; only a dozen will offer ProVision integration by year's end. Even so, delivery of the Platinum Open Enterprise Management Services technology promised two years ago has encouraged users to extend their fledgling suites. "I'm not in love with Platinum to the point that they're the only vendor I'd evaluate, but now I would tend to look there first," Mueller said.

MidFirst Bank in Oklahoma City, runs only the Autosys job scheduler from Platinum, but it hopes to add four more tools to start building an enterprise management suite, said Collin Douglas, Unix systems administrator at the bank.

"Integration was their only weak point compared with alternatives like [CA's] Unicenter TNG and [Tivoli's] TME 10," Douglas said.

"I look forward to putting aside my handwritten scripts to let my Platinum tools talk to each other."

- Jerry Burgen,
E and I Transport

The ProVision option should trigger sales in the huge base of Platinum users, but Platinum faces significant competition from framework players CA, HP and Tivoli, said Herb Van Hook, an analyst at Meta Group, Inc. in Westport, Conn.

Platinum users should adopt the free ProVision upgrades to benefit from the common interface and infrastructure, Van Hook said. But Platinum will struggle against the entrenched vendors because of ProVision's functional weaknesses, such as the lack of network and inventory management, he said.

Cisco/Microsoft pact

**CONTINUED FROM PAGE 55**

Cisco will incorporate its network routers and its Internet-working Operating System services into the draft specification. "There are fantastic synergies, and both companies have the resources to really promote standards for directory-enabled networks," said Mike Sidell, senior business manager of business systems at the Electronic Brokerage division of Charles Schwab & Co. in San Francisco. "Still, the Active Directory is a year away from shipping. So who knows whether standard will become reality or remain a fantasy."

According to Bob Sakakeeny, an analyst at Aberdeen Group, Inc. in Boston, "Some alliances succeed; many are pure hype designed to freeze the market."

In general, analysts and users said, most alliances never make it beyond the hype stage. A recent example of a successful alliance, is Sun Microsystems, Inc. getting vendors to support its Java programming language. By contrast, 3Com Corp.'s attempt in late 1994 to forge a technology alliance is generally regarded as a flop, which had attempted to enter into a pact with multiple vendors to promote Priority Access ControlEnabled technology to run multimedia over Ethernet networks. In the case of the Microsoft/Cisco pact, seeing is believing.

"It sounds great, but at this stage, I don't take it too seriously. The alliance is based on the Active Directory that doesn't exist and won't for at least a year. I'm also skeptical because Microsoft never supported any DMTF initiatives before this," said Matt Rice, senior network manager at USTrust Bank in Cambridge, Mass.

Eric Hindin, an analyst at The Yankee Group in Boston, agreed.

"Alliances are useful in defining the direction products need to take and to create awareness of technology to solve issues. But Microsoft's idea of a partnership isn't democratic. They create something and end up close to support them," he said.

Polaroid extranet

"We use the extranet to build new or better relationships with some business partners and suppliers by providing them access to our inventory control database."

- George Dyett,
Polaroid

Dyett is considering consolidating those two WANs and a third, which runs at 1.544 M bit/sec T1, into a Synchronous Optical Network (Sonet) in the U.S. Even after the cost of new equipment, aggregating the traffic would save money, he said. He wouldn't mention specifics.

Dyett has hands full managing the network, which continues to grow as the number of users of sophisticated networked applications— including videoconferencing and SAP AG's R/3 — has grown.

"We've gone to two data drops per office, and that happened over a short time, too, like three to five years," said Ron Hill, an information management analyst at Polaroid.

"When I first started as an electrician many years ago, everybody was on the same wire. So if one person went down, everyone did. The network's come a long way."

Dyett is challenged by the mass of projects, but it isn't unusual at major companies, analysts said. "[A WAN manager] has to be able to juggle several important and often diverse projects at once without any one suffer- ing," said Daniel Briere, president of TeleChoice, Inc., a consultancy in Verona, N.J.

"And global companies typically have a spider's web of different WAN lines to monitor and manage," he said.
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**Bundled office apps sweeten NC offer**

By April Jacobs

**USERS AND ANALYSTS are calling Network Computer, Inc.'s (NCI) decision to bundle StarOffice — a Microsoft Corp. Office-like productivity suite — with its NC server software a big step forward for network computers.**

NCI, based in Redwood Shores, Calif., is a spin-off of IBM's DBs or Red Brick Systems, Inc.'s namesake decision-support database. The upgrade of the four-product suite is scheduled to ship next month. Per-product prices are expected to range from $7,500 to $65,000.

The product is available as a Microsoft Corp. Office-like productivity suite — with its NC server software a big step forward for network computers. NCI, based in Redwood Shores, Calif., is a spin-off of IBM's DBs or Red Brick Systems, Inc.'s namesake decision-support database. The upgrade of the four-product suite is scheduled to ship next month. Per-product prices are expected to range from $7,500 to $65,000.

**StarOffice 4.0 suite will give users of Oracle's NC the following features:**

- **Word processing**
- **Spreadsheet and database functionality**
- **Internet access and E-mail**

StarOffice 4.0 suite will give users of Oracle's NC the following features:

- **Word processing**
- **Spreadsheet and database functionality**
- **Internet access and E-mail**

**BIG STEP**

"This is a very important step forward for Oracle and network computers," said Anne Thomas, an analyst at Patricia Seybold Group in Boston. She said there are few competitors currently in the market.

Allen's opinion was echoed by other network computer-minded end users and industry analysts.

**NIKE JAPAN**

NIKE JAPAN

**1997 revenue:** $613.5 million*

**Growth rate:** 93%

**Japan is the second-largest growth market for Nike shoes and apparel, second to the U.S.**

**Nike Japan accounts for half of Nike's Asia-Pacific business**

*N Fiscal year, which ended May 31

By Randy Weston

Nike — the word invokes images of double-digit growth, a corporate logo recognized worldwide and the best athletes in the world clamoring to be represented.

But for Nike Japan Corp., keeping up with the image is a struggle. Sales in Japan are going through the roof while an aging Fujitsu Ltd. 8,480 mainframe that runs a custom order-entry system lags behind. "These are great problems to have," said Michael Della Ratta, director of logistic support at Nike Japan. "Unfortunately, this computer system we have is not of much use unless it ties in with improving the customer's life [and] how they can relate to Nike."

So Nike Japan, the Tokyo-based subsidiary of Nike, Inc. in Beaverton, Ore., set out to revamp its entire order-entry system to create some uniformity in its customer relations. The project includes installing System ESS order-management software from Industri-Matem-atik International Corp. in Tar-rytown, N.Y. The entire project, including hardware and licensing fees, is budgeted at between $15 million and $20 million. It is scheduled to go live in June.

**STIFF COMPETITION**

Della Ratta said competitors in the Japanese market — companies such as Asics Corp. and Mizuno Corp. — set the service standard and pressure Nike's information systems people and equipment to keep pace. "They are quite customer-oriented, and keeping up can sometimes lead you down a path that can be very demanding on your team," Della Ratta said.

Nike Japan, page 62
Nike Japan revamps system

CONTINUED FROM PAGE 61

computer system and customer service group," he said.

With the new system, Nike Japan's order-entry and customer service processes are guided by the company's specified business rules and decision-support mechanisms in the software.

"The custom [mainframe] system has no rules, so if you get a good customer service agent, you get good service" from Nike, Della Ratta said. "But if you get someone who is junior or someone who is having a bad day, you get bad service. But with the new customer service package, there are rules to guide the process so you get uniform service."

CUSTOMER EDUCATION

The system also means educating customers on a new way of doing business. Most of Nike Japan's customers, mainly retailers and wholesalers, place orders on demand instead of forecasting or using shipping windows. So Nike is trying to change that by using the system to help its customers forecast needs six months ahead. The forecasting is being done with a custom system built by Nike for all its operations.

"It's really a new learning [experience] for a lot of customers," Della Ratta said. "It's about making them more like a partner than just someone who can demand a product today."

Greg Girard, an analyst at Advanced Manufacturing Research, Inc. in Boston, said although improving the demand end of the process is a worthy endeavor, it should go hand-in-hand with improvements in supply-chain management.

"There is a lot of supply-chain opportunity driven by forecasting," Girard said. "You can't get it all by execution. You need to get a good portion of it through improved forecasting and demand planning."

Once Nike Japan has the project in place — from execution of its new software system to better forecasting its needs — Della Ratta said the company should be able to more efficiently get the nearly one million pairs of Air Jordan basketball shoes bought each month to stores across Japan.

Bundled apps

CONTINUED FROM PAGE 61

ingham, Mass., said access to more PC-like applications will help network computers gain a wider audience. But the jury on network computers is still out.

"Using a Windows base, this may be one more brick in the edifice needed to make the NCI environment viable, but it doesn't answer longer-term questions like whether it will be occupied by many users. It doesn't guarantee a passing grade," Kay said.

WAIT-AND-SEE APPROACH

Bruce Benham, chief information officer at RE/MAX International, Inc. in Englewood, Colo., said he is passing on any network computer adoption plans until they become more widely accepted. Network computer models are still so new that reliable market statistics aren't yet available.

Benham said the availability of more applications and improved functionality could make network computers more attractive in a few years. He said much of his hesitation is based on the fact that they still appear to be limited in functionality.

The StarOffice 4.0 suite provides users with standard productivity application features, such as electronic mail, word processing, spreadsheet and database access. Users of StarOffice can also link their documents to Microsoft documents by saving them in a similar format or as Hypertext Markup Language-based documents to be posted to the World Wide Web if necessary.

Bundling and pricing information for the software suite wasn't yet available.
BOOK REVIEW

Guide shows way to Visual Basic, SQL

Hitchhiker's Guide to Visual Basic and SQL Server (Fifth edition)


This tome covers the use of Microsoft Corp.'s Visual Basic 5.0 to design, code, debug and tune SQL Server 6.5 applications. All the expected topics are in there: Open Database Connectivity, the Data Access Object interface, Jet database, Visual Basic library and many other extraordinarily technical topics that will make a programmer happy.

But there are nice surprises, too. Vaughn, who works at Microsoft as a Visual Basic product manager, takes the reader on an insider's journey through the evolution of Visual Basic 5.0 and what's new from Version 4.0. Surprisingly, he talks about Visual Basic 5.0's 32-bit bias and how it won't deal with the 16-bit world, as well as the diverse and often confusing ways Visual Basic can access data. Perhaps not so surprisingly, Vaughn defends its speed, especially compared with C++, and talks about its ease of use.

The author also explains why he chose not to cover much in the book about how to use the Visual Basic/SQL Server combo to develop Internet applications. "Corporate America is not completely convinced that it's ready to give up its private LAN limousines in favor of public transportation for its data," Vaughn writes. So he is saving that discussion for the next edition of the book, assuming one is forthcoming. It makes one wonder what that other Bill in Redmond might think.

The first two sections of the book are devoted mostly to explaining the basics of client/server data access, architecture and application design. There is even a chapter about Vaughn's suggestions for the basic configuration of a Visual Basic 5.0 development workstation — a 66-MHz 486 machine with a minimum of 12MB bytes of memory.

— Johanna Ambrosio

QUARTERDECK CORP. has announced TuneUp, Windows 95-based software that automates application updates over the Internet.

According to the Marina Del Rey, Calif., company, the software profiles the software and hardware on a PC and gives the user a list of the latest updates or bug fixes posted on vendor World Wide Web sites. The user can select the desired updates, and TuneUp downloads them.

TuneUp costs $39.

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Common sense says this is the way it should work. But the deep dark secret of most messaging software is that when you hit the ceiling on its capabilities, that's it. You have to throw it away and start over. The cost, the aggravation, and the sheer inconvenience are enormous. For more information about Lotus messaging solutions, go to www.lotus.com/worktheweb.
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By Kim Girard

**BIG IRON MORPHS INTO MAINSTREAM SERVERS**

**N.J. REELS IN SCOFFLAWS**

**CD-REWRITABLE DRIVES TAKE LEAP FORWARD**

**MAINTENANCE & CRUNCHING**

By Nancy Dillon

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**BRIEFS**

**MAINFRAME BITS**

- The mainframe market will hover around $21 billion with little dramatic growth this year
- Processor prices will break $10,000 per MIPS this year
- Up to 80% of mainframes IBM shipped last year had newer, CMOS processors
- Mainframe product cycles have dropped from 4 years to 12 to 18 months

**NEC gets lighter**

NEC Computers Systems Division in Mountain View, Calif., has introduced the Versa 5000 series of thin, light business notebooks. The devices weigh 6.9 pounds, have a 13.3-inch screen and are 1.5 inches thick. They come with a 1.06 GHz 2.1GHz or 3.4GHz processor and 166MHz Pentium processor with MMX technology. The machines are available now. Pricing ranges from $2,995 to $5,995.

**Mega storage**

Symbolics Logic, Inc. in Fort Collins, Colo., this week will announce its MetaStore disk systems. MetaStore is based on a modular design that will let users change connection options and expand their disk systems from the same building blocks. Storage capacity can range from 1G bytes up to multi terabyte systems. MetaStore systems will ship next month.

**Multiprise on tap**

IBM last week announced a new model of its Multiprise 2000, a low-end server that runs a mainframe CMOS processor and the OS/390 mainframe operating system. The models boost the performance of Multiprise’s higher-end two- and five-way models. The internal storage capacity of entry-level machines was doubled to 2G bytes.

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**SERVERS & PCs**

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**Mainframe number-crunching**

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**CLOSER LOOK**

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**Mainframe update**

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**CD-reWritable drives take leap forward**

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**Administrative Office of the Courts. "Now, the collection rate is up to 90%.”**

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**DataPro, Inc. conducted its mainframe user survey this year included high-end Unix server shops in the mix.**

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**Big iron, page 71**

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**Traffic, page 70**

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**CD-RW drives, page 70**

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**Computerworld**
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For more information visit us at www.compaq.com/products/networking or call 1-800-645-6645.
Traffic scofflaws

CONTINUED FROM PAGE 67

municipality. New Jersey installed its statewide tracking system by using a portion of the parking fines collected to pay for the $1.5 million in hardware and network costs.

UNUSUAL APPROACH

New Jersey's approach to ticketing is unique, said Mike Humphrey, a business director at Public Technology, Inc., a Washington-based technology consultancy to municipalities.

Many towns separately automate their ticketing systems. By contrast, a statewide system simplifies information sharing among courts, the parking department and the DMV, he said.

Instead of writing out tickets with pen and paper, New Jersey parking enforcement officers now enter vehicle and violation information on a rugged handheld device, the two-pound PPT 4500 from Symbol Technologies, Inc. in Holtsville, N.Y. Information is automatically downloaded to the courts' IBM 3090 mainframe.

The pen-based handhelds have 2M bytes of memory and a 2-1/2-pound printer attached for printing tickets.

The devices connect to the data center via an Ericsson, Inc. wireless modem that works on a wireless network from RAM Mobile Data USA in Woodbridge, N.J.

All street and road names are stored on a database, customized by municipality. Officers fill in most of the data by choosing from a field of entries, so bad handwriting and wrong information no longer causes 10% to 15% of all tickets to be discarded as illegible.

Jacobson said battery life was an initial problem with the handhelds. Law enforcement officials wanted eight-hour life from the lithium battery, they have settled for 6 1/2 hours.

CD-RW drives

CONTINUED FROM PAGE 67

for 2,000 of the company's U.S. employees.

"With only write-once CDs, I have stacks of outdated sales and marketing discs on my desk that I have to break and throw away for confidentiality purposes," Johnson said.

He said his company has spent thousands of dollars on CD-recordable media this year alone. "My accounting people will be happy to move to rewritable discs," he said.

MAJOR BUY

Six CD-RW drives from Palo Alto, Calif.-based Hewlett-Packard Co. are on order for Johnson's Northwestern region. Once those drives have been tested, Johnson said, he plans to push for several hundred more for offices across the U.S.

HP announced its first rewritable drive, the SureStore CD-Writer Plus, a few weeks ago. The internal version costs $499, and the external version costs $610. A CD-RW disc from HP holds 650M bytes of data and costs $32. (A CD with record-once capability costs about $4.)

Other CD-RW drives in the $500 to $700 range recently were announced by Yamaha Systems Technology, Inc. in San Jose, Calif., and Phillips Electronics NV in Eindhoven, Netherlands.

Dave Sebald, an information technology manager at Teledyne Water Pik in Fort Collins, Colo., said his company is looking for alternatives to desktop tape storage, and CD-RW drives are a possibility.

Teledyne is an international supplier of oral health and water filtration products.

"I'm glad to see rewritable CD storage reaching critical mass. I like the concept," Sebald said. "But we're not going to go out and buy the drives until we see how well the technology is received in the marketplace. Speed is also an issue for us."
The department tracks its clients with a mainframe database called Model 204 from Computer Corporation of America in Framingham, Mass. “We want the mainframe to have strong central tracking, and then we can spool the critical data out to other packages,” Bonner said. Driving all this are the continued gains in mainframe processing power: • IBM recently announced its 63-MIPS CMOS processors and is upgrading its parallel sysplex mainframe clustering scheme. • Amdahl Corp. in Sunnyvale, Calif., has a three-year plan to crank up its processors to 150 MIPS. • Hitachi Data Systems Corp. in Santa Clara, Calif., continues to win on the high end with its Skyline processors, slated to reach 150 MIPS late this year.

In fact, new single-CPU Skyline models perform more reliably than the multi-CPU CMOS offerings from IBM and HDS, according to recent research by Meta Group, Inc. in Stamford, Conn. Because the mainframe takes on heavy workloads and is in a central position in business computing, software plays a more important role in helping users automate and manage those responsibilities.

For example, The Royal Bank of Canada in Toronto relies on the mainframe to provide the infrastructure to its companywide data warehouse, while smaller servers manage local data marts. The bank uses Platinum Technology, Inc.’s Repository/MVS, a mainframe inventory system, to help users track where data elements came from and make sure all data changes are spread throughout the warehouse.

**CONFIDENCE-BUILDER**

“Having the warehouse backed by the mainframe and mainframe software gives users confidence in the data warehouse data,” said Mohammad Rifaie, manager of data management at the bank. “If you don’t trust the data, you will be hesitant to use it.”

At Florida’s Department of Labor in Tallahassee, the mainframe still runs several hundred jobs per month that have to be properly scheduled and the interactions among them tracked. Cynthia Goodman, systems project administrator, uses Beta Systems, Inc.’s scheduling software to automate the process.

That lets the mainframe, with all its recent improvements, remain in the background and go nearly unnoticed while still being at the center of enterprise computing. “The mainframe is getting closer and closer to being a lights-out operation,” Goodman said.

**SHORT**

Intel 1960 chips

Intel Corp. recently said about a dozen companies intend to ship servers with I20 technology and Intel’s 1960 I/O processors. The technology works by off-loading some I/O functions of the processor to the I/O subsystem. That improves performance and scalability, Intel officials said.

Among the server vendors that have signed on to this technology and plan to release servers over the coming months are Compaq Computer Corp., Dell Computer Corp., Gateway 2000, Inc., Hewlett-Packard Co., IBM and Micron Electronics, Inc. in Nampa, Idaho.
Allen Feryus, Senior Vice President and CIO, New York Mercantile Exchange: “DIGITAL Multivendor Customer
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- NIIT, incorporated
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- New Horizons Computer Learning Center of Boston
- Sybase/Powersoft Education
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QUALITY?! WHAT'S THAT?

When it comes to software quality, clueless IS managers may be their own worst enemies.

BY GARY H. ANTHES

If you're not part of the solution, you're part of the problem.

Experts say software quality is poor and getting worse, and the information systems manager is to blame. Beset by budget cuts, user demands, competitive pressures and rapidly changing technology, IS managers give quality assurance a low priority, if they focus on it at all.

The result, say quality assurance specialists, are penny-wise, pound-foolish decisions that may satisfy customers and budgeteers today but ultimately serve neither group well.

Few IS managers would admit to indifference about quality, but they often emphasize testing — which is at the end of the development process — while ignoring more comprehensive and cost-effective ways to trim software defects.

Money talks when it comes to quality, says Bob Schillato, manager of quality services at The Money Store. He says the typical company can chop its IS budget by 20% to 30% through readily achievable quality improvements.
It’s a fairly bleak picture, says quality expert Rebecca Staton-Reinstein, president of Advantage Leadership, an IS consultancy in Aventura, Fla. “IS managers’ attention to QA (quality assurance) is just not there in most cases.”

She ticks off the following forces that work against the quality-conscious manager:

−When mainframes gave way to other kinds of computing, tried-and-true quality methods were made obsolete and haven’t been replaced by effective new methods. “So-called ‘best practices’ for the client/server world are few and far between,” Staton-Reinstein says.

−The recent alignment of IS managers and business unit managers further allows the fast-paced nature of the workplace and the attitudes of programmers and analysts, who often fail to appreciate the business functions they ultimately support.

−Rapid technology change and user demands pressure managers to commit to mediately payoffs. Outsourcing threatens do force cutbacks in areas that foster long-term support.

−Lack of attention to quality is caused by “a combination of false economy and unrealistic schedules. ‘That’s been the feeling that we live in heads in the sand,” Staton-Reinstein says. “And it’s the feeling that we live in such a crushing marketplace that we’ve got to do more with less, we’ve got to be lean and mean — that whole mantra of modern business.”

And IS managers who think they can sidestep the issue by outsourcing software development are mistaken, says William Boll, a former software quality specialist at GTE Corp. “What you have is IS managers who aren’t too heavy on quality agreeing to let someone do their work who may be even less oriented toward quality.”

Experts say IS managers too often see software quality as simply a matter of more thorough testing. “There’s nothing wrong with testing, of course, but a true QA practitioner is interested in process improvement,” Boll says.

That emphasis on fundamental process improvement usually is lacking at companies that produce poor software, says IS consultant Nancy Kastl, president of Kaslen Group, Inc. in Darien, Ill. Often those companies assume that good people or good technology alone will carry the day. “It’s really the three together that make you successful — technology, people and process,” she says.

And quality leadership should start outside IS, Kastl says. “If the company isn’t set on [total quality management], then IS isn’t going to be, either.”

Kastl says IS managers frequently scapegoat QA for a software failure because they supposedly weren’t being used. The agency later sends 11,000 letters of apology.

“Don’t try to sidestep the issue by outsourcing software development processes often require some selling, sometimes to the chief information officer by quality assurance specialists and sometimes to the CEO by the CIO. ‘The best way to sell quality concepts is with hard numbers,” Schillato says. “If you can show them you can save eight, 10, 12 million [dollars] out of their IS budget every year, that’ll get their attention.”

But Schillato concedes that getting the data needed to make those kinds of arguments isn’t easy and could take several years.

Cox says IS managers shouldn’t be intimidated by efforts to put in a comprehensive quality-improvement program. “Don’t try to tackle the whole world at once,” he advises. “Pick the problem area that will give you the best bang and have a success story. Then go to the next area. It’s amazing how that will snowball.”

Anthea is Computerworld’s senior editor, special reports.

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For more on IS managers and quality, see special reports in the next issue.

www.computerworld.com and listen to Rebecca Staton-Reinstein of Advantage Leadership in Aventura, Fla.
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any information systems managers are building systems that draw them closer to the customer, from call centers to customer information archives, data warehouses and extranets.

Those systems all involve gathering and analyzing information and turning it into knowledge on how to have more satisfactory and profitable customer interactions on an online, real-time basis. Several new books can help you understand the business and social trends that should be influential as you design and deploy those systems.

Start with CUSTOMER CONNECTIONS by consultants Robert E. Wayland and Paul Cole (McGraw-Hill; 388 pages; $35.95, hardcover). Their premise, laid out in Chapters 1 and 2, is that a company’s true value isn’t its products or physical assets, but its portfolio of customer relationships. Those relationships can be tracked and assigned specific economic value. Chapter 3 focuses on the role technology plays in helping companies connect with customers in increasingly meaningful ways. Leave the rest of the book for the marketing department, but read the outstanding case studies.

Legendary high-tech marketing guru Regis McKenna continues the theme of customer connectedness in REAL TIME (Harvard Business School Press; 185 pages; $19.95, paper; $29.95, hardcover). He defines “real time” as “our sense of uncom-pressed time and foreshortened horizons,” occurring when “time and distance vanish, when action and response are simultaneous.” He says many companies are accelerating their internal processes, but he asserts that a far more powerful application of the real-time concept is in creating an information feedback loop—from customers and market infrastructure (including suppliers) to design and service and back out again. He then gives us a wide-ranging and entertaining tour of the real-time landscape, including implications for our social and political structures. This might be a good read for your next plane trip.

Further exploring the knowledge and information waves. The third-wave economy is dominated by service organizations, where the intellect of employees (knowledge workers) is the primary resource. The authors lay out third-wave management issues; issues 2 and 3 (customer value and knowledge management) are particularly relevant for IS. A breezy read, the book is full of case examples. (The Hope Brothers authored the Computerworld Leadership series article “Crunch numbers, not people,” which is available at www.computerworld.com/leadership.)

Taking advantage of that knowledge is the focus of Thomas M. Koulopoulos’ SMART COMPANIES, SMART TOOLS (Van Nostrand Reinhold; 270 pages; $29.95, hardcover). He outlines seven characteristics of smart companies, including structural flexibility, a focus on return on time and the use of technology. Key technologies in support of smart companies are workflow, intranets and time-based analysis, the latter explained in most detail. The re-engineering jargon can be annoying at times, but the case studies are enlightening.

A similar theme is expounded in Peter G. W. Keen’s latest book, THE PROCESS EDGE: CREATING VALUE WHERE IT COUNTS (Harvard; 192 pages; $24.95 hardcover). He agrees that we shouldn’t judge companies based on how streamlined their processes are but on how much additional economic value a given process provides.

Keen, a Computerworld columnist, offers suggestions on improving processes to support economic value-added.

The most interesting part of the book (Chapters 8 and 9) discusses how different leadership styles and corporate cultures can organize to implement these changes. Thus, an opportunistic style has the advantage of swift movement and the willingness to discard past practices but can exhaust itself in reacting to every shift in the wind. By contrast, the sustained improvement style frequently found at industry-leading companies can be thrown for a loop when confronted with fundamental shifts in the marketplace. These sections deserve to have been developed further.

That’s where transformational leaders come into play. They are the people who recognize that a fundamental shift has occurred and take it upon themselves to move their firms into a whole new way of doing business.

That’s the focus of THE LEADERSHIP ENGINE, by Noel M. Tichy (with Eli Cohen) (HarperBusiness; 384 pages; $26, hardcover). Organizations win if they can continually produce leaders at all levels. That requires the ability to see reality (not what it used to be or what they would like it to be) and to mobilize appropriate responses.

Most important, it requires the ability to learn and develop teachable points of view, then teach others to lead. Included are several leadership profiles of individuals who have done just that.

This book is the most valuable of the lot because it solidly confronts a vexing problem today — the lack of leaders who are willing to take their organizations through fundamental change. From Congress to the boardroom to the computer room, the qualities discussed are in short supply. If you think you’ve got what it takes, Tichy offers a comprehensive handbook for developing a leadership program at your workplace.

By Leilani Allen
The biggest reason your company should come to us for your Year 2000 solution?

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MICROSOFT AT YOUR SERVICE? COULD BE

How can Microsoft keep growing at current rates? There's only one way: It must change its business model and enter the IS services industry. Soon, Microsoft will want to manage your desktop, not just provide it with software.

Microsoft's stock price is likely to sag if the company doesn't maintain its growth rate. That will take some doing. To maintain its 1996-97 financial performance over the next 10 years, Microsoft's profits must grow a total of 9.100% to $170 billion by 2007. Meanwhile, growth in global IT spending is expected to remain at 9% per year, compounded annually. Most of that growth will be in staff and services, not packaged software, in which Microsoft is dominant.

Microsoft can't keep up its growth rate just by selling more desktop software worldwide. Only 10 countries account for 85% of worldwide IT spending, and that isn't likely to change materially. In most of those countries, particularly the U.S., year 2000-problem budget pressures and the creation of centrally controlled corporate networks will reduce the amount of money opportunity for desktop software. There's less growth available to Microsoft in this business than in the past few years.

What about raising the price of Windows NT? New editions are projected to cost twice as much as the entry-level versions. Nevertheless, at most, NT can only double Microsoft's share of the total cost of ownership from the present $180 per seat per year to $360. That isn't enough to maintain current growth, even if Microsoft's software were to control most of the clients and servers in the universe.

So far, Microsoft's accomplishments in entertainment and publishing aren't impressive. After investing hundreds of millions of dollars in ventures such as The Microsoft Network, children's software and the Expedia Travel Service, those product lines still don't contribute much to the company's profits. The payback from Microsoft's $1 billion investment in cable operator Comcast and $425 million for WebTV technology is very much in doubt.

One bellwether moneymaker for Microsoft is offering around-the-clock online support at a flat rate of $35 per problem. To keep its costs down, Microsoft has subcontracted much of its online assistance to firms with low labor costs. That's a good business for Microsoft, because corporate staffs won't be able to match Microsoft's superior expertise, which comes from linking its marketing, service and development organizations. But getting a piece of the desktop support business isn't enough to drive growth. It's worth only about $120 per seat per year.

MICROSOFT'S BEST BET

The most lucrative approach left for growing revenue and profits is desktop and network management services. Recently announced and widely publicized, Microsoft's Zero Administration Initiative and IntelliMirror features are an attempt to cash in as companies try to cut desktop costs.

Managing corporate desktops and networks is a lucrative business for Microsoft. The company could offer to eliminate more than half of its clients' unnecessary ownership costs through remotely executed diagnostics, preventive online maintenance, asset controls and fault-monitoring techniques. For some clients, the savings could be worth as much as $4,000 per seat per year. Microsoft could then collect a large share of those savings by real-time metering and cyberbilling of chunks of Microsoft software needed to complete any business transaction.

That's a hard strategy to execute. To carry it out, customers must institute tight network rules, install uniform desktop operating systems and enforce standards - all dictated by Microsoft. All corporate applications would become inextricably dependent on Microsoft.

Still, this omniscient, universal solution may be just what executives are looking for. CEOs and CIOs are anxious to regain control of their systems and integrate them; many companies are already taking steps to implement such a centralized approach. Executives will be attracted to Microsoft's centrist and disciplined view of how to manage information if it enables them to eliminate the chaos of their homegrown systems. Bill Gates' superb marketing engine will surely claim that Microsoft offers the only feasible way to achieve universal connectivity and encompassing, regardless of a market-dominant firm, operating under unified leadership and possessing global capabilities, can deliver that capability, they will say.

A HISTORIAN'S ADMONITION

Yet if history teaches anything, it's that universal and monolithic solutions, when imposed by a dominant authority, will ultimately fail. Corruption, rigidity, accidents or arrogance will always creep in. CIOs should be suspicious of any Microsoft claim to offer an all-encompassing solution, regardless of the immediate benefits it may offer. Nobody can predict if Microsoft can succeed where others have failed. Microsoft's quest for dominance is yet to be tested as information management evolves from an era driven by desktops to one propelled by network-centric communications.

My advice is exactly what I give to anyone who buys a home or enters into an outsourcing contract: After you move in, how costly will it be to move out? Corporate executives have finally learned that IT spending isn't merely an annual expense but a lasting and costly commitment. Questions will be asked about the ultimate costs of overdependency on a single and powerful vendor. Computer executives who are tempted to put all their faith in Microsoft ought to be ready to answer to that.

Paul A. Strassmann (paul@strassmann.com) has spent lots of money since 1961 converting information systems from one generation of technology to another. Much of that was avoidable through tight control of data and disciplined systems engineering to avoid dependency on any one vendor's products and services.
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OPAL MELEDS LEGACY, SQL

By David Strom

Pardon the pun, but Infresco Corp.'s Opal is a real gem of a product. It does something I think is rather unique and has some big benefits for enterprises. It's used to rapidly develop communications- and database-aware applications that are distributed across an IP network. And it enables users to access those applications via World Wide Web browsers.

Opal's heritage lies at the crossroads of three paths: It is part client/server database, part object-oriented development environment and part Web-based mainframe access. It combines those notions into a single coherent whole, something I didn't think possible before I tried it out. I'll explain how it works, but first let's take a look at why you need it.

If you have ever needed to integrate data from both SQL and host databases, then this is the right product for you. For example, let's say your accounts receivable system runs on IBM VM, and you want to bring up an application that shows an aging report or who has owed money the longest. But your system doesn't have the full contact information for your customers — that's kept in some Oracle Corp. Unix database maintained by the sales department. With Opal, you can pull the information from both places into a single graphical screen. Then just put those screens in front of your best bill collectors and let them go to work.

You also will want Opal if you need an application that takes data from your mainframe and combines it with data accessed across the Internet at one of your customers' servers. This mix-and-match approach is quite powerful.

Opal goes way beyond the notion of taking green 3270 screens and turning them into pretty Windows applications. If you have experienced High-Level Language Application Program Interface (HLLAPI) programmers on your staff, then this isn't the product for you. But if you're trying to build applications that aren't well-suited for HLLAPI screen-scraping, such as assembling information from multiple host sources or combining mainframe and Unix data sources, then take a closer look at Opal.

PIECE MAKER

Opal comes in several pieces: Opal Integrator, the tool you use to build, test and run applications; Opal Player, which is just for running applications; and Opal Server, which ideally should reside on the same machine as your database servers. Infresco, a subsidiary of Computer Associates International, Inc., delivers Opal with a copy of CA's Open Ingres, but you don't need it if you already have your own database server.

The products all run on Windows 95 and Windows NT, although we just tested them on NT Workstation Version 4. Finally, there are 32-bit Windows-based plug-ins for Netscape Communications Corp. Navigator that can view and interact with Opal applications.

The company promises Windows 3.1 support and an ActiveX control for Microsoft Corp.'s Internet Explorer soon.

The way that Opal makes its database connections is quite clever. Unlike other client/server tools, you don't need a separate copy of Open Database Connectivity (ODBC) running on every client. What you do need is ODBC software running on the Opal server.

The server takes the information it extracts from your database and sends it over an ordinary TCP/IP connection to the client. If you ever had to deal with installing ODBC on hundreds of client computers, then you'll appreciate what Opal has done here.

That alone might be worth the price of the software. Opal also cuts down on the bandwidth between your database server and clients, which is useful if you have limited bandwidth between them.

I want to say up front that I'm not a programmer. The last time I did some serious programming was back when Basic was anything but visual. Nevertheless, with a little coaching from the Opal tutorial and printed manual, I was able to cobble together a sample application in about two hours. That was impressive, given that the database I was querying was across the country on an IBM AS/400, and I had never seen its structure before. If you have developers who know their way around SQL syntax and data structures, all the better. But even though I was woefully ignorant about things SQL, it wasn't all that difficult.

Opal applications are called projects, which are a collection of pages or screens. Pages can be linked to particular host session screens or SQL queries and contain the usual collection of user interface elements such as scroll bars, tables, buttons and labels. Everything you do is either a right mouse click or a simple menu pick, and there is an assortment of gizmos, wizards and assistants to help you understand how to assemble the various pieces of your project.

Yes, this is a very deep product. But it is very useful for developing distributed applications. And although the list price is somewhat steep, quantity discounts are available to make Opal more affordable, according to CA. The final version is scheduled to ship later this fall.

Strom is a reviewer in Port Washington, N.Y. He can be reached at david@strom.com.

PRODUCT REVIEW

Opal Version 2.0 (beta)
Computer Associates International, Inc./Infresco Corp.
Sarasota, Fla.
(941) 972-1517 www.infresco.com

PROS: It provides access to both SQL and 3270 data streams. Simple graphical screen designer.
CONS: You'll have to learn its lingo, meaning you can't use existing APIs. Price is steep.
LIST PRICE: $5,000 for server, plus $1,000 per concurrent user and $3,500 per each Integrator.

The last time I did some serious programming was back when Basic was anything but visual. Nevertheless, with a little coaching from the Opal tutorial and printed manual, I was able to cobble together a sample application in about two hours.
WE HAVE MEET THE ENEMY AND WE ARE FULLY COMPATIBLE.

In the rough and tumble world of information technology, Sybase proudly introduces a way to help us all live together in peace. It's called Adaptive Component Architecture. And it is truly a different kind of animal. With Adaptive Component Architecture, open components access data from any DBMS, using standard component models. Meaning you're no longer locked into a single vendor. Even our application development tools are open. Which means that they interoperate with all of your existing systems to help you create new Customer-Centric Computing applications no matter whose technology you use. Adaptive Component Architecture is a complete, integrated, end-to-end architecture that includes everything from high performance data and transaction servers to leading edge middleware and enterprise development tools.

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InForms is helpful but a handful

Application helps you automate forms-based tasks, with some effort

By Howard Millman

InForms is helpful but a handful

Newbie developers could build stand-alone forms with some effort and agony, but they would be better off using less sophisticated and lower-cost products, including Caere Corp.'s $200 OmniForm.

InForms' two core components are Designer and Filler. Designer allows you to create simple stand-alone forms and "smart" forms with embedded intelligence that supports, for example, dynamic routing. In addition to enabling documents to determine their destination based on current circumstances (using nested "if-then-else" logic), these advanced forms can include field, form and database links.

Filler, the end-user component, is the mechanism for entering data into the form. In Filler, developers can embed context-sensitive help, drop-down lists, automatic calculations. links to databases that will automatically fill in information and automatic database updates.

NEW AND NOTABLE

Key new features and enhancements include improved performance and database access, tighter integration with Novell's GroupWise 4.x and 5.x, expanded network security options and simplified installation.

Performance enhancements result from speedier access to back-end databases that use improved Open Database Connectivity (ODBC) drivers and native drivers. Filler also uses a variety of times and quicker responses to queries. Novell says that 4.2 employs nimbler versions of ODBC drivers for Corel, Inc.'s Paradox, Borland International, Inc.'s dBase, Microsoft Corp.'s FoxPro and Computer Associates International, Inc.'s Clipper and newly optimized native drivers for most popular SQL databases, such as those from Oracle Corp., Microsoft Corp. (SQL Server), Sybase, Inc., Borland (InterBase), Informs Software, Inc. and IBM (DB2). I didn't run benchmarks.

Some of the more quantifiable time-savers that I experimented with include an expanded formula editor's function pop-up list. Novell organizes the numerous formulas into categories to make them easier to locate. Some formulas control workflow, whereas others are for calculations (arithmetic, attribute, database, date/time, financial, statistical and text).

Filler includes a spell-checker and thesaurus. Spelling enhancements allow spell-checking of a single object, an entire form or a complete page.

FOR YOUR EYES ONLY

Some of those many documents traveling through the electronic pipe will carry sensitive information. Novell has beefed up its security to bestow added peace of mind to security-minded network administrators that I experienced with include an expanded formula editor's function pop-up list. Novell organizes the numerous formulas into categories to make them easier to locate. Some formulas control workflow, whereas others are for calculations (arithmetic, attribute, database, date/time, financial, statistical and text).

Information will convert images into templates to simplify compliance with a corporate document appearance

In Forms 4.2 provides an improved form approval process for forms that travel over NetWare and some Unix networks that run Novell Directory Services (NDS). For example, it allows multiple digital signatures, each having multiple approval levels.

In 4.2, Novell now provides tools to extend the NDS user object schema that will enable developers to snap in InForms security objects. Likewise, new tools extend the password schema to store user attributes, passwords, digital signatures, approval groups and levels.

InForms creates and stores a TamperSeal in NDS that uses RSA Data Security, Inc.'s Private/Public Key encryption technology.

To prevent documents from disappearing into the electronic ether, 4.2 automatically routes the form to alternate recipients if the designated recipient doesn't respond.

BEST USED WITH GROUPWISE

InForms' tighter integration with GroupWise 4.2 and 5.x lets systems administrators install InForms Filler on multiple PCs by simply having users click on a Setup icon sent to them via E-mail. A configuration file parameter prevents users options such as program location. This reduces systems administration and maintenance costs.

Although InForms supports most popular E-mail systems to transport documents, including Lotus Development Corp.'s Notes, Microsoft Corp.'s Exchange, its tight integration with GroupWise lets users send forms as messages that open when double-clicked. That enhanced integration also facilitates automatic updating of central data repositories, often not accessible to remote end users. This enhances productivity and timeliness of data for end users of both the forms and associated databases.

Developers can empower advanced users to create their own ad hoc database in one of three areas: public, group or private. A typical benefit of these ad hoc, client-side databases is to simplify sharing of data files for list boxes or commonly used data values. If these features overpower users, they can right-click on objects for customizability and context-sensitive help.

HELP!

Although the user's online help files are helpful, online help for newbies developers designing a form from genesis will leave them scratching their heads instead of the surface. It is more helpful for modifying sample forms. Designers familiar with forms design even with competitive packages will have little problems. The graphical tutorial that depicts how to map a field or form to a database is especially helpful.

Developers have their choice of forms creation techniques. Starting out with the simplest methods first, they can modify one of InForms' 50-plus sample forms, import a third-party form, import a WordPerfect table, import an existing database structure or scan in existing paper forms for use as templates. Most time-consuming, although sometimes unavoidable, is to develop a form from the ground up.

Soon Novell will post additional sample forms on its World Wide Web site. Designers can select from a library of predefined objects, or they can build their own objects and create their own libraries.

Designers can also develop query catalogs and macros. Designers can link forms and databases. All these features enhance designers' productivity and standardization among an enterprise's many forms.

InForms 4.2 also provides eight sample applications (forms with built-in intelligence), offering an address book, contact menu, enhancement request, orders and shipping, performance evaluation, travel expenses and travel request.

I modified the travel request for a private yacht cruise to Fiji and a chartered Gulfstream to Portugal, and the form expanded dynamically to accommodate the additional data. It then linked it to related forms. Now, that's my definition of intelligent routing.

By Howard Millman

Millman operates Data Systems Services, a consultancy in Croton, N.Y. He can be reached at hmillman@ibm.net.
Avoid the crash. Make mass Y2K change in-house with the privacy and control you need, and a partner you can trust.

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The former Soviet Union is overflowing with underemployed superprogrammers — not to mention rocket scientists and other assorted Ph.Ds. And many are finding work in U.S. IS organizations. But before you renew your passport and go on a hiring spree, be prepared for some management challenges.

No sooner had Sun Microsystems, Inc. posted Java specifications on its World Wide Web site than Russian programmers began to show up at Sun's development facility in Moscow. The programmers claimed to be proficient in the brand-new, red-hot language.

"We couldn't believe it," recalls Arvind Deogirikar, an international business development manager at Mountain View, Calif.-based Sun. "We had a gentleman from Moscow State University say, 'I know the language. You trust me.' It turned out he was really good at it, and we hired him."

The programmer — bright, ambitious and largely self-taught — is one of thousands of computer professionals in the former Soviet Union who've been left unemployed by stagnant economies and a military in decline.

But the bad news in Belarus, Russia and Ukraine is good news for U.S. companies that have tapped a rich vein of information systems talent, often at bargain-basement rates.

Some programmers work in development centers such as Sun's in their countries, set up by U.S. companies to harness overseas talent. Others are immigrating to the U.S. and others are arriving on temporary visas reserved for people with scarce skills.

U.S. managers praise the Russians for their technical skills, willingness to work hard and ability to learn quickly. But, they add, the programmers present new management challenges, and those who come to the U.S. aren't always happy here.

Leonid Z. Batkhan, an application programmer at SAS Institute, Inc. in Rockville, Md., left Belarus in 1991, only two years after starting a software company in Minsk. The company employed 30 to 40 people — "superprogrammers," Batkhan says — at pay as low as $200 per month.

But Minsk is no Silicon Valley. "I was disgusted with the environment," Batkhan says. "Soviet officials pressured us and asked us for bribes."

The Russians are coming, page 89

In Depth

The Russians are coming!

The Russians are coming!
One exceptional office suite turbocharged for optimum productivity.

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"The release of Netscape Communicator 4.0 ushers in an exciting new era for corporations, end users, and applications developers alike."

PC Magazine, August 1997

Get the edge you need. Get Corel® WordPerfect® Suite 8. And get there faster.
The Russians are coming!

CONTINUED FROM PAGE 87

Batkhan, who is Jewish, also fled Belarus to escape anti-Semitism. "I was always a scapegoat," he says. He arrived in the U.S. with the equivalent of a Ph.D. in computer science and $150.

Batkhan estimates that half his former computer science classmates at a university in Minsk now hold non-JS jobs. He says he benefits from discipline developed while programming on primitive computers. For example, he wrote complex mathematical algorithms for real-time diagnoses of diesel engines on a computer with only 4K bytes of memory.

"Every millisecond was essential, and I had a lot of fun trying to find tricky ways to do it," Batkhan says. "Now it's a habit to write efficient code."

"Russians have a good knowledge base for how to solve problems in very difficult situations," says Alexandre Barilov, a senior engineer at Marimba, Inc. in Palo Alto, Calif. Batkhan came to the U.S. three years ago as part of the U.S. arm of Moscow-based ParaGraph International, a graphics software company since acquired by Mountain View, Calif.-based Silicon Graphics.

Barilov boasts that the mathematical grounding of ParaGraph's Moscow programmers enabled them, despite the most primitive of hardware, to develop the best three-dimensional graphics engine in existence and the handwriting recognition software developed for Apple Computer, Inc.

Alexander M. Stein, a senior programmer/aanlyst at American Management Systems, Inc. in Fairfax, Va., fled the U.S.S.R. in 1950, also because of anti-Semitism.

Stein earned a degree in computer science at New York University two years later. "I was good at math and science and abstract things. I was good at thinking logically," he says. Asked about a reference to chess on his professional resume, Stein shrugs. "Lots of people play chess in Russia," he says.

INTELLIGENTIA

Indeed, Russian society holds mental activities such as chess and programming in high regard. "Russians believe in a class of people called "intelligentia," Stein says. "For educated Russians, a priority is to be considered an intellectual, to read a lot, to analyze."

On the downside, Russians often lack project management skills, Deogirikar adds. And sometimes the American work ethic is missing, he says — possibly a relic of the communist system, under which hard work and entrepreneurial zeal didn't necessarily pay off. "(Russians) sometimes have the old notions," he says. "It's OK if somebody doesn't come to work or do their job."

"For educated Russians, a priority is to be considered an intellectual, to read a lot, to analyze."

Alexander M. Stein, American Management Systems

DIRTY WORK

They will work on legacy systems and at tasks that U.S. programmers often shun. Van Derven says, "You'd have to pay a premium for a U.S. programmer to do mundane work that someone else could do," he says. "The question is, 'Where is that someone else?' The answer is, 'Not in this country.'"

Van Derven says he has never failed to find a qualified candidate in the former Soviet Union for a U.S. job opening. He has about 80 such people in the U.S. now and says that soon will grow to 150.

Computer Sciences Corp.'s (CSC) Financial Services Group in Austin, Texas, employs 14 Russian programmers supplied by Van Derven's company on two-year contracts. They work in Cobol and assembler language on mainframe-based insurance applications for CSC's outsourcing services.

The Financial Services Group turned to Russia when it couldn't fill all its needs — it will hire 100 to 150 programmers this year — within the U.S.

In technical skills, the Russian programmers are roughly the equals of good U.S. programmers, Nelson says. And they are exceptionally dedicated and hardworking, she says. In part because many of them hope someday to gain U.S. citizenship and become permanent CSC employees.

But Nelson says she underestimated the communications challenges of working with the Russians. They are excellent readers of English, but oral communications require special care, she says. "We go through a lot of careful dialogue — 'Do you understand? Repeat back to me.' We manage them a little differently."

Konstantin Sidorin, a Latvian programmer at CSC, says English hasn't been a barrier for him. But life in the U.S. has its drawbacks, and he says he hasn't decided whether he wants to stay. Although the pay here is considerably higher than in Russia, so are expenses.

"And for my wife, it is difficult," Sidorin says. "She was a cosmetics designer in Riga. Now she is sitting at home without much contact with people."

As for the notion that Russian programmers as largely self-taught, Stein says: "They are spoiled by their utter disregard for international copyright laws.

A Russian who wants to know about PowerSoft's PowerBuilder, for example, can just pirate the software and avoid the procurement costs and delays that would encumber a U.S. programmer. Stein says.

Sun has about 250 Fortran, Pascal and Java developers at three centers in Russia. A strong foundation in math and science is "deeply rooted in their logic," Deogirikar says.

Cold War, round two

Foreign programmers not eligible under U.S. immigration laws to enter the U.S. permanently can be brought in temporarily under the government's H1-B program. H1-B visas let companies hire foreign workers in the U.S. for up to six years, provided that suitably skilled U.S. workers aren't available and the workers are paid at competitive U.S. rates.

Some U.S. high-tech workers are threatened by H1-B. They say it has been abused by companies that see it as a way to replace U.S. workers with cheap foreign labor.

According to the U.S. unit of the Institute of Electrical and Electronics Engineers (IEEE) in Washington, 11,600 computer scientists entered the U.S. last year with temporary visas. That far exceeds the need based on genuine skills shortages, contends Paul Kostek, chairman of the IEEE-U.S. Activities Board's Career Policy Council.

Kostek says skill shortages have been overstated. "In the year 2000 problem, for example, there is basically no limit on what companies are willing to pay, and there are plenty of people available to do the work," he says.

Alternative Technology Resources brings in programmers from the former U.S.S.R. under H1-B visas. "We are not taking the place of American workers," says President George Van Derven. "And we are not doing the same work American workers would do for less money." — Gary H. Anthes
On October 20, 1997, you have a special opportunity to update your recruiting skills and network with recruiters in your area at the first annual Southern California Corporate Technical Recruiting Conference, held at the Sheraton Grande Hotel, Los Angeles, California.

A Full Schedule of Contemporary Topics

7:45am Continental Breakfast & Conference Registration

Concurrent Sessions:
- Connecting Your Recruiting Strategy to What the I.T. Professional Needs
  - Sue Keever, President, The Keever Group
- Immigration Update
  - David P. Berry, Attorney at Law, Berry, Appleman & Leiden LLP

General Session
- Candidate Selection
  - Dr. William S. Swan, President, Swan Consultants, Inc.

12:30pm Luncheon Keynote:
  - Maryfran Johnson, Executive Editor, Computerworld

Concurrent Sessions:
- Connecting Your Recruiting Strategy to What the I.T. Professional Needs
  - Sue Keever, President, The Keever Group
- Immigration Update
  - David P. Berry, Attorney at Law, Berry, Appleman & Leiden LLP

Town Hall Forum
  - Fred S. Rodriguez, Corporate Manager of Human Resources, Hughes Aircraft

5:30pm Program ends

Selected sessions include:

Luncheon/Keynote Address
- Maryfran Johnson, Executive Editor, Computerworld
  - Maryfran Johnson, one of the industry's leading watchers of the Information Systems profession will give you an up-to-the-minute view in this very special keynote address.

Candidate Selection
- Dr. William S. Swan, President, Swan Consultants, Inc.
  - Now more than ever, hiring the most productive people is critical. Yet most interviews are no better than chance in predicting how a new employee will behave on the job. In these sessions, you'll learn about the skills necessary to make accurate predictions and conduct organized selection interviews.

Connecting Your Recruiting Strategy to What the I.T. Professional Needs
- Sue Keever, President, The Keever Group
  - Based on findings of research conducted with five of America's most respected corporations, you'll learn what companies are looking for in today's I.T. and technical professionals and how they are successfully targeting candidates. In addition, findings from focus groups of I.T. and technical professionals will uncover what candidates are looking for in an employer and how they go through the job search process.

Town Hall Forum
- Fred S. Rodriguez, Corporate Manager of Human Resources, Hughes Aircraft
  - In this session, you'll not only be able to propose your specific questions for open discussion, you'll learn of real world issues and solutions from your peers. You won't want to miss this rare opportunity, as Fred Rodriguez, an expert in the HR field, leads us through this modern discussion of your recruiting topics.

Cancellation Policy
- Cancellations must be received in writing. There is no penalty for cancellations made on or before September 19, 1997. There is a penalty of 50% of your registered rate for any cancellations made between September 20, 1997 and October 3, 1997. Any cancellations received after October 3, 1997 will be billed for the full amount. There are no refunds for "no shows." Substitutions are permissible and should be made in writing prior to October 3, 1997.

For more information, call the conference hotline: 1-800-488-9204
Sure, everybody pays lip service to the need for communication skills. But what’s the real payoff for the IS pros who develop them?

For years, industry gurus have urged IS professionals to develop soft skills. Those are the skills you’re supposed to use when you’re forced to deal with nontechnical people who don’t know a mouse from a mainframe. You know the drill — “active” listening, speaking English rather than computerese and basically letting frustrated users know that when their laptops freeze, you feel their pain.

Many IS organizations have paid lip service to making their staff members more user-friendly. Some have even provided soft-skills training. In an effort to melt their hard, technical edge, information systems professionals have been charged with re-engineering a new paradigm that empowers them to think outside the box.

Yeah, right.

If you hear one more airhead user suggest that you think outside the box, you’re going to crawl back inside the box and tape the lid shut. But before you grab that tape gun, listen up. There are some subtle changes going on in the corporate and vendor environments that may ultimately change the way you view those soft skills.

“Users don’t have the same tolerance for techies that they once did,” says Kate Nasser, president of CAS, Inc., a New Jersey-based consulting firm that integrates business, technology and people. “Technology has become less of a mystery to them. In the past, users didn’t expect techies to have interpersonal skills. Today, no one is making excuses for them.” The explosive growth of desktop computing has taken information technology out of the glass house and into users’ offices. Like it or not, technical people must interact with nontechnical users more frequently than ever before. And because business has become so critically dependent on technology, IS professionals must speak the same language as their colleagues in finance, sales, marketing and human resources just to do their jobs.

Recognizing this shift, universities and consulting firms are tailoring their soft-skills training programs to meet the needs of a dynamic workplace. IS professionals now must be as confident in their interpersonal abilities and business understanding as they are in their technical know-how.

Don’t dismiss these programs as IS charm schools. The best soft-skills programs use real-life case studies and teach practical skills that can be put into effect on the job immediately. Here’s a look at soft-skills training today from the organizations that offer the programs and the IS professionals who’ve gone through them.

---

**Are you soft in the head?**

IS professionals should master these 10 critical, nontechnical skills:

1. Managing IS customer expectations
2. IS customer service
3. Earning a partnership role with IS clients
4. Cooperation and collaboration
5. Ability to influence
6. Managing change
7. Resolving conflicts constructively
8. Active listening
9. Accelerating the delivery of results
10. Adapting to change

Source: Interpersonal Technology Group, Inc.

“Many IS pros think soft skills are important but not urgent. When service levels drop so low that users go out and build their own IS organization, then soft skills become urgent.”

— Cliff Hallberg, managing principal, Interpersonal Technology Group, Inc.
New job requirement

The last laugh's on IS professionals who think soft skills are a joke. It's common knowledge that high-level IS careers run aground when managers find themselves without the interpersonal and business skills necessary to operate at the highest levels of the corporation. 

Now the same thing is happening to code crunchers. The IS department at Public Service Electric and Gas Co. (PSE&G) in Newark, N.J., used a zero-based staffing approach when it restructured to meet the utility's new emphasis on customer focus. All employees within the department had to interview for available jobs as though they had never worked for the company. In addition to technical proficiency and other criteria, the incumbent applicants were required to demonstrate their ability in several soft skills, such as listening and communicating effectively. "Some of our long-standing employees didn't make the cut," says Glenn Rogers, vice president of information technology at the utility. Even with more than a year's notice about the importance of what Rogers calls the "people dimension," some old-school techies chose not to change. They lost their jobs.

During the restructuring process, PSE&G employees were given training opportunities to improve their soft skills. Rogers introduced customer satisfaction as a fundamental measure of success in his department, tying it to compensation.

Today the department is organized like a consulting firm. IS professionals are assigned to resource managers, who are responsible for helping them identify and get the training and career development they need to be more productive for their internal customers. The resource managers are IS professionals "with a human resources affinity," Rogers says.

Vitiello is a freelance writer in East Brunswick, N.J.

Soft skills for hire

Several consulting firms and industry groups offer courses in different soft skills. Some organizations periodically offer public seminars; others will bring their programs right to your company's training room. Those training providers include the following:

**COMPANY**

- CAS, Inc.
- Interpersonal Technology Group, Inc.
- Omicron Telesystems, Inc.
- Ouellette & Associates Consulting, Inc.

**SPECIALTY**

- Customer service and team building
- Organizational development; business, interpersonal and management skills
- "MBA in a Nutshell" for IS professionals
- Developing the human side of technology

**LOCATION**

- Somerville, N.J.
- Rockville Centre, N.Y.
- Mountain Lakes, N.J.
- Bedford, N.H.

**CYBERCONTACT**

- K Nassar, CAS@compuserve.com
- www.ig-web.com
- www.omicronet.com
- poullette@ouellett.com

Classes are in session

One of the best places to find short-term executive development programs is at the business schools of major universities. Although most of the programs weren't designed specifically for IS professionals, up-and-coming techies are welcomed with open arms.

**Darden Graduate School of Business Administration**

At the University of Virginia offers a Leadership for Extraordinary Performance (LEP) that has the blessings of management at Oracle Corp. in Bethesda, Md. The company sends several of its promising, midlevel IS pros to Darden on a fairly regular basis. Two LEP participants say this soft-skills course benefited them in the following ways:

- **Christie Ellsworth**, technical team leader, Oracle: "In our industry, you have to reinvigorate yourself every 12 to 18 months or you're behind the curve. Darden helped me learn how to lead change right where I am now at my level in the company. The program also gave me the chance to meet people from all over the world — Europe, Asia and the Middle East. I saw that the issue of leadership and change are global concerns across a range of businesses."

- **Patricia Gregory**, technical team leader, Oracle: "As a technical team leader, I'm more of a player/coach than a manager. Leadership training taught me how to communicate the needs of my team and request resources across the organization to accomplish our goals."

In the heart of Silicon Valley, Santa Clara University offers what may be the nation's only leadership program designed specifically for IS professionals.

**The Information Technology Leadership Program**

ITLP is hosted by the Executive Development Center at the University's Leavey School of Business and Administration.

The program was launched this year to help IS executives improve their skills in general management, leadership, interpersonal communication, consulting, and sales and marketing.

- **Keith Nakashima**, director of management IS, The Gap, San Bruno, Calif.: "Technology doesn't run itself. We need people to do the work. Over the three days, I saw a unique blend of approaches from some top-notch IS executives."

- **Kathy Cruz**, chief information officer and vice president of information technology, Aspect Telecomm, London: "Historically, CIO meant "career is over." It doesn't have to be that way. A CIO must be an equal partner with other corporate executives and must know how to build relationships, influence peers and use technology to solve business problems or create business opportunities. The program provided new insights into how to do that."

"Interpersonal skills are the distinguishing characteristics that differentiate outstanding IT people."

- Jim Webber, executive director, Omicron
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A Full Schedule of Contemporaneous Topics

7:45am Continental Breakfast & Conference Registration

Concurrent Sessions: Connecting Your Recruiting Strategy to What the IT Professional Needs

Sue Keever, President, The Keever Group

Immigration Update
David P. Berry, Attorney at Law, Berry, Appleman & Leiden LLP

General Session
Dr. William S. Swan, President, Swan Consultants, Inc.

Luncheon Keynote
Maryfran Johnson, one of the industry's leading watchers of the Information Systems profession will give you an up-to-the-minute view in this very special keynote address.

Candidate Selection
William S. Swan, President, Swan Consultants, Inc.

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Faced with a desperate hiring market, IS managers are putting more emphasis on retaining the IS workers they already have.

When a key information systems staffer recently left Georgia Tech because his spouse needed to move, Rich LeBlanc didn't worry. Nor did he worry when shortly after another staff member finished an advanced degree and went looking "for much more money elsewhere."

LeBlanc, associate dean for the college of computing at Georgia Tech, says he rarely worries about finding information systems talent. In his case, graduates from the college provide a steady stream of recruits. But despite higher salaries at many companies in the region, LeBlanc says he still manages to keep turnover low at the computer center. That's because he gives his new recruits a chance to do high-level work.

Although LeBlanc's opportunities differ from those faced by many local hiring managers, his determination to play it smart in recruitment and retention is typical of Atlanta IS organizations. Many Fortune 500 companies and large government agencies are hunting around the same pool of talent in metro Atlanta, so IS managers are using every trick in the book.

Salaries and training: Paying through the teeth

Companies such as Fiserv, Inc. and Lanier Worldwide, Inc. are focusing on pay.

"We are paying what we think is more than fair — about 15% above market rates," says Larry Green, senior vice president of information systems at Fiserv. "We are also motivating our people by putting more money into retention bonuses if someone is "the only candidate available," and retention bonuses up to 20% of an individual's current salary. But that's available only if you can prove you have had a job offer."

Green says the wallet-fattening, skill-strengthening approach has been a winner on the retention side of the equation. There was no turnover in his 132-person department for the two-year period, and you must meet key expectations and stay for the full period, Mangan says.

Referral bonuses: It pays to know somebody

HBO & Company also implements bonuses for retention, although with caution, says Susan Slater, manager of recruiting. The company pays close attention to salary studies performed by industry groups. The upshot has been that HBO now has a $5,000 per year training budget reserved for each employee. Bonuses also are available for selective use in attracting key talent sets. The most substantial funding is reserved for an employee referral program, which provides a $5,000 finder's fee for bringing a new employee aboard.

Work ethic: A more noble cause

Through choice or necessity, some Atlanta IS operations are putting dollars second. Toby Burke, chief of the recruitment branch at the Centers for Disease Control (CDC), says the comparative rigidity of government human resources policies hasn't made his life any easier.

While salaries in the private sector have skyrocketed in recent years, Burke says a reexamination of CDC IS salaries was recently mandated by the Office of Management and Budget. The result is that many employees will be facing a salary reduction in coming years, Burke says.

But Burke says even the government recognizes that some people with hot, in-demand skills will still need incentives beyond the feel-good ones. For them, Burke says there are a limited number of bonuses available: relocation bonuses if someone is "the only candidate available," and retention bonuses up to 20% of an individual's current salary. But that's available only if you can prove you have had a job offer."

Ears is a freelance writer in Franklin, Mass.
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Unix world faces shake-up

It's not easy being a Unix systems vendor these days.

With mainframes making a resurgence and Windows NT servers firing users' imaginations, it may seem like Unix is getting squeezed out of the market. And Silicon Graphics, Inc. (NYSE:SGI) last week announced that it expected its upcoming results to be far lower than originally anticipated. That prompted investors to drop SGI's stock like a hot potato (see chart). And market watchers such as Salomon Brothers, Inc. in San Francisco lowered earnings expectations on SGI for the coming year. And Silicon Graphics, Inc. (NYSE:SGI) last week announced that it expected its upcoming results to be far lower than originally anticipated. That prompted investors to drop SGI's stock like a hot potato.

But the Unix server market is still growing at 25% per year, with $35 billion in sales last year. That means the market is still a solid investment opportunity, especially for pure Unix players such as Sun Microsystems, Inc. (Nasdaq: SUNW), but the players involved are experiencing some shake-ups.

Salomon Brothers analyst John Jones says SGI was switching from a scientific and engineering sales focus to a role as a more commercial-oriented workstation and server provider. But the road has been rough, especially after stellar results in June. And Silicon Graphics, Inc. (NYSE:SGI) last week announced that it expected its upcoming results to be far lower than originally anticipated. That prompted investors to drop SGI's stock like a hot potato.

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**INDUSTRY ALMANAC**

**The Week in Stocks**

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**Fervor for Servers**

Most Unix server vendors are weathering the Windows NT storm, but SGI recently has fallen on hard times.

<table>
<thead>
<tr>
<th>Vendor</th>
<th>July 25</th>
<th>Oct. 9</th>
</tr>
</thead>
<tbody>
<tr>
<td>SGI</td>
<td>25%</td>
<td>17%</td>
</tr>
<tr>
<td>Sun</td>
<td>46%</td>
<td>45%</td>
</tr>
<tr>
<td>Hewlett-Packard</td>
<td>65%</td>
<td>68%</td>
</tr>
<tr>
<td>Data General</td>
<td>30%</td>
<td>25%</td>
</tr>
<tr>
<td>Sequent</td>
<td>27%</td>
<td>26%</td>
</tr>
</tbody>
</table>

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**Key:** (H) = New annual high reached in period  (L) = New annual low reached in period

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TELEPHONE/FAX
Main phone number (508) 879-0900
All editors unless otherwise noted below
Main fax number (508) 879-8531
24-hour news tip line (508) 820-8859

E-MAIL
Our Web address is www.computerworld.com.
All staff members can be reached via E-mail on the
Internet using the form:firstname.lastname@cw.com.
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Editor Randy Westen (508) 820-8489

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DEPARTMENT EDITORS/NEWS
Senior Editors/News
Group, E-mail, managing
Barbara Conners-Maselli (617) 889-8812
Laura Zilles (617) 889-8816
Network/systems management
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E-mail users: Pay up!

chargeback plans are becoming more common as information systems departments try to rein in skyrocketing E-mail costs and reduce administration costs. Administrators at many sites say they charge a baseline fee for E-mail services — typically $5 to $50 per user per month. The most common ways to tack on charges seem to be to charge by volume of mail sent or amount of storage used.

In many companies, messaging is viewed strictly as an overhead item. Information systems want to control costs, but it also wants to be able to say top management, “Here is why it’s costing so much.” Excessive use of E-mail burdens networks, and oversized archives are expensive to back up.

Yet workers clearly are becoming more reliant on E-mail. According to the Electronic Messaging Association (EMA) in Arlington, Va., E-mail transmission is per person per week increased from 190 last year to 253 this year.

The growing dependency on E-mail and the associated costs are forcing more companies to track E-mail charges and expenses, something that was common in mainframe mail systems, said Joyce Graf, an analyst at Gartner Group, Inc. in Stamford, Conn. “In many cases, the [chargeback] capability was built right into the [mainframe] E-mail system.”

That isn’t the case with client/server messaging systems, and there has been a shortage of third-party tools that can address this shortcoming, she said.

The motivation for tracking E-mail use — and making the departments with the heaviest users pay — isn’t to discourage people from sending E-mail, users said. The EMA estimates users can send 10 E-mails for a dollar, so E-mail is likely to be less expensive than a telephone call, fax or overnight package. Rather, the idea is to justify the growing cost of messaging networks and fairly distribute that cost to business units.

TARGETING INDIVIDUALS
That can be key in places such as the U.S. Department of the Treasury in Washington, where E-mail usage has soared 500% in the past year.

The agency charges groups based on the volume of mail they send. It is considering using software from Tally Systems Corp. in Hanover, N.H., that would let the Treasury Department track messaging down to the end-user level.

“There can be a small [group of users] that sends the stats off the chart for the whole unit,” said Michele Rubenstein, messaging program director at the agency.

At Digital Equipment Corp., there is a baseline charge for E-mail, and users can send E-mail on a dollar basis. Wish. But departments are charged for messages that are sent to Xerox mail systems or fax machines because the company incurs extra charges for those transactions.

Separately, the company’s 60,000 Microsoft Corp. Exchange users are given 50M bytes of mail storage space, but they are charged extra fees for anything above that. Exchange servers hold only 16G bytes of mail, said Dan Martin, Digital’s director of individual computing productivity.

Companies also use chargeback plans to reduce administration costs. Digital is on the high end, charging a $1,000 fee to restore a message that was deleted by an end user. That’s because the restoration process is particularly time-consuming in Exchange. Digital has seen requests for such services drop considerably since it began charging a fee.

At Countryside, getting users to offload mail is a matter of degrees. The data bases will make it more valuable to the corporation.

stories just like that from a slew of U.S. companies. He has to tell them they are out of luck.

"I've also known cases where a foreign IT worker has gotten a visa approval from a third company, then gone back to the second company and said, "This is what they're offering me." And the second company will match it," Khanna said. "The bottom line is they're making employ- ers bid against one another."

PAY PREMIUM
That factor alone is increasing foreign labor costs significantly, the lawyer said. For example, the average salary of the Indian programmers he has worked with is $5,000 to $10,000 more than their American counterparts. Khanna said. Of course, labor costs are up about 20% for U.S. information technology professionals as well, according to William M. Mercer, Inc., a New York compensation consultancy.

Yet for companies wrestling with how to help with visas as a way to attract foreign talent, money is just part of the story. Many foreign IT professionals, like their U.S. counterparts, also want to work on the hottest proj- ects and use the latest technol- ogies. And therein lies the catch-22.

Spooked by the prospect of a quick exit by a key developer, many U.S. employers are reluct- ant to include foreign talent on top project teams. Not only would they lose a key contribu- tor, but they also could end up sacrificing their investment in processing visas and green cards, which can take up to two years and run as high as $10,000.

Consider Ramesh Dorairaj, a 28-year-old native of India. After seven months, he left his software developer job at the New York law firm that sponsored his first three-year work visa. He joined RSG Systems, Inc., also in New York, which sponsored his current visa.

The move netted Dorairaj an immediate 10% increase in pay. But more money, he said, wasn’t the main reason for the switch.

What he was after was broader experience. "At the law firm, I was typically doing a lot of re- ports. But the main thing I wanted was different projects," he said. Workers with different kinds of experience advance faster, he added.

"Today, after a little more than a year at RSG, Dorai- raj's resume includes work on several Internet and intranet pro- jects in the entertainment and publishing industries. And that's exactly how RSG execu- tives said they planned it.

"It takes time and ef- fort to instill a sense of loyalty, and the way we're doing it is to con- stantly challenge the staff and give them a new role," said Mokesh Sehgal, president of the 60-person consulting firm. About half the staff is foreign-born.

"Compensation is just one part of it," said Sehgal. "People don't wake up thinking, 'This is how much I'm going to make to...

"So we don't have a key contribu- tor, but they also could end up acceler- ating turnover among workers in search of hot projects.

"When they get bored, they move," Richardson said. He said turnover has run as high as 50% in the past year. On the other hand, "We don't let contractors come in and do one-of-a-kind development because the odds are that they are going to leave you with a legacy problem you didn't want,'" he said.

The bottom line is that "different things motivate different peo- ple," says Naples, who has interviewed and hired hundreds of foreign-born IT profes- sionals as a recruiter at Bluemotion, Inc., a soft- ware and consulting firm in Mount Laurel, N.J.□
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Rhapsody isn't the smash hit Apple needs

David Coursey

Having seen a sneak preview of Apple's new Rhapsody operating system, I can tell you one thing for certain: It won't save the company. Not overnight, and probably not ever. That doesn't make it a bad operating system, just an insignificant one.

Today, Apple begins shipping the developer's release of Rhapsody to anyone who wants it. This is the first of three versions of Rhapsody to be released by next summer. Remarkably, the development project is pretty much on schedule. All this may well be for naught. Apple needs a win now, not in the five years it will take to establish Rhapsody. And it's hard to believe Rhapsody will make even as much noise as IBM's OS/2, an operating system that is perpetually gasping for air under the marketing weight of Microsoft's Windows NT.

Server operating systems build market slowly. Once a server is running, sensible people don't swap its operating system just for kicks. And Rhapsody faces another challenge: Apple must persuade developers to build server applications that people want to buy or give them great tools so they can build their own applications.

Rhapsody is in trouble on both fronts. There isn't a huge installed base of server applications whose next releases could easily support it. Apple touts computer-aided design and publishing workflow systems as candidates, but will there be enough of those to really make a difference? And it's doubtful that scales of commercial developers will bet development bandwidth on an operating system whose prior incarnation drew fewer than 350 customers.

Some will, of course. But I suspect introduced-on-Rhapsody applications will be high-end — not the sort of products that will sell lots of copies of the operating system or Apple hardware. And what about corporate developers? If Steve Jobs is as smart as he likes people to think he is, why didn't the Microsoft deal include support for Rhapsody in Microsoft tools suites? Skip the $150 million, Bill. Rhapsody needs cool tools and assurance from Redmond that it's not an NT rival. Which do you think is most likely?

Apple and Metaworks, Inc., meanwhile, are building tools for Rhapsody. But the masses don't want to learn more tools, especially ones that give the thorny problem of key escrow only to a minor operating system. Yes, you'll be able to program for Rhapsody in Java and HTML, but what will that give you that Windows NT won't? A fair amount, actually, but only if you use proprietary Rhapsody Java programming interfaces or Apple's WebObjects tool kit.

To be fair, the Rhapsody developer CD includes some early commercial-looking applications that run atop the new operating system. Some of this demo-ware looks nice, but Apple has trotted out spiffy software before — remember OpenDoc? — that never saw the commercial light of day.

From what I've seen, Rhapsody is likely to be a powerful operating system that will, at least initially, develop only a cult following. Maybe it will expand from there. If Apple can rev up its Rhapsody devotees as much as IBM has done with the OS/2 zealots, lots of developers will give Rhapsody a test-drive.

But millions of developers and end users have test-driven Macintosh only to buy Windows. I wish it weren't so, but I get a sense of deja vu — all over again.

Coursey (david/coursey.com) is editor and publisher of 'coursey.com and host of Internet Showcase, a conference that will be held Jan. 27-30 in San Diego.

Contrarian thinking on encryption controls

David Moschella

Has anyone seen a single editorial in the IT trade press that expressed any sympathy for the federal government's interest in managing the use of encryption?

Because I haven't. I decided to write one. The computer industry needs to wake up fast before it digs itself into a hole it can't get out of.

The critics are right about one thing. Long term, Uncle Sam will never be able to restrict the world's use of encryption. Because I haven't, I decided to write about the federal government's interest in managing the former Soviet Union. We were aware of their efforts, but we could not decipher their highly encrypted communications?

That's hardly an unrealistic scenario. Should it occur, wouldn't the high-tech business be better off if it could honestly say, "We have been working hard to develop an effective anti-encryption system; it remains one of our highest priorities"?

What is the alternative? To acknowledge that secure criminal communications is unfortunate but claim there's nothing the industry can do about it without slowing the spread of the Internet and global electronic commerce? As the "net begins to handle voice traffic, today's encryption technologies could eliminate the effectiveness of phone surveillance as well. Is the technology industry really prepared to tell the world that the end of criminal surveillance is just the price society must pay for the glories of the Information Age? Perhaps it is, but don't be surprised if many see that as a price not worth paying.

Moschella is an author, independent consultant and weekly columnist for Computerworld. His Internet address is david_moschella@cw.com.
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Computer system that takes a real-time feed of news stories and organizes them as spots on a map, showing where the news originated. Readers can zoom in on the stories from locales of interest. The black spots fade to gray and white as the story gets older. (5,671,342, In-2-2)

Vital records

CompuCom Systems in Dallas has developed an electronic "birth certificate" for corporate PCs and servers. Before the systems are delivered, vital configuration details are stored in a database for asset management and troubleshooting during the hardware's life.

Every step you take...

Pinkerton's, founded in 1850 by the original "private eye," Allan Pinkerton, has opened a high-security advanced technology center near Atlanta to provide clients with remote monitoring capability for virtually any building in the U.S. The 24-hour control center keeps tabs on facilities ranging from ATMs and office buildings to computer rooms via audio, video and electronic monitoring.

Inside Lines

Fill 'er up

Who says computer geeks don't like to party? Not the folks at SANS, who are targeting the wilder side of systems administrators in the brochure for this month's SANS Network Security '97. It notes, "New Orleans is one of only two cities in the country that does not have a closing law for bars."

StorageTek virtually ready with virtual tape

At its user conference this week in San Francisco, Storage Technology plans to announce its Virtual Storage Manager, a "virtual tape" system that uses disk-based caching to efficiently cram mainframe tape cartridges full of data. (CW, April 7). IBM and Sun will ship their virtual tape products. StorageTek, the Louisville, Colo.-based leader in high-end tape systems, has developed VSM from the ground up with proprietary technology, according to sources.

Fusion for Domino on tap

Sources close to Lotus and Redwood City, Calif.-based NetObjects said the companies will announce next month that they have integrated NetObjects' Fusion HTML authoring tool with Lotus' Domino servers. The move had been anticipated since Lotus announced in May that it would make its clients with remote monitoring service available to reporters, a fairly senior Hewlett-Packard executive was waxing eloquent about the company's phenomenal growth in the AIX Unix operating system business. But he may have gotten carried away just a tad when he said, "We are on Dell's tail. They are on our tail. So as those dogs! If you have an interesting image or an interesting news tip, send it to News Editor Patricia Keefe at (508) 820-8183 or E-mail her at patricia_keefe@cw.com.

RS/6000 for E-business

IBM next week will announce RS/6000 Web and video servers targeted at electronic-commerce applications. The machines offer quick setup, the newest version of the AIX Unix operating system and a price of less than $5,000. IBM had no comment.

Talk about conjuring up impossible images. At a recent briefing for reporters, a fairly senior Hewlett-Packard executive was wearing eloquent about the company's phenomenal growth in the PC business. But he may have gotten carried away just a tad when he said, "We are on Dell's tail. They are on our tail. So as those dogs! If you have an interesting image or an interesting news tip, send it to News Editor Patricia Keefe at (508) 820-8183 or E-mail her at patricia_keefe@cw.com.
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