

COMPUTERWORLD

Demand for IS talent soars

By Julia King and Erin Callaway

Money talks, but it does not always buy top-notch talent in today's red-hot information systems job market. Recruitment also takes plenty of perks, such as on-site day care, exercise facilities or a fully equipped home office.

The reason is simple. Demand for IS professionals skilled in today's booming technologies far outstrips supply.

As of December 1994, the job market was up a whopping 44% over 1993. Compared with 1992, the number of available IS jobs has increased by 64%, according to a Mississippi State University study of want ads from 10 major U.S. cities.

Last week, IS recruiters confirmed that business is extra brisk, especially in the health care and financial services industries. Compa-

nies in all businesses are looking for experts in distributed technologies with finely honed skills and plenty of hands-on experience, head-hunters agreed.

"Companies pay me to find people who aren't looking for jobs," said Michael Mantel, a partner at technical recruiter

BMW Group, Inc. in New York. "They're not interested in the brand-new applicants."

In the driver's seat

Given this employment boom, IS job seekers with highly sought-after skills are in a prime position to ask for plum deals. People with networking and Oracle Corp. database skills in particular "can pretty much write their own ticket," said Violet O'Brien, a technical recruiter at The Whittaker Co. in Houston.

Meanwhile, IS managers
Jobs, page 155

Techie top guns

The hottest software positions, according to a survey of 100 IS managers

- 1 Application developer (C++)
- 2 Database developer (Sybase)
- 3 Unix systems administrator (Solaris)
- 4 Application developer (Windows)
- 5 Database developer (Oracle)

Source: Pencom Systems, Inc., New York

Much ado about Windows logos

By William Brandel

Maybe there is a future for 16-bit applications after all.

In an effort to appease developers who had expected to be selling 32-bit applications sporting the Windows 95 logo by now, Microsoft Corp. last week said it will extend licensing terms to developers for the Windows 3.1 logo.

Those licenses, which allow Microsoft-certified applications to carry the Windows 3.1 logo, were set to expire in April.

The logo is a Microsoft guarantee that the software will run with Windows. It is also seen as a way for Microsoft to provide a portfolio of applications that will run with

Windows NT.

Perhaps most telling, the license extension indicates that vendors, including Microsoft, realize that users will continue to demand 16-bit Windows applications.



Microsoft Windows 95

As a result, 16-bit Windows applications strategies — which might have been shelved by now had Microsoft met its original Windows 95 ship date of December 1994 — are

being revisited by software vendors.

Both Lotus Development Corp. and WordPerfect, the Novell, Inc. Applications Group, for example, said they will continue to develop and deliver new 16-bit Windows of-

Windows logo, page 16

On-line options blooming

Hearts afire on the 'net

By Ellis Booker and Thomas Hoffman

Love is in the air this week, and on the wire, too.

On St. Valentine's Day, modem-equipped romantics will be able to take part in a range of romantic activities, including the following:

- Sending electronic valentines to their sweethearts.
- Entering interactive "chat" rooms to find that special someone.
- Searching on-line personal ads.
- Scanning electronic-mail directories for the address of a lost love.
- Buying and sending flowers, chocolates or lingerie.



How much of this data traffic will result in lasting relationships is anyone's guess. What is clear, however, is that for every bauble being marketed electronically, relatively few will ac-

Hearts afire, page 14

IBM to unveil Internet Link for support

By Ellis Booker

IBM plans on Feb. 28 to unveil an Internet version of Link, its long-standing, proprietary customer-support network, company sources confirmed last week.

The 6-year-old on-line system supports some 200 applications in six broad categories and provides a host of customer-support systems—including access to company product and help databases, technical forums and servers with downloadable software.

IBM sources said the Internet Link will be geared to providing service and support rather than positioned as a general-purpose information network like Micro-

soft Corp.'s Microsoft Network.

Just last week, Microsoft announced the first wave of content providers for its network. The list, which includes Dell Computer Corp., AST Research, Inc. and Lotus Development Corp., will be expanded during the next few months to include news and information providers, Microsoft said.

Microsoft plans to launch its public data network, which will be tightly integrated with the Windows 95 operating system, in Au-

IBM, page 14

Coming back for more



Pizza Hut, KFC and Taco Bell are serving up hot new "customer loyalty" and "suggested selling" information systems to win back fast-food fans.
Management, page 101.

Fed agency gets a client/server grip

By Gary H. Anthes

WASHINGTON

At 3 feet tall and 78 feet long, the flow-chart in Larry Byrne's office might seem adequate to depict the workings of the entire federal government.

But it isn't.

"This is the process for moving a foreign service officer from one mission to another," said Byrne, assistant administrator for management at the U.S. Agency for International Development. "It takes 18 months and one staff-year of effort to move one person."

Even by Washington standards, the red tape at AID is staggering. But Byrne and his management team are hacking away the regulatory kudzu as they sweep aside the agency's ancient computer systems and haul in new client/server applications.

At a time when billion-dollar giveaway programs are being viewed with disfavor throughout the U.S. Congress, the rein-

Federal agency, page 28



School districts give microwave top marks

By Laura DiDio

From kindergarten through 12th grade, schools are increasingly putting wireless microwave technology at the head of the class as they navigate the ABCs of internetworking entire school districts.

Wireless microwave technology, which has been around since the 1960s, is undergoing a renaissance in the '90s. Users such as school districts are rediscovering microwave's advantages as a reliable, cost-effective internetworking technology.

K-through-12 school districts typically have only a fraction of the operating budgets of their wealthier university counterparts. But they find microwave appealing because it lets them link dozens of geographically dispersed schools at full Ethernet speed for a fraction of the cost of fiber-optic cable.

This was the case for George Araya, technology specialist at the Desert Sands Unified School District in Palm Springs, Calif., and Bruce Ionno, data processing manager at the Atlantic City Public School System in Atlantic City.

"For 10 cents on the dollar vs. the cost of fiber-optic cabling, we were able to link all 21 schools in our district for a onetime cost of \$500,000, compared with an estimated \$5.5 million for comparable leased-line connections," Araya said. The district is using gear from Microwave Bypass Systems, Inc. (MBS) in Hingham, Mass. "The MBS microwave equipment was the only solution that allowed us to transmit voice, data and video at full wire-speed Ethernet reliably and cheaply," Araya said.

The Atlantic City Public School System similarly installed a microwave link last September. The school district had looked into a variety of options, but these choices failed to pass muster because of prohibitive costs, according to Ionno.

"The fiber-optic cable priced out at \$3,000 per month plus \$20,000 in up-front installation costs. By contrast, the microwave link carrying our Ethernet data traffic cost \$40,000 complete, and we own the equipment," Ionno said.

His initial skepticism — and fears that inclement weather such as fog or exces-

sive rain would disrupt network operations — has proven unfounded.

"The MBS microwave equipment works perfectly and is superior to fiber," Ionno said. "We've done benchmark tests transmitting files over the hard-wired Ethernet network and over the Ethernet microwave connections. The response time is the same."

Equal access for all

The microwave technology is also a great enabler: It allows schools to transmit all types of data, including multimedia and full-motion video, and also lets school districts access the Internet. The Internet is an equalizing force for districts such as Desert Sands, which encompasses many poor neighborhoods. "Internet access evens the score for our students who otherwise would never have access to the multitude of services and information that they get on-line," Araya said.

The positive experiences of the Desert Sands and Atlantic City school districts are causing other school systems to sit up and take note.

Richard Rigling, assistant superintendent for business affairs at Lowell Public Schools in Lowell, Mass., and Steve Arnoff, administrator of instructional technology, recently phoned Ionno for a mid-term report card on the MBS microwave network's performance. They liked what they heard.

High-tech education

A microwave network can connect computers in a school district for academic and administration purposes. It can also connect students to the Internet.


School districts that have installed microwave networks include the following:

- ATLANTIC CITY PUBLIC SCHOOL SYSTEM, ATLANTIC CITY
- DESERT SANDS UNIFIED SCHOOL DISTRICT, PALM SPRINGS, CALIF.
- LEMON GROVE SCHOOL DISTRICT, SAN DIEGO

School districts that are considering microwave networks include the following:

- LOWELL PUBLIC SCHOOLS, LOWELL, MASS.
- MESQUITE INDEPENDENT SCHOOL DISTRICT, MESQUITE, TEXAS*
- ROCKWOOD SCHOOL DISTRICT, ELLISVILLE, MO.

* Using microwave for cable TV transmission; considering it for data



Benefits of microwave

- Customer-owned equipment
- No recurring costs
- Transparency to network
- Full-speed 10M bit/sec. Ethernet, 20M bit/sec. duplex Ethernet and 45M bit/sec. DS3 connections

"We can't afford leased lines or FDDI, and microwave seems like a good fit," Rigling said. Arnoff said that if the microwave implementation is approved — most likely in May or June — the Lowell school district may put a microwave tower on each of its 10 new school buildings.

Dennis Hevron, director of electronic engineering at the Mesquite Independent School District in Mesquite, Texas, is also considering adding microwave to his district. "I like the reliability of microwave. And I think it will have a place in our networks," Hevron said.

Spry aims for wider browser distribution

By Ellis Booker

Spry, Inc. wants to put a copy of its Internet browser in every pot by distributing it with general merchandise such as refrigerators and athletic shoes.

Spry's Mosaic browser provides a graphical way to navigate the internet. Company executives said it makes a lot of sense to distribute it to consumers. "Companies are putting up Web sites all over, but 98% of their customers are not on the Internet," said David Pool, president and chief executive officer of Spry.

Late last month, Seattle-based Spry launched Mosaic In A Box, a single-disk product that can get new users running on the Internet in minutes. Like Internet In A Box, which Spry introduced last fall, the latest title automatically creates local Internet accounts through CompuServe, Inc.'s network of more than 400 nodes worldwide.

Honing the focus

What is unique about Pool's strategy is his desire to forge alliances — none of which have been announced yet — with general-interest consumer goods companies. The result, Pool said, will be a profusion of company-specific, on-line networks able to micro-market to consumers. He said this approach will be more focused than what vendors of goods and services can achieve today with com-

mercial data networks such as CompuServe or America Online. These networks dilute a merchant's message with unrelated services and data, he said.

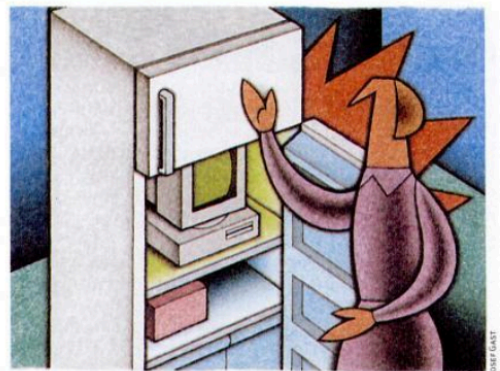
Although Spry has no formal deals with large consumer-oriented firms, it does have some other things cooking. Martin Rood, president of DealerNet in Lynnwood, Wash., recently received 10,000 copies of Mosaic In A Box, which he is planning to give away this week to car dealers at the National Automobile Dealers Association meeting in Dallas. "Someone has to proactively go out and get people to sign up" on the Internet, Rood said. The DealerNet World-Wide Web site has been up for 18 months.

Packaging the 'net

Last week, Spry, UUNet Technologies, Inc. in Falls Church, Va., and Compatible Systems Corp. in Boulder, Colo., announced WorldWire for Windows, a corporate Internet bundle of software, TCP/IP access and networking hardware for Windows-based Ethernet. WorldWire includes Spry's Internet navigation software, Internet access through UUNet's AlterNet TCP/IP network and Compatible Systems' MicroRouter gool router. The Windows package includes a five-user corporate license for Spry's Air Series. The \$1,995 package is slated for March.

Analysts said Spry's distribution strategy is welcome but that the company is not alone in wanting to make the Internet more mainstream.

"I'm glad Spry has this product, but they have to move on execution," said Jerry Michalski, managing editor of "Release 1.0," a newsletter in New York. He said Prodigy, Inc.'s Web browser, the first among the commercial data networks, could offer functionality similar to Spry's default home page approach. "If Prodigy felt like doing it, they could set a button from an advertisement appearing on their core service to the



advertiser's Internet home page," Michalski explained.

The next step in bringing consumers onto the Internet and into cybermalls may be to make access free, said Mark Winther, vice president of worldwide telecommunications at IDC/Link Resources Corp. in New York. "Carriers sell \$7 billion worth of 800 numbers a year," Winther said. Businesses with 800 lines have found them "a tremendously effective and cost-effective way of providing support and a way to order goods."

"For the Internet to truly become a commercialized vehicle for new forms of business to the consumer, this has got to happen," Winther said. "It's not going to happen by [Internet access] and on-line providers beating themselves up on prices." He said it has taken CompuServe 20 years to reach just 2.5 million subscribers.

Mosaic In A Box will be available by midmonth for \$49.95 retail; users will be billed \$9.95 a month for service plus \$2.95 per hour after the first three hours.