



Client Server NEWS 2000



Competitive Intelligence and Observations about Microsoft-based Servers, Storage and Related Phenomena

Heavily Funded Start-up Seeks To Reinvent Storage

By Maureen O'Gara

If there's no venture capital left and nobody can get any more money, it must be because a storage start-up by the name of **3ParData** drained what was left in the pond.

Count 'em. One hundred and twenty-one million smackers. For all the money still going into next-generation storage – and storage, wireless and biotech seem to be where any money is going – 3ParData must have taken the lion's share.

It's enough, it says, to get it to the nirvana of breakeven without recourse to the public trough. None of this newfangled IPO'ing to stay afloat. 3Par's old-fashioned.

It closed on its C round this summer and got \$100 million. Its valuation going in was \$200 million, according to VP, marketing and business development Gabe Gotthard, who in his past life ran inbound marketing for **HP's** Enterprise NetServer group.

The number is indicative of how far along 3ParData's technology was when its nearest prospective competitor, fellow start-up **Cereva Networks**, should have been out for a few months and wasn't and still isn't.

In July, after 3Par got the money, and was in business, well, development anyway, 26 months, it very quietly deployed a beta one unit, its first and only machine to be outside the company, near as we can tell.

Production units aren't due until the middle of next year. Gotthard says the biggest gating factor to release is all the banging that has to be done on the thing to ensure it doesn't modify or pollute the data and can withstand catastrophic failure. Gotthard describes storage as basically "an error management system."

One of the things 3Par's sure isn't going to delay its progress once it's out is certification. It had the foresight to arrange strategic relationships with **Oracle**, **Veritas** and **Sun**. The three of them are investors.

So, it seems, is everybody else: the **Mayfield Fund**, **Worldview Technology Partners**, **Amerindo Investment Advisors**, **Net One Systems**, **Nissho Electronics**, **Intec IT Capital**, **Anshutz Investment**, **Aurora Technology Fund**, **Dain Rauscher Wessels**, **iGlobe Partners Fund**, **Merrill Lynch**, **Mitsubishi Capital Financial Services**, **Mitsubishi International**, **Thomas Weisel Partners** and **Van Wagoner Capital Management** among them.

It was, it says, oversubscribed and turned wannabe investors away.

3Par is still in stealth mode and aims to remain that way for a while, but it describes what it's doing as carrier-class utility storage servers. What it won't explain is its proprietary architecture code name **Scaffold**. (Evidently 3Par doesn't mean to be as threatening as it sounds. It thinks of a scaffold as a "platform." Ah, tell that to Mary,

Queen of Scots.)

A carrier-class utility storage server is supposed to be functionally beyond the enterprise-grade stuff people have been buying. It's past the modular widgetry that connect and make SANs and the monolithic mojah of **Hitachi's** **Lightning**, **EMC's** **Symmetrix** or **IBM's** **Shark**. It's supposed to be defined by heightened performance, scalability and always-on availability.

What all this actually translates into in real life depends on somebody like **YottaYotta**, another prospective 3Par rival, or **Cereva**, which seems to be

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M'soft Courts Java Set

It seems **Microsoft** put on a full court press last week for a bunch of opinion makers among the Java faithful at one of those developer get-togethers it hosts periodically in Redmond.

It obviously wants Java support for the .NET framework and trotted out as bait the breath and depth of its own vision coupled with the formidableness of its brand and ultimately its poor misunderstood Java widgetry. Takeaways were offered like "marketing screwed up the message on the Java Jump campaign and Bill Gates stepped in and said stop it." And J# is more reverent about Java than people assume. Naturally you get the picture.

Evidently Microsoft has figured out that although the Java community is a fraction of the Windows mob – and may really only be half or less than the two million Java developers Sun claims exist – the Java people are far and away more likely to be – by a factor of six to one, we've heard – the decision makers and guys who hold in their hands the way computing architecture is morphing. VB developers are not in the vanguard here.

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M'soft Courts Java Set

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Besides, Java is what they're teaching in school. Luckily schools don't really care that your Java technology isn't exactly *au courant*. Java 1.1.4 would do.

So one might gather that Microsoft is preparing to do some major sucking up. Which reminds one in turn that it's going to have to do it without its most skillful developer liaison, the long-gone Todd Nielsen, who it stopped from working at **CrossGain**, where he had repaired.

CrossGain, of course, was recently bought by **BEA**, which if BEA was listening closely to what **Oracle** had to say this week at its shindig must have heard Oracle's main message – that it's bound and determined to carve out a big chunk of BEA's application server business for itself to dine on.

With databases saturated, Oracle has been looking for a server market to replace it that would offer rocketship growth and has lighted on what BEA and **IBM** WebSphere do for a living. Oracle heroically walked away from its own dinky app server when it found something better, the Swedish **Orion** widgetry, and has been expanding its core. *Viola* Oracle9 AS. One might say it's singularly committed. It's also backing its play with a serious move on tools.

Microsoft's practiced answer to app servers is to say, "Yeah, we got one it's called Windows," but .NET and app servers represent the new distributed application infrastructure and we're pretty sure we've got the ingredients of a pretty volatile political cocktail here, we're just not sure how it all plays out yet.

Compaq Blade Info Dripped Drop-by-Drop

Well, it's safe to say **Compaq** doesn't think much of **HP**'s CompactPCI-based blade proposition, even if they are supposed to get married. Compaq dismisses HP's PowerBar as niche – central office, telco – and says the only problem it solves is "cable reduction." It lacks density, adds cost and eludes general-purpose. There's not enough data transfer speed to link different blades in the same box. Compaq, on the other hand, thinks its upcoming Quick-Blade solution, currently in beta, results from serious contemplation of the requirements of the distributed data center. It appears they're going to call the thing ProLiant BL. The low-end, low-voltage Tualatin-based "front-end" blades are going into 3Us, the Xeon-based "mid-tier" and "back-end" blades will go into 6Us capable of accommodating two-way blades. There'll be four-processor versions at some point too, Compaq said.

Compaq Tries Software To Salt Tails

To improve business against the assaults of rivals and convince people its servers will survive the **HP** merger **Compaq** is unleashing its server software arsenal.

It likes to say that it's got more software engineers housed in its **Intel** server division than it does hardware guys.

The other day it trotted out a "blueprint for the adaptive infrastructure," not exactly a catchy phrase but a mess of highly critical widgetry that Compaq reckons goes beyond **IBM**'s vaunted five-year eLiza self-healing project that Armonk is supposedly spending "billions" on.

When asked how much it's spending on its scheme, Compaq merely replies, "It's what we do." My, my.

Like eLiza, this will be years unfolding too.

Beginning next year, this new ProLiant Essential software will include kits for its ML, DL and some of it for its upcoming blades boxes, dubbed BL, covering fancy cost-containing automatic provisioning, dynamic resource scaling, fault management, workload management and lights-out management. The last has been reduced to an ASIC that Compaq has worked on for three years that'll go on the boards in its larger rack-mount chassis.

Will Carly Get Her Way?

Maybe today this **HP-Compaq** merger business will be sorted out. It's possible the board of the David and Lucille Packard Foundation will vote on where it stands.

HP CEO Carly Fiorina and Compaq CEO Michael Capellas pitched the foundation's finance committee Wednesday on the HP-Compaq merger and the board is having a regular board meeting today and entertaining its financial advisors, **Booz-Allen**.

What Booz-Allen says could be the decisive factor and Booz-Allen is believed to be philosophically opposed to such ideas.

Everybody's on the edge of his chair waiting to see how today's meeting goes.

The foundation is expected to make a public statement once it decides.

Of course, since HP has yet to get around to asking its stockholders for approval, or even setting a date, something that's unlikely to happen before late February, the foundation may want to mull things over and not vote before next year. Still people are looking to it for direction and the foundation knows that.

It's HP's largest single shareholder and controls 10.4% of the stock. How it swings is supposed to influence other investors and could determine whether the contested merger will go through – or at least how much blood is going to have to be spilled trying to get it through.

How much the foundation, one of the largest philanthropic institutions in America, is worth all depends on the value of the stock it holds so it's definitely interested. Though it's hard to see a conservative foundation being a thought

leader, and it did seem positively inclined by HP's better-than-expected quarterly results, it could still back up the Hewlett and Packard kids who don't want to see their daddies' fabled "way" ground into dust under Carly's high-heel shoes.

Anyway, the size of its endowment has been reduced from \$13 billion to \$5 billion.

Last week Walter Hewlett, the now renegade HP director, and his sisters filed notice with the SEC that they were girding themselves for a counter-Carly proxy battle. How passionately they pursue the idea may rest largely on how the foundation votes although we read in the paper that his lawyer Stephen Neal, head of **Cooley Godward**, says their strategy is to stop the deal under "all circumstances."

Hewlett told the SEC the other day that the deal would dilute HP's earnings next year by 34%, according to the calculations of his advisors **Friedman, Fleischer & Lowe**. That's way more than the 9.1% HP has reckoned.

Friedman, Fleischer has paid a visit to the Packard Foundation's finance committee too.

The fact that Compaq shares are trading something like 27% below HP's offer is taken as indicative Wall Street doesn't believe Carly will pull the merger off.

Hewlett pointed out to the SEC the devaluation both stock prices have experienced since the deal was announced. Compaq is off almost 18%, he said, HP is down 5.3%, a combined market value of \$6.2 billion. Consensus estimates for how they'll do next year and year after are down 77.3% and 60.2% for Compaq and 17.1 and 20% for HP. ♦

HPQ: It's All Intel's Fault

We forget where Andy Neff at **Bear Stearns** stands on the **HP-Compaq** merger – Wall Street has vacillated back and forth these last couple of months – but we were amused to see him blame **Intel** for it the other day.

Neff says he's got a theory that Compaq decided to find a merger partner because it expects Itanium adoption to be slow and frets that such a thing could pressure its operating performance. He speculates that both Compaq and HP worry that they might have to fund their native 64-bit architectures, Alpha/Tandem and PA-RISC, beyond the current game plan and discombobulate their poor customers even more than the prospective Itanium migration is doing.

Neff even toys with the notion of Intel doing a Pentium with 64-bit extensions *à la* AMD's Hammer initiative, an idea he admits would give aid and comfort to **IBM** (Power) and **Sun** (Sparc) and tickle **Dell** no end because it's "less disruptive to its model" while throwing a monkey wrench into HPQ's plans.

Microsoft Loses Amex

Told ya so. When we scooped **Sun**'s Passport-denying Liberty Alliance, we said **Amex** was in. Well, its name didn't appear in the first official list and it's taken them a couple of months to get squared away and own up.

AOL Time Warner, which looked like a terrible miss considering its joint venture with Sun, also signed on this week. It and its 32 million Internet subscribers theoretically. AOL has its own identity authentication system code named Magic Carpet. How that fits in remains to be seen.

American Express, which was supposed to be providing some amorphous "partner support" for the Passport-carrying .NET My Services, is a Java account and says now it won't be supporting Passport. Sun needed a credit card company for validation.

The first Liberty technology meeting in November – there's no spec yet – reportedly ticked a few Liberty allies off. Too much Sun it seems.

The question of the moment continues to be whether **Microsoft** will join.

Wouldn't Keelhauling Do?

The District of Columbia and the nine states that refused to sign off on the notorious **Microsoft** antitrust settlement with the **Justice Department** and nine other states are supposed to turn up in district court today Friday, December 7 with a document explaining to Judge Colleen Kollar-Kotelly what more stringent remedies they think are appropriate.

It will be the first time in this whole, long, sorry affair that the states, which are supposed to have shot down the chance of a Posner-mediated settlement last year, will put their cards on the table. Whether it matters much at this point remains to be seen. Microsoft says it won't negotiate anymore and the bookmakers are giving odds that Kollar-Kotelly approves the deal as is. She can't fiddle with it, the DOJ has told her.

Early reports say the dissenting states want Microsoft to be required to put Office on Linux and maintain it on **Apple**, whose five-year agreement runs out next year; restore Java support to Windows, though between a court order and a pact with **Sun** it's kinda hamstrung doing that; produce a middleware-free Windows stripped of its Media Player, IM, Outlook and browser; and disclose more source code. There also been talk of getting a special master to oversee the remedies.

The dissenting states include California, Florida, Utah, Iowa, Connecticut, Minnesota, Kansas, West Virginia and Massachusetts. According to one report, California, home to Microsoft's main enemies, is picking up a lot of the bill for the prosecution.

Microsoft gets to respond next week. ♦

M'soft Wants US Settlement To Cover Europe Too

Bloomberg News happened to glom onto **Microsoft**'s otherwise-secret 102-page response to the EC's list of antitrust charges and said that Microsoft wants the European trustbusters to ignore **Sun**'s demands that Microsoft be forced to license its source code. Microsoft reportedly argued that "compulsory licensing" would break international patent laws and allows rivals

like Sun and **IBM** to develop a cheap clone.

The company also apparently flatly denied new charges that it obstructed the EC's investigation by allegedly rigging letters of support from vendors and users.

Microsoft, which might be suspected of trying to avoid another PR debacle, said last week that it didn't want to defend itself against the EC's allegations at a public hearing that the commission had scheduled at Microsoft's behest for right before Christmas. Microsoft wants to cut a deal instead. It's telling the Europeans the highly criticized settlement of the US antitrust case – since it covers its business practices – would resolve the EU case as well. The Euro trustbusters don't appear to be buying it, arguing their case is different.

Meanwhile, Microsoft's detractors could get airtime anyway. The EU said they have a right to request a hearing too.

Sun has charged that Microsoft is leveraging its PC monopoly into servers. There's a separate multimedia angle as well.

Since Microsoft is widely regarded as getting off with its hand slapped in the antitrust case in the states, what happens in Europe is regarded as the last chance to hand the software giant its comeuppance.

Besides Sun, apparently **AOL**, **Novell** and **Oracle** have been complaining to the European authorities too. ♦

Capital Hearing Set

That resuscitated Senate Judiciary Committee hearing on the great Microsoft antitrust settlement is set for Wednesday, December 12. They've invited a fun group: former **Netscape** CEO Jim Barksdale, who's now on the board of both **Sun** and **AOL**, **Red Hat** CEO Matthew Szulik, Thomas Penfield Jackson's would-have-been special master Larry Lessig, **DOJ** antitrust chief Charles James, New York antitrust chief Jay Himes – New York went along with the settlement – and consumer advocate Mark Cooper. Senator Orrin Hatch of Utah (read **Novell**) has a list of 29 gotcha questions he wants James to answer.

High-Speed Interconnect Vendors Sharpen Their Blades

By Stuart Zipper

High-speed interconnect vendor **Myricom**, which claims 90% of its market niche, and upstart Israeli InfiniBand maven **Mellanox** have begun eyeing the emerging market for blade and ultra-dense servers.

The rest of the high-speed interconnect industry can't be far behind.

So far blade makers haven't paid a lot of attention to interconnects. Fast Ethernet is about as sexy as the specs get for most blade offerings, gigabit Ethernet perhaps. Myricom CEO Charles Seitz says that his company is fixing to change that, and has begun a drive to sign up blade server vendors.

"We're talking to all of them," he says. He won't name names or say if he has any contracts in hand – citing a stack of NDAs.

What Seitz and Myricom are trying to do is get blade makers to see their products as "very small area networks, board area networks."

It's a concept thing. The idea is to look at a blade server as an ultra-dense cluster.

Mellanox agrees, although of course it sees InfiniBand as the answer rather than Myricom's Myrinet technology.

"We're really trying to draw people's attention to the functionality of blades rather than just the form factor," a Mellanox spokesman said. "Focus on form factor, without regard to function, misses the true benefits of blade technology."

Mellanox admits that it doesn't have any contracts in hand yet from blade vendors, but then again it's just started trying to mine the market. It's striking the pose of an InfiniBand evangelist, rather than a Mellanox peddler.

The pose is born of necessity. There isn't a lot of InfiniBand awareness in the blade market, Mellanox says, and "We do as much work educating folks on IB as we do the Mellanox-specific stuff."

Then again there's the fact that Myrinet, a high-speed interconnect veteran, has already made the rounds, pushing its technology to broaden its market beyond the very high-end clusters that it's noted for. Myrinet got its foot in the door first. It's been selling its technology since 1994. The

first InfiniBand widgets from Mellanox went on sale this year.

Still, Seitz admits that he's looking over his shoulder more than a little worried about an eventual InfiniBand onslaught. Myrinet, after all, is one small 50-man company. InfiniBand has, well, a band of companies gearing up for market.

To deal with that Seitz has a secret weapon he's preparing for next year.

The next version of Myricom's chips will support InfiniBand as well as Myrinet.

He calls it "a defensive move." Just in case.

The idea is to get the design-win, even if it means selling InfiniBand, and then convincing OEMs to adopt the entire Myrinet scheme, which of course Myricom argues is superior, citing specs such as latency rates, low host CPU utilization, high availability and virtually unlimited scalability. Myrinet does, after all, interconnect the "Platinum" cluster that **IBM** built for the National Center for Supercomputing Applications (NCSA) at the University of Illinois at Urbana-Champaign. Platinum is powered by 512 IBM xSeries 330 dual-CPU servers connected by Myrinet and 7.7 kilometers of optical cables – it holds the current record as the fastest cluster in the world in the Top 500 supercomputer ranking.

Another little curve that Myricom's readying for next year is a dual-port implementation of its technology that will double the bandwidth available per channel to connect the servers in a cluster. Myrinet's interconnect technology already blazes away at a "true" bidirectional 2 Gb/second per link. InfiniBand specs are commonly quoted at 2.5 Gb/second, but when measured by the same method as Myrinet, yield an identical 2Gb.

The 2x offering will be followed in 2003 with a 4x model that should hit the street about the time that the touted 3GIO, or Arapahoe, technology first starts dribbling onto the market. 3GIO is the future generation of PCI, internal to computers. It isn't supposed to threaten Myrinet or InfiniBand, but work with either. ◆

West Virginia Sues M'soft on State Antitrust Charges

This story has been updated since it broke.

West Virginia, one of the nine states to refuse to sign off on the proposed **Microsoft** Consent Decree, lodged suit Monday against the company alleging violations of state antitrust and consumer protection laws.

Microsoft said the move did "not come as a complete surprise." It claimed West Virginia wouldn't sign the now-notorious settlement agreement hammered out with the **Justice Department** a few weeks ago because it wanted to file this suit. Microsoft also said that it was not expecting similar moves from the other non-consenting states or the equally non-consenting District of Columbia.

The office of West Virginia's attorney general indicated the purpose of the suit was to collect damages and penalties, something that wasn't on the table in Washington. The suit, which specifies a jury trial, names no figure, but asks for treble damages under West Virginia code plus restitution and maximum civil penalties.

The attorney general's office seemed pretty sure the local Boone County circuit court where the suit was filed would see things its way.

The suit alleges unfair and deceptive practices under the state's consumer protection laws and says Microsoft maintained a "predatory" monopoly in West Virginia contrary to local antitrust laws to exclude competition like Navigator and Java or control, fix or maintain prices. It charges the company with both selling Windows 98 at a monopoly price without regard to supply and demand and distributing other products like Internet Explorer for free or below cost with the intent to destroy competition.

The suit both borrows freely from the original DOJ case and reprises the hundred-odd class actions that Microsoft is currently trying to settle with a so-called billion-dollar grant of hardware and software to the country's poorest schools.

Critics claim the deal, the brainchild of some of the attorneys handling the class actions, will only enhance Microsoft's monopoly.

Drive Bay

InterSAN's Pathline Arrives

InterSAN, the start-up with the newfangled, second-generation storage management software, is on the threshold of that magic moment known as GA, an instant in time as pregnant with possibility as a first kiss.

InterSAN has named its first product Pathline and says it'll cut the cost of managing heterogeneous storage networks. The widgetry fully automates storage provisioning, provides and measures differentiated service levels and ensures end-to-end policy-based security, a concept relatively unheard of in storage, one gathers.

Pathline is supposed to be the first solution to manage the relationship between applications, the data storage and "everything in between," as the company says.

It does stuff that its much bigger, more established competitors like **Veritas**, **EMC**, **Computer Associates**, **Tivoli**, **Prisa**, **BMC** and **McData** don't, at least not completely.

InterSAN's patent-pending Virtual Private DataPath (VPD) abstracts the many complexities of the storage networking infrastructure so devices don't have to be manually managed. Its top-down applications approach is reportedly unique.

It says that by managing the application-to-data storage path without placing any hardware or software in the way, Pathline avoids performance and availability penalties. It uses industry-standard interfaces for discovery, topology rendering and monitoring.

The applications approach also lets IT manage storage from a business or best practices perspective, it says. That in turn disenfranchises the priestly caste usually needed to manage the widgetry, making it a one-step operation anyone can do, it says, and leads to 24x7 data security and uniform enterprise-wide control, which must be akin to motherhood and apple pie.

To pave its way into the market, the little 23-month-old 40-man start-up in Scotts

Valley established strategic partnerships with eight storage networking vendors since the summer including **EMC**, **Brocade**, **Emulex**, **JNI**, **InRange**, **LSI Logic**, **HDS** and **QLogic**.

Pricing depends on the amount of SAN-attached storage involved, how diverse it is and the number of switch ports. Take for a yardstick, a figure of \$79,000 for 10 terabytes.

Between its A (for angel) and B rounds, InterSAN has pulled in \$10.3 million in funding. It's gonna be going out for another pre-revenue round of, oh, \$15 million.

Early customer deployments started in August and two customers have Pathline up in non-production environments.

The company estimates that Pathline will provide a productivity savings worth \$7,000 per terabyte in people, a 20% savings on the capex side from SAN infrastructure rightsizing and a 5% utilization increase beyond existing SAN efficiency. There is also the little matter of 10% less downtime, whether planned or unplanned. In provisioning alone, InterSAN says it turns a 55-minute wrestling match per widget into a one-minute task.

InterSAN, by the way, has just gotten itself a VP of sales in Thomas Phillips, previously VP of worldwide sales at notorious **Linuxcare**, where he is said to have boosted sales to \$13 million in 12 months. — *MOG*

Rich Media Storage Start-up Hides under the Bed

Storage start-up **Ikadega Inc.**, which has been eating through its \$15 million in financing, has gone to ground after failing to deliver its promised widgetry for rich media and large data file storage and delivery on time.

The company now refuses to discuss its

products or plans until sometime in January. It admits it missed its launch date this fall. It's not clear whether the problem is marketing-related, or whether it's the exotic technology it's been brewing up.

Ikadega has been promising NAS/SAN storage based on its own home-brewed fabric-based server architecture called DirectPath. Ikadega says the architecture will be far more efficient at delivering rich media content and large data files than any standard server architecture now used to build storage. DirectPath is a data transform platform, built with custom silicon.

For its initial offering Ikadega back in March promised an 8U rack-mount appliance with a capacity of more than 1.5TB and up to 4 Gb/second throughput. Conventional storage servers typically spew out data at a speed of only 200 Mb/second.

Based in Northbrook, Illinois, Ikadega started life with the name **e-Video Networks**, a moniker that makes its primary planned target market crystal clear. It planned to sell to the Internet "edge of network" content storage and delivery, hospitality and residential video-on-demand markets.

The company was founded in January 2000 by executive VP Darryl Moskowitz and CTO Robert Phillips with about \$2 million in friends-and-family start-up capital. The two previously founded residential automation and video server house **Omnivation**, which has disappeared. Its technology formed the starting point for Ikadega's planned offering.

The co-founders enticed Michael Cahr, the former president and CEO of prescription management software house **Allscripts** and before that Venture Group manager for **Allstate Venture Capital**, to come out of retirement and take over as president and CEO of the young company.

By April 2000 the company had raised another \$5 million in angel funding. In March of this year it got \$8 million in institutional capital in a round led by **Kettle Ventures** with participation from **BlueStar Ventures**, **Leo Capital Holdings** and **OCA Ventures**. — *SZ*

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EMC, HP Sit on Sidelines as First Enterprise Storage Benchmarks Are Released

The two-and-a-half-year-old **Storage Performance Council** (SPC) Monday released its promised enterprise storage benchmark suite, the first such thing. There's only one little issue: **EMC, HP** and **Microsoft** dropped out of the group over the last year, each for different reasons.

Given its position in the storage industry, EMC is the most serious dropout. It's actually a double dropout. When the SPC was formed, both EMC and the then-**Data General** Clariion Storage Division, an EMC unit, were members.

EMC is missing because it thinks it will lose once the SPC benchmark results start flowing. The SPC benchmark, called SPC-1, tests storage system performance and comes up with price/performance metrics from that.

EMC hasn't "had much of a focus on performance," said SPC chairman Leah Schoeb, who in real life is a staff engineer in **Sun's** Engineering Technology Office.

When it walked out the door in March, EMC had been arguing that the benchmarks should also test reliability as a critical metric. On Monday, at the benchmark's unveiling, EMC had a representative in attendance, making the same pitch. From accounts of folks who were there, nobody paid much attention.

Longer term, though, the SPC hopes to see EMC return. In part it's counting on industry pressure to force EMC to participate.

When the first SPC-1 test results are published, probably around the end of February,

there won't be EMC numbers. It will be "outside the circle," Schoeb said. With enough EMC competitors inside the circle, she figures customers will start asking tough questions. Eventually EMC will find it easier to participate than explain its position. After all, it's never a good sales strategy to have to start out on the defensive.

Schoeb notes that the scenario is exactly what happened when **Oracle** refused to take part in the widely watched **Transaction Processing Performance Council** (TPC) benchmarks, on which the SPC benchmark is modeled.

There's also the chance that, like it or not, scores for EMC widgetry will start showing up. "Permission is not required" from a manufacturer to test its gear, according to Roger Rike, SPC founder and senior technical director of **Veritas'** Office of the Chief Technology Director.

Anybody, say, a customer, could simply decide to test any storage device it wants. The rub, Rike said, is that there might be legal requirements that prohibit revealing the results publicly. Oracle, Microsoft and **Informix**, for instance, have clauses in their database licenses prohibiting anyone from publishing benchmarks on the stuff without first getting the company's permission.

Speaking of Microsoft, which was prominent in the SPC when the outfit started in June 1998, it walked away from the SPC with no publicity or note.

It seems the initial SPC-1 benchmark

only tests direct-attach storage and SANs. Microsoft's only current offering used in storage is in NAS, where NT 4.0 embedded (NTE) and the Win2K Server Appliance Kit power various appliances.

Never mind that the next benchmark to emerge is expected to test NAS. SPC hopes that Redmond will rejoin then. Of course by that time the benchmark to test Windows-powered server appliances will have been written without Redmond's input.

"That's just the way they operate," Schoeb said philosophically.

The story at HP, meanwhile, is sad.

HP, an SPC founder, still wants to be in the SPC.

It just doesn't know how.

"This year with all the changes and turmoil going on inside the company, they haven't had the resources," Schoeb said.

A highly reliable source claims that's not the problem. It seems that HP corporate couldn't figure out which part or parts of the company should foot the bill for SPC membership. It's a story heard around HP before over the years, and one of the shortcomings Carly Fiorina vowed to fix when she ascended the throne.

For gosh sakes, full membership in the SPC is only \$9,500 a year, but HP apparently can't even figure out whose budget a \$1,500-a-year associate membership should come out of. Sad.

While who's missing is fun, SPC has in

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fact garnered support from a huge roster of other big names in the enterprise storage business. Sun and Veritas are members. **IBM** is there. So are **Compaq** and **Dell**, along with **Hitachi Data Systems**, **Unisys**, **NEC**, **LSI Logic Storage Systems** and **Adaptec**. Now that the SPC has its first benchmark finished other storage players are expected to take note and join the club.

Also on board are storage industry consultants the **Evaluator Group**, based in Colorado, and Australian **Ideas International**. Evaluator and Ideas have been named preferred analysts for the SPC-1 results, charged with ensuring that interpretation is vendor-neutral.

For technical details of the SPC-1 benchmark, see www.StoragePerformance.org. The full specification will be posted as soon as the workload generator is finally validated. —SZ

ExaNet Snags \$17 Mil, Pilots Start Next Month

Despite the economic blight, storage start-ups continue to be a dependable magnet for investment.

Eighteen-month-old **ExaNet**, for instance, has raised \$17 million in a second round of financing, taking its current total to about \$30 million. The money came from **Intel Capital**, **Evergreen Canada-Israel Investments** and unidentified private investors.

The Santa Clara, California concern is going to use it to bring its glitzy high-end ExaStore storage system to market.

Using fabric-based storage clustering technology, ExaNet has reportedly developed a system whose capacity, bandwidth, backup/recovery and manageability all scale.

In the brash hyperbole of a start-up, ExaNet boasts that ExaStore is the first system to provide "limitless expansion of

data center storage infrastructures to meet any present or future needs."

As the 55-man company sees it, the architectural limitations of competing monolithic subsystems and virtualization tools have made it difficult for data center storage to scale and be easily managed.

At the heart of the ExaStore system is ExaMesh software, which runs on chi-chi high-end Itanium-based clusters and high-speed bleeding-edge InfiniBand interconnects. The company touts ExaMesh as the breakthrough that provides the first scaleable mesh interconnect and scaleable storage cache.

ExaMesh runs on **Red Hat Linux** but doesn't use the Linux file system because it's not cluster-aware. It's got its own file system.

The whole system consists of ExaNet nodes interconnected by the InfiniBand switch fabric. The nodes are connected to storage clients at the front end and RAID5s at the back.

The company says that since its file system is distributed, any request can be targeted at any node and served with no latency penalty. All the nodes, it seems, appear to the outside as one entity.

ExaNet's other key feature is a so-called distributed coherent caching mechanism that reduces the communications overhead among the cache instances and ensures greater scalability. ExaNet's file system uses the distributed cache mechanism to dynamically create multiple copies of frequently accessed data on demand, avoiding "hot-spot" creation and the need for static duplication of data.

Capacity, bandwidth, I/O and backup/restore throughput reportedly all scale independently with the ExaStore system. Scaling is accomplished by adding system nodes and connections to RAID5s, clients and interconnect switches so sites grow incrementally.

ExaNet claims its approach supports service-level agreements under all data access patterns for both block and file services.

It says ExaStore, which works with multi-vendor disk arrays, will support

petabytes of storage and beyond, accelerated backup and restore and bandwidth in the 1 TB/s range and higher.

ExaNet's strategy is to license the ExaMesh software to OEMs who will then build and sell their own ExaMesh-based storage systems. It's currently talking to **Dell**, **Bull** and **NEC**. Dell is said to be interested and evaluating the technology. But no OEM deals have been signed yet.

Mindful of the time required to close OEM deals and get the vendors up and running, ExaNet plans to build integrated systems itself short-term and sell them to end users directly.

The start-up appears to be running a couple of months late on ExaStore pilot deployments. The beta deployment cycle has been pushed back to January from its original Q3 target date. However, the company is now supposed to be on track for commercial delivery. The product should ship around June. Shipments from OEMs are expected late next year.

ExaNet is the brainchild of CEO Giora Yaron, executive VP of R&D Nir Peleg and VP of technology Amnon Strasser. Yaron has done six other start-ups. Prior to co-founding ExaNet, Peleg was chief architect of **nSOF/Digital Appliance**, where he designed and implemented hardware, firmware and software modules in massively parallel systems. Strasser used to run his own consulting company.

ExaNet's development center is in Herzlia, Israel.

According to chief strategy officer Mitch Schults, ExaNet is targeting the Fortune 1000, particularly the publishing, scientific computing and media-on-demand markets.

Schults considers **YottaYotta** his closest competitor but believes ExaNet's strategy of relying on industry standard hardware a superior approach. Other competitors include **FalconStor**, **DataCore**, **Sistina**, **Zambeel** and **Cereva**.

Pricing details weren't disclosed. The company would only say that pricing depends on functionality. —RR

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Brocade Exiles Engineering Chief to Corporate Siberia

Brocade Communications Systems appears to have shunted its engineering chief Paul Bonderson off to corporate Siberia, bringing in Morris Taradalsky in his place.

Taradalsky, previously executive VP of engineering and technology at banged-up hoster **Exodus Communications**, will be responsible for product development including all technology, engineering and R&D. Taradalsky has done stints at **IBM**, **Apple** and **NetObjects** during his 30-year career.

Bonderson, also a co-founder of the six-year-old company, has been moved to the newly created position of VP of strategic development, where he will focus on long-term product strategy and market definition initiatives.

Lately there has been some concern over delays in Brocade's Silkworm 12000 switch prompting CEO Greg Reyes to remark during the company's recent earnings call that "A lot of the back channel chatter about the product and its timings are way overblown."

Reyes promised that the thing would show up in Q1 with a few units shipping as early as January. Silkworm 12000 is a 128-port switch that supports 2Gbps Fibre Channel and high-availability features.

Brocade denied that Bonderson had been sidelined and said he continues to be an important part of the overall team. A spokeswoman said Brocade wanted someone to take the company to the next level as an engineering organization and Taradalsky with his significant experience in hardware and software and managing large projects fit the bill. — RR

Reading EMC's Tealeaves

Okay, as near as we can figure out, last week's strategic reorg over at **EMC** puts

executive VP David Donatelli in the ascendancy. He's currently the fair-haired boy and his future at EMC is doubtless made unless a) he screws up royally or b) gets a better offer.

He's charting the company's product strategy and has finally gotten his open systems, let's-not-be-Symmetrix-xenophobes vision, which started when he bought **Data General** and its Clariion operation, to flower.

His nemesis, Symmetrix inventor Moshe Yanai, has been neutralized and set to thinking great thoughts far away from product line responsibilities. Hopefully Moshe can't send any more signals to EMC's sales force from there. A story is retailed that says that's why EMC threw Clariion over the transom to **Dell**. Moshe's body language told EMC's cutthroat sales force, "Don't push Clariion."

In the last few weeks both *Forbes* and the *Wall Street Journal* have delved into the Moshe situation and come up with identical lines. For years he was paid on Symmetrix sales, a compensation plan that appears to have been changed some months ago. EMC is officially horrified at the obvious conclusion that anyone would compromise EMC strategy for personal gain and denies such a thing ever happened. Insiders however label Moshe and his Symmetrix-only religious zealotry a stumbling block.

Donatelli, meanwhile, who had been biz dev but is reportedly "very technical," is now running all product development and one of Moshe's people, Erez Ofer, has been given software, sorry, open software, apparently to Donatelli's satisfaction. — MOG

CA's Lifeguard To Be Rechristened, Upgraded

Computer Associates is upgrading and re-branding its Lifeguard backup software.

Lifeguard, which CA got through its **Sterling Software** acquisition, lets corporate users back up their remote PCs and laptops.

The new widgetry, due December 11, will be called BrightStor Mobile Backup 3.5 to align it with CA's BrightStor backup products.

CA execs said the upgrade would come with an improved GUI with the look-and-feel of Windows Explorer, a new open file agent to backup open files and enhancements to the core differencing engine that reduce the time required to calculate the changes in a file.

Like the older version, BrightStor Mobile Backup 3.5 will do incremental backup and send data to the corporate server in a compressed format. Administrators can schedule backups in background when users are working. When users check for e-mail, the software is supposed to detect the connection and transmit the backup data to the server. The entire backup and transmission process is transparent to the user.

Pricing for BrightStor Mobile Backup 3.5 will be based on volume and start at \$139 per laptop. CA said it would continue to offer BrightStor Mobile Backup direct as well as through the channel. — RR

Arsenal Gets Funded

Arsenal Digital Solutions, a storage service provider, just raised \$23 million in C funding for a total of \$42 million.

"We believe we've got a solid business model," boasts Arsenal CEO Geoffrey Sinn. "We're seeing pretty good traction."

The Durham, North Carolina concern, which provides backup and restore and managed disk storage services, plans to use the money for capital expenditures, ramping staffing by 15% and supporting partners.

Southeast Interactive Technology Funds led the round. Other investors included **Covestco**, **TaskUSA** and

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MCNC. All of them backed the start-up before.

Arsenal delivers its services through **AT&T** and **Verio**, who resell them under their own brands.

The three-year-old company initially provided a service to exchange large files over the Internet. In April 2000, it moved into storage backup and restore. Over the last three months, it has added managed disk storage to its portfolio.

According to Sinn, most of Arsenal's 400 customers are on the backup-and-restore side. He claims Arsenal's strategy of starting with backup and restore proved to be a less expensive way to get up and running with storage services.

The company's storage capacity was put at 750TB, but Sinn declined to discuss utilization.

The new funding is expected to cushion Arsenal so it can expand into new areas such as remotely managing on-site enterprise storage, partnering with application providers that require lots of storage and archiving and signing up new channel partners.

Sinn claims that Arsenal is on track to break even in the first half and become profitable by Q3.

However, Arsenal has not been without growing pains. It went through three rounds of layoffs that reduced its headcount to 65 employees from a peak of 165 and its founder Kevin Pollard left in February. Pollard continues as chairman.

Arsenal considers its competitors to be **StorageWay**, **SANrise**, **MSI** and **Storage-Networks**. — RR

Cereva Exodus Continues

Whoops, there goes another one.

The exodus of top managers continues at storage start-up **Cereva Networks**.

VP of operations John Crossin has quit, the fourth senior exec to leave since May. Cereva has already lost CEO Alan Lutz, VP of sales and marketing Timothy Lieto and

CFO Brian Cohen.

Cereva repeated its usual explanation. Crossin left for personal reasons. "I believe it was voluntary," a spokesman said. Crossin was one of Cereva's early employees.

Cereva denies it's got a problem and said — reasonably enough — that it was "fairly common" for a new CEO to bring in his own people.

Cereva's new CEO is Mahesh Ganmukhi, an ex-VP of **Lucent's** ISTN business and founder and CEO of **Ignitus Communications**, an optical networking start-up Lucent acquired last year. He was on Cereva's board before taking over, a move that usually says something.

Larry Kellogg has replaced Crossin. He was previously VP of manufacturing operations at **Ellacoya Networks**, responsible for materials, testing, purchasing and outsourcing.

There's no word on when the start-up will launch. Cereva's big-time storage system for large enterprises, service providers and carriers is supposed to accelerate content delivery, deal with unpredictable demand and scale to support millions of subscribers. The widgetry was due in April, then September, then November-December, then January-February. Burned, now all it's saying is "soon, soon," but won't set a precise date.

Turquoise Gets Money; Will Bolster Sales & Marketing

Turquoise Technology has raised a million bucks from unnamed private investors in Asia and Europe in a third funding round that means it's seen \$5.5 million.

The three-year-old concern, with headquarters in both Boulder, Colorado and Dresden, Germany, plans to spend the money on worldwide sales and marketing initiatives. It's looking to strengthen its five sales offices in Boston, Boulder, Dresden, Paris and Amsterdam and set up a distribution channel in Taiwan and Australia.

The 38-man start-up offers the Linux-based **ContentCube** appliance that lets users

consolidate storage, asset management and graphical audio/video data in a single integrated resource.

The box, based on a 1GHz Pentium III with 1GB of memory, includes DVD-RAM, CD-RW and a removable hard drive. The OS, application and database are housed on redundant mirrored drives while the content is stored in a six-disk RAID5 array.

ContentCube 150, the company's first product released in October, comes with 365GB of storage, version control software and archival features. The device accepts both digital and analog content, converts it into standard digital formats and stores it for easy retrieval.

The 16-inch-square appliance plugs into any networked desktop or multimedia computing environment and is platform-independent. It works with PC, Mac and Unix workstations.

Users access the thing through a browser or the **ContentManager** client software that supposedly provides more robust functionality.

Turquoise claims the Cube has had a good response. According to Turquoise VP of engineering Jim Phillips, the company has sold the Cube to a customer in Germany and signed a contract with a Fortune 500 aerospace firm.

Turquoise is targeting the Cube at ad agencies, multimedia shops and web developers. It's looking to expand its addressable market to medical imaging, scientific computing and oil and gas exploration.

Sometime at the end of Q1 or early Q2, the start-up plans to launch a new Cube with higher storage capacity and video capture capability.

Turquoise is reportedly working with an unnamed storage vendor to expand Cube's capacity to 5TB.

The company expects to be profitable in Q2. Revenues for the coming year are projected to exceed \$10 million.

Turquoise is the brainchild of CEO Bruce Parker, Rolf Doerr and Phillips. Doerr is based in Germany and handles sales. The three founders met when they worked at scientific visualization house **Precision Visuals**.

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Rich Start-up Seeks To Reinvent Storage

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tangled in its own laundry, finally delivering something measurable. Suffice it to say, the bandwidth of a Sun server can exhaust four or five Lightnings, currently the fastest of monoliths, 3Par says. It's evidently gonna bring that ratio down.

The other distinguishing characteristic is multi-tenancy. The stuff is supposed to be able to handle multiple apps, all types of workloads (think rich media), multiple lines of business and departments and lots of customers. Multi-tenancy is key to 3Par's marketing brief. Scaffold is not supposed to replace anything. (Yeah, right.) It's supposed to be where the enterprise finally gets to centralize all the data that – thanks to the client/server paradigm and years of cultural decentralization – is isolated and duplicated in the tangle of autonomous business units that have been created. It's gonna be a way for them to do really sophisticated – sometimes scary – data mining, Gotthold said.

3Par says customers will get an "information factory."

Needless to say, Scaffold, which is both hardware and software, is supposed to have built-in fault tolerance, virtual capacity allocation, policy-based automated management, single system image and quality-of-service provisioning. It's also supposed to be able to do what it does at a reduced capital and operating expense.

Storage watchers think 3Par may have its act sufficiently together to "bring a real paradigm shift in thinking to the market." My, my.

The Fremont, California company, which takes its name from the initials of three of the founders, was started by server designers from Sun. Storage architecture – this stuff serves data, right? – and that of the classic server have begun to approximate each other so much, 3Par says, that server aces ought to be wizards at it. The guys built Sun's way late high-end Serengeti machine, the 4500 and 6500. 3Par engineering VP Jeff Price was responsible for Sun's 1000-6000 servers and CTO Ashok Singhal was chief architect for three generations of Sun servers, responsible for the architecture and system bus design of its Enterprise 3000-6000 family.

Ah, but, 3Par recruited a storage guy for president and CEO: David Scott, who it plucked out of HP, where he was general manager of its XP enterprise storage business. He replaced 3Par founder Robert Rogers, who seems to have disappeared. Bob Rando, who was North American storage sales general manager at HP, signed on as VP, sales. Rando had also been VP of sales at **Data General's** Clariion Storage Division and did stints at HDS, IBM and EMC.

The start-up now has 160 people, apparently most of them engineers. It's stuff will work with the usual suspects: all the databases, NT, Linux and the Unixes. ♦

Taking the Auspices

Intel and **Sun** read the mid-quarter auspices for Wall Street Thursday. Intel said it was doing better than expected and jacked its guidance up to between \$6.7 billion-\$6.9 billion as against the \$6.2 billion-\$6.8 billion it thought it would turn up with. Seems Pentium 4s are selling briskly. Briskly enough they're in short supply, Intel acknowledged, though it couldn't say how short, but the "factory is approaching full." CFO Andy Bryant attributed some of the positive complexion to Windows XP. How much, he said, was "unclear" because there's "so much noise," starting with 9-11. He described the uptick as "perfectly seasonal." Q4 is historically good at Intel.

AMD waded in saying its MPU sales were running better than expected too. Despite flat flash memory, it figures it can clear sequential revenue growth of 10% or better though it still won't return to profitability before Q2. It did \$766 million in Q3. The two of them are performing in the lousiest PC market ever.

Sun was another matter. Much more diffident. It thinks business is improving slightly, but couldn't or wouldn't say whether it was real or just a matter of catch-up. According to what it's said before, its business virtually dried up in the wake of the 9-11 attack and it estimated that it was down \$200 million-\$300 million. It claimed it didn't know whether the improvement it's feeling now is just those accounts placing their orders again or a true growth spurt. COO Ed Zander said he wasn't confident of a bottom and was just living day-to-day. It was all touchy feely – "what's normal?" – with no specific guidance on revenue or profitability. Sun will return to profitability next June. Zander said the company had "hundreds of quotes" out on its new **HDS**-derived storage systems, but gave no indication of how much business would close or when because the environment was too "dynamic," and merely talked of the "slow buildup" and "long sales cycle."

Jobs to Gates: Just Write a Check

Apple has gotten itself in such a state over **Microsoft's** proposed class-action settlement – the one where it would give a supposed \$1 billion in hardware and software to the poorest schools – that it'll be filing a supplemental brief today with the Baltimore court overseeing the matter. It's gonna say that according to its calculations the software-side deal will really cost Microsoft less than a million dollars. Apple would prefer it if Microsoft just wrote a billion-dollar check to an independent foundation that would dole out grants to the schools. Apple's worried about its historical, if diminishing, position in the education market and figures the deal would just hand Microsoft another monopoly. Microsoft hasn't of course been convicted of the class actions' allegation of overcharging for Windows. The judge is supposed to decide in a few weeks. Lawyers representing cases in California, North Carolina and Minnesota want to be exempt if he accepts it.

Eiffel .NET'd

Interactive Software Engineering (ISE) has released its promised .NET'd version of the Eiffel object oriented programming language.

Eiffel was one of the 17 programming languages that Microsoft bragged would be enabled for .NET back in July 2000, a number that's since grown to more than two dozen, including Java, although that's not Sun's doing. The key to .NET'ing any language is writing the class libraries that let it run with Microsoft's Common Language Runtime (CLR).

ISE CEO Bertrand Meyer said that Eiffel is the only one of the clunch of languages

supporting .NET to offer multiple inheritance, genericity and "design by contract" for .NET. Genericity is the ability of a language to provide parameterized modules or types. Design by contract is ISE's trademarked name for a development technique in which "a software system is viewed as a set of communicating components whose interaction is based on precisely defined specifications of the mutual obligations – contracts."

The new Eiffel cut, rev 5.1, is part of the EiffelStudio software development environment, a \$3,000 kit, 100 bucks for non-commercial student use. ♦

Oasis Releases Lightweight XML Schema

The XML interoperability consortium Oasis has released its promised "lightweight" alternative to the W3C's XML schema, a little number called Relax NG that melds the Trex standard developed by Japan's Information Technology Research and Standardization Center (Instac) and Relax, which was developed by Oasis.

Trex, originally created by web pioneer James Clark, stands for "Tree Regular Expressions for XML." Relax is an acronym for "REgular LAnguage description for XML." Both are highly similar structure-validation languages and the Oasis group working on Relax decided to come up with a standard that melds the two in April.

Clark describes Trex as essentially "DTDs (Document Type Definition) in XML syntax minus some things plus some

others."

Trex, Relax and Relax NB only validate syntax. XML DTDs both validate and interpret a document. The rationale behind Trex/Relax is that sometime XML programmers only want to do one thing – validation or interpretation – and not the other.

Another problem, as Clark explains it, is that the XML DTD standard compromise removed some features such as "and" groups that permit unordered content. Trex/Relax restores that.

Oasis director of technical operations Karl Best hails the release of Relax NG as "avoiding duplication, confusion and fragmentation."

In Japan, meanwhile, INSTAC said that it's put Relax NG up for consideration as a Japanese Industrial Standard (JIS). ♦

MicronPC To Try Server Business Again

MicronPC's new owners, Gores Technology Group, have decided to take another run at the server business.

This time Micron's going to make the widgets itself. It used to resell HP-built servers, and it's believed the business was never a go. It got out while going down the tubes in the desktop business.

Micron Technology paid Gores \$70 million in May to take the ailing MicronPC unit off its hands. Shuttering the thing would have been more expensive, what with severance and all. Two months ago Gores announced it had turned the unit around and

that it was making a profit for the first time in more than two years.

It should be instructive to see what Micron's chances are in the low-end server business, now as vicious as the PC business.

For its first box in the NetFrame line Micron is fielding a dual-CPU model 3500 powered by a pair of 1GHz Pentium IIIs. The widget, packaged in either a 5U pedestal or rack chassis, will cost \$4,899 equipped with a healthy 512MB of DRAM and four 18GB hot-swap hard drives. The price includes three years of service, but no operating system. Win2K is an option. ♦

IT Industry Survey Backs Microsoft in Antitrust Settlement

Despite the noise level of those opposed to Microsoft's proposed antitrust settled, which sometimes makes it sound like Redmond doesn't have a friend in the world, most of the high-tech business supports the deal according to a survey by Decision Analyst Inc. Only about one in three would trash it.

Decision Analyst said it polled 5,700 technology professionals at hardware and software companies out of the 40,000 on its Technology Advisory Board.

It said that 55.9% approved of the settlement; 33.2% disapproved. The remaining 10.9% were sitting on the fence.

If it were a presidential election, Microsoft would have won by a landslide.

The victory is really even bigger than that. While half of those opposed to the settlement are bitter that Microsoft is getting off easy, practically Scott free, a third oppose any settlement because they don't think one is needed. They think the government picked on Microsoft unfairly, and it shouldn't be meddling in private business.

"What our survey reveals is that the individuals who are most knowledgeable about the computer and software industries are solidly in favor of the settlement agreement," said Decision Analyst CEO Jerry Thomas.

The responses reflect some interesting opinions on why people approve or disapprove of the settlement. They were allowed to cite more than one reason for why they approved.

Only 20.9% of the "yeahs" thought Microsoft's "behavior will be constrained" by the settlement and an only 24.7% liked the settlement because it will take power or influence away from Microsoft.

In contrast a 63% majority said, "It's in the best interests of the consumer. A slightly smaller 59.8% said they felt it's in the best interests of the industry."

Some 41.9% thought the terms are "fair to all the parties involved" and 40.2% said "It's better to settle and stop wasting the government's money."

Of the 33.2% disapproving, 32.4% said that they think Microsoft was unfairly targeted and oppose a settlement because the government's got no case.

Micron-Hynix Memory Merger Mooted

Micron Technology and Hynix Semiconductor revealed Sunday that they are in talks that could result in Micron buying Hynix, alive only because of a Korean government bailout. The move would create the largest memory maker in the world.

Hynix said it would decide whether to stop or go on this month. A deal could take months more. Despite their rivalry, the two are suffering the same memory market disaster and battling **Rambus'** IP tax demands.

The disclosure came amid mounting pressure on Hynix to reveal why its stock price spiked. A week ago Hynix denied it was talking to Micron.

It lied.

"We do not know how Hynix could deny...there were discussions occurring," **Lehman Brothers'** incredulous analyst Daniel Niles said.

Micron and Hynix said they are in talks "evaluating a broad array of strategic options." Hynix CEO CS Park said negotiations include "possible steps to maximize stakeholder value in the face of an unprecedented downturn in the semiconductor industry."

Niles said he heard that Micron CEO Steve Appleton has met with Hynix' creditors and Korean government officials "to test the waters for a merger."

Niles figures that to work the deal would have to go down for about \$3 billion in Micron stock. Hynix creditors would have to forgive debt. Hynix would also have to sell or close its inefficient chip plants despite the major loss in jobs and battles with Korean unions and possibly the government. ◆

Niles also figures **Samsung** will do everything it can to prevent the deal because a merger "would make Micron the dominant player by far in the memory markets" with about twice Samsung's memory output.

Samsung is believed to have been hoping that Hynix would go belly up and let it pick up Hynix' assets at 10 cents on the dollar for chip plants that would cost \$8 billion to \$10 billion if one had to build them from scratch.

Infineon CEO Ulrich Schumacher late last month charged Samsung with driving memory prices down in hopes of bankrupting Hynix.

Meanwhile, investment banker **Thomas Wiesel Partners** believes the Micron-Hynix talks will come to naught.

Citing Hynix' "resiliency," Wiesel said that although the company "is in desperate trouble," it expects Hynix to survive despite a "staggering debt load" that could boost Hynix' price to more than Micron would want to pay.

Bear Stearns thinks Hynix is leery of Micron's intentions. One school of thought suggests it just wants to remove capacity and would close a lot of the operation down. Hynix, it said, is keeping its options open including the possibility of talking to other people.

Meanwhile Hynix Monday was begging the **LG Group** for more time to pay the 400 billion Korean won (\$314 million) that Hynix owes LG from its 1999 takeover of **LG Semiconductors**, a 2.56 trillion won (\$2 billion) deal forced on it by the Korean government. ◆

New He-Bull at Bull

Bull has got itself a new chairman and CEO, Pierre Bonelli, former head of the Anglo-French **Sema Group** plc, which went to **Schlumberger** a few months ago.

He replaces Guy de Panafieu, who resigned a couple of weeks ago when the French government lent the country's flagship company another \$88.2 million.

Bonelli, like many people, apparently has doubts that Bull, a shadow of its former self now that most of it's been sold off, is viable, a sensible observation to make considering it's had to be subsidized to the tune of \$5 billion over the last 20 years. Bonelli, who's not there forever, says it'll take him till spring to

come up with a strategy. Doubtless, Bull won't be turned out to pasture. Despite his skepticism, Bonelli is already talking sales growth and profitability.

When De Panafieu turned in his chevrons, COO Cyrille du Peloux also stepped down, but he's still keeping his job as head of Bull's **Integris** unit, which Bull was selling until Bonelli got there. He's put a temporary stop to the brain drain. Du Peloux is part of a group bidding for Integris' 3,500-man French unit, a transaction now on hold although the deal with **Groupe Steria** for Integris' European operation can't be stopped.

A few years ago there were negotiations aimed at merging Sema and Bull. ◆

Dell & Avanade Close Datacenter Deal

Told ya so. Told ya so.

Dell's cut that deal with **Avanade** that we were telling you about two months ago (CSN No 420).

It's not clear why it took so long to hammer out final terms. Andersen is supposed to handle Win2K Datacenter and .NET consulting for Dell customers.

As expected **Avanade**, the joint venture between **Microsoft** and **Anderson Consulting**, will service Dell customers running Datacenter on Dell's PowerEdge 8450 servers.

Microsoft's Gotta New Project

Next week **Microsoft** will take the wraps off a new version of Project, its Office kit for project management, adding a new Enterprise rev of the stuff and upgrading the current base version.

The new cut will be Project 2002. It won't hit market until 2002 – how novel.

The first public "preview" of the software has been timed for the San Jose, California iteration of ProjectWorld, a small 80-booth traveling trade show dedicated to product management. Other ProjectWorlds are scheduled for Toronto, Boston, Chicago and Ottawa over the next 12 months.

Although Project's a member of the Microsoft Office "family," it isn't bundled into the Office suite. The current version sells separately for \$199 for the desktop version. There's no hint what the Enterprise cut will cost.

Microsoft never mentioned it was working on a new Project, so one can only deduce what might be in it. For starters it will integrate with Office XP, probably sharing an XP GUI look. The Enterprise version will link multiple users. It will, of course, be dubbed a .NET application since it uses XML.

The thing would probably have been ignored but for a breathless announcement by the show's promoters heralding a mysterious "major" and "exciting" Microsoft announcement.

For the still unexcited, the show's keynote could be fun. **Ben & Jerry** are going to describe how they built their ice cream company.

Larry Loses Another One

Moments before the company's big OpenWorld end-user festivities started this week, **Oracle** executive VP Jay Nussbaum, head of its Service Industries business unit, which handles the US government, education, health care, communications, utilities and financial services, defected to **KPMG Consulting Inc.**, creating the sensation of over-dependence on Oracle CEO Larry Ellison again.

Nussbaum, a member of Oracle's Executive Committee, follows Oracle president Ray Lane, who was pushed out, and executive VP Gary Bloom, who became CEO of **Veritas**, something he couldn't do at Oracle, out the door. Nussbaum's responsibilities have been divided between four remaining Oracle execs.

Nussbaum has been on KPMG's board and joins as executive VP for managed services and enterprise solutions. He's supposed to increase its managed services business and will resign from the board.

Ellison uttered a benediction over Nussbaum and said in the newly public KPMG's announcement how much Nussbaum had contributed to Oracle's growth in his 10 years there. KPMG is an Oracle partner. Nussbaum is believed to have CEO fever.

Credit Suisse discounts the idea that Nussbaum is leaving because of tension with Ellison and figures he's really "driven by a compelling outside opportunity." The brokerage allows that "the timing of his departure given the soft market conditions, aggressive financial targets and need for flawless execution in H2:FY02 might mean this departure introduces more risk going forward." However, it thinks Oracle's sales operation has the "bench strength" to deal with the loss.

Nussbaum's not leaving empty-handed. He reportedly cashed in \$22 million worth of Oracle stock in October.

Veritas NetBackup XP'ed

Veritas this month will release a version of its NetBackup Professional backup and recovery software that supports Windows XP and, curiously, ME for the first time as well. The new cut, NetBackup Professional, will come with hierarchical support that offloads infrequently used backup data on disk to off-line tape. Prices start at \$69 a client.

AMD, IBM Promise Faster MPUs

This week **IBM** and **AMD** both projected a future filled with faster processors at the International Electron Devices Meeting (IEDM), one of the premiere showcases for perspective chip technologies.

IBM said it has perfected the long-sought techniques needed to make so-called "double-gate" transistors and expects to see them used in new MPUs in five years, resulting in speed increases of 30% to 100%.

AMD, meanwhile, said it successfully built a transistor with a 15-nanometer (0.015 micron) gate length as part of a program to develop a 30-nanometer process that it hopes to have online by 2009. In theory AMD's technology can increase MPU speeds by 20x, sometime next decade. When the first chips start rolling off the line, AMD said they should be 10 times faster than those produced today.

Network Associates Shuffles Top Execs

Network Associates, still struggling to turn the bottom line around, has tinkered with its top management team again, promoting Gene Hodges, the president of its McAfee anti-virus unit, to be company president.

Hodges takes over the post from chairman and CEO George Samenuk, the 22-year **IBM** veteran brought in on an emergency basis at the beginning of this year when the company's CEO, president and CFO all resigned following massive losses and unexpectedly poor sales. Immediately before joining the company Samenuk was president and CEO of online business-surplus exchange **Tradeout**.

Replacing Hodges as president of the McAfee unit, which yields 60% of Network Associates' revenues, is Art Matin, a recruit from **CrossWorlds Software** where he was senior VP of sales and marketing. IBM bought CrossWorlds recently.

In a third move, CFO Steve Richards has been given the added job of COO.

Network Associates last month reported a pro forma operating profit for the first time in a year, but the bottom line remained in the red for the fourth quarter in a row.

Death Threat

The CEO of **LM Ericsson** Kurt Hellstroem has gotten a death threat, according to a story the Swedish tabloid *Aftonbladet* confirmed by the police. The words "Time has come, you die soon" were reportedly glued to a piece of paper. There was a bullet too. It's speculated it has something to do with layoffs.

Exodus Goes to Phone Company

Cable and Wireless is picking up what's left of **Exodus**.

Well, You Gotta Spend Money To Make Money

Corel, after struggling mightily to avoid death and return to profitability three quarters ago, will be back in the red next year as part of a plan to become "incredibly more profitable," CEO Derek Burney told investors Wednesday.

He characterized Corel's future as hinging on its ability to be a leader in technical illustration, enterprise process management and XML content solutions. A far cry from the Corel of yore, which saw its future in consumer graphics, the WordPerfect Office suite and now dead-and-buried Linux-based widgetry armed with Corel's own homebrewed desktop Linux distribution.

Burney said the company expects see an increase in sales for fiscal 2002, which ends November 30, 2002, to \$170 million to \$180 million and a loss of between \$23 million and \$31 million. The loss doesn't include amortizing costs for its October acquisition of **Micrografx** and pending acquisition of **SoftQuad**, expected to close before the end of February.

"We obviously have shown that we can operate a profitable business if we want to but it's coming at the expense of revenue growth," Burney said. "We do want to grow the business."

Burney said that Corel expects to burn through only about \$10 million or \$15 million of its cash next year. As of August 31 it had \$123.8 million in the bank out of the \$135 million that **Microsoft** gave it in October 2000.

Linux Watch

Evolution Evolves

After five betas, two release candidates and 750,000 lines of code, **Ximian** has finally launched Evolution, the open source Outlook knockoff for Linux and Unix systems.

Evolution 1.0, the culmination of two years of development, is considered one of the most significant end-user application projects ever undertaken by the open source community.

Touted grandiosely as the definitive personal and workgroup information manager, Evolution includes an e-mail client, a calendar and contact and task list management.

Ximian claims that Evolution provides the critical collaboration and information management features needed for Linux desktop adoption. Its broad support for data exchange and communications standards is supposed to ensure that Linux and Unix users can be integrated into corporate messaging systems and networks.

The product supports SMTP, IMAP, POP and other standard messaging protocols as well as LDAP and vCard. It's also supposed to read or import mailboxes from **Netscape**, Outlook Express, Unix mbox, Eudora and other Linux and Unix e-mail formats.

Mail features include threaded mail view, automatic message indexing, a spell checker, user-defined filters and a so-called vFolder that Ximian touts as a powerful feature that saves e-mail searches so contextual views of online messages can be dynamically created. vFolder, positioned as management superior to regular folders, lets messages appear in multiple folders without repeated copying.

The widgetry supports peer-to-peer calendaring with other users of Evolution, Outlook, **Lotus** Notes and programs supporting the iCalendar protocol.

There's also address book and to-do list management.

Apparently, Evolution can synchronize calendar, address and task list information with PalmOS-based devices such as the **Palm Pilot** and the **Handspring Visor**.

Evolution supports **Red Hat** 6.2, 7.0, 7.1 and 7.2, **Mandrake** 7.0, 7.1, 7.2 and 8.0, **SuSE** 6.4, 7.0, 7.1 and 7.2, Debian GNU Linux 2.2, **Turbolinux** 6.0, Yellow Dog 1.2 and 2.0, LinuxPPC 2000. It supports Solaris 8 as well.

Evolution 1.0 can be downloaded for free

from Ximian.com or purchased on CD as part of the Ximian Desktop software in both Standard and Professional editions later this month. The Desktop Standard Edition costs \$30; Professional is 50 bucks.

Early next year, Ximian plans to offer an Evolution add-on called Connector for Exchange 2000.

Connector is supposed to let Evolution function as an Exchange client so users can manage their e-mail, personal and group calendars, address books and task lists using Exchange 2000 servers.

Ximian said Connector won't be offered under the GPL. There will be a proprietary license. It will cost \$69 and come with 90 days worth of web support. Sometime in the first half, Ximian plans to offer Connector for Exchange 5.5. — RR

VA Linux Gone, Replaced by VA Software

Well, it's happened. **VA Linux Systems**, the spoiled Linux box shifter now living off the remains of its record IPO, has morphed into **VA Software** Corporation, as expected. This is its third personality in two-and-a-half years. It used to be **VA Research** before it sought to cash in on the Linux momentum. It's now selling its proprietary SourceForge Enterprise Edition collaborative development software, hoping large enterprise projects bite. The name change required the approbation of VA's dejected stockholders.

e-Lizabeth Abandons Linux

The Queen of England's web site royal.gov.uk, which made headlines a couple of years ago when it went to Linux and Apache on **Dell** from Solaris on **Sun**, is now switching to **Microsoft IIS**. The site's got a new service provider, **CCG.XM**, which uses the Microsoft gear as its default. The Queen's old host, a government agency, stopped providing hosting.

New Linux Tests Ready

The **Linux Professional Institute** (LPI) has released Level 2 of its Linux certification tests. They've been in development for a year and in beta since September 4.

Level two consists of two tests on intermediate-level Linux system administration and

troubleshooting. Each of them costs \$100 to take and are administered by **Virtual University Enterprises** (VUE).

LPI, whose exams are developed by volunteers through an open source-like effort, hasn't said when it expects to have a planned Level 3 expert exam ready. Among other subjects, Level 3 will test one's knowledge about the integration of Linux and Windows.

The LPI tests will be offered in both English and Japanese, although the Japanese version of one of the new tests won't be ready until the end of the month.

Prizes Worth Winning

Free Software Foundation (FSF) president Richard Stallman and Linux creator Linus Torvalds are co-recipients of the 2001 Takeda Award from the Takeda Foundation of Japan. Torvalds for Linux; Richard for launching the free software movement 25 years ago and pushing the development of the free GNU operating system. The prize is not your simple peck on both cheeks and a hearty *bonhomme* backslap. Nope, Richard's share is 33 million yen, roughly \$268,000, and he says he will invest it to defer future living expenses. He says he lives like a monk and still gets no salary or expenses from the FSF. The third recipient is Ken Sakamura for the TRON embedded RTOS, which never made it off Japanese shores.

Opera Holds its Own

Opera is slowly increasing its overall share of the browser market despite the dominance of **Microsoft** and **Netscape**, according to e-business intelligence service **WebSideStory**.

Opera's global use at the end of November was put at 0.67% compared to less than 0.3% in January.

Opera's share is said to be growing at a faster rate in some European countries like Russia, Germany and Sweden. Its usage jumped from 1.5% at the beginning of the year to 5.9% at the end of November in Russia, from 1.3% to 3.37% in Germany and from 0.5% to 1.8% in Sweden.

WebSideStory said the free ad-supported version that Opera launched a year back increased its user base.

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Linux Watch

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Bitstream Debuts Font Server for Linux

Bitstream has released a font rendering technology for Linux called btX that's supposed to give Linux the same font presentation as found on Windows and the Mac.

With btX, developers should be able to render hinted, anti-aliased and kerned characters that produce great-looking text on screen.

Bitstream claims btX renders high-quality characters in TrueType and Type 1 formats as well as PFR (portable font resource) and stroke-based Asian font formats.

Besides the font subsystem, btX also includes a core set of 13 delta-hinted, TrueType screen fonts. Delta hinting involves fine-tuning fonts to make them look good on the screen, even at small point sizes on low-resolution monitors.

In all, btX renders eight font formats including compact fonts that can fit in embedded Linux devices, where space and memory are at a premium.

IBM Debuts Linux RAID Storage Management Software

IBM has launched a suite of software for Linux system administrators managing its Mylex and ProFibre RAID storage products.

The Global Array Manager (GAM) suite for Linux is supposed to allow an administrator with Internet access to install, configure, monitor and manage a RAID array from a Linux-based client anywhere in the world.

The suite comprises Linux versions of the GAM server, GAM client and SANArray Manager Client supports PCI Hot Plug, which allows a failed PCI controller to be removed and replaced without shutting the system down.

With GAM, users can monitor physical and logical devices, events and environmental factors such as enclosure temperatures and fan speed.

The GAM suite already supported NT, Windows 2000, Solaris x86, NetWare and SCO OpenServer operating systems.

Wyse Guys Head Back to the Future

By Stuart Zipper

Wyse is putting legacy serial ports back into some of its WinTerm Windows terminals.

The company has a new line of widgetry with the ports under development, secretly until now, that will hit market sometime next year. Depending on the model the terminals will be powered by XP embedded (XPe), WinCE or Wyse's own homegrown Blazer operating system.

It seems that all the industry hype over the past few years about the wonders of "legacy-free" devices ignored one key player: the customers.

In this case the customers are companies that typically buy terminals in hundreds, thousands and even many thousands at a time. Outfits like the huge airline reservation centers and mail order call centers.

Those are so-called "green screen" shops. They traditionally use dumb terminals connected to mainframes and midrange computers.

Once upon a time there was a theory that all those terminals would be replaced by PCs.

PC makers drooled at the prospect.

It hasn't happened, and isn't likely to, for a variety of reasons, the strongest of which is that the companies don't need or even want the flexibility of a PC. They don't want employees to be able to modify a system. They do want widgetry that is more stable than a general-purpose Windows PC.

The next failed theory involved the glories of legacy-free systems. Responding to the industry hype Wyse and most other terminal makers ripped out the old serial ports, plugged up the parallel ports and installed USB.

The problem is that a large portion of the large IT shops that use green screens use an ancient infrastructure that they're not about to rip out. Ethernet is not supported. Serial ports are.

The issue is not even the cost of some new wiring. The applications they're running are old and it would cost a fortune to

change them. In many cases they're custom code, and the folk who wrote that code are long gone.

Terminals from Wyse and other manufacturers can easily mimic the old dumb green screen terminals using emulation. But if they have only "modern" interfaces they can't plug into the network.

Wyse has been bridging the gap with a USB-to-serial dongle, but that adds about \$50 to the price of a terminal. Meanwhile, sources inside Wyse say, the company has started to see competition from offshore "white box" terminal makers putting legacy ports back into their cheap terminals.

Meanwhile, Wyse this week launched another move to counter that white box competition by cutting its entry-level price to \$299. It's the first time the company has had a sub-\$300 thin client. The \$300 number is considered a "magic" entry-level price point in the terminals business, a number previously met only by white box makers.

The \$299 buys a WinTerm1200LE thin client, which formerly costs \$409.

The widget is targeted at users of **Citrix** technology, and comes with a built-in ICA client plus Wyse's Rapport Workgroup and WyseWorks Remote Administrator management software. It runs on Wyse's Blazer OS. Wyse is expected to make similar price cuts on its somewhat pricier Windows-based WinTerms.

Separately, Wyse competitor **Network Computing Devices** Wednesday launched a new line of WinCE-powered thin clients designed for web services and .NET technologies.

The new widgetry, the ThinStar 332 and 500, are powered by **National Semiconductor** 300MHz GX1 Geode CPUs running WinCE, with a free upgrade to the forthcoming WinCE.NET when it's released. It's the use of WinCE.NET and the accompanying IE 5.5 browser with their support of XML that earns the new widgets the right to call themselves .NET devices. ♦

Microsoft Starts Gouging Vendors

Microsoft has changed its payment terms. It used to pay its accounts payable 30 days net. Thanks to the wonders of databases, the process was automatic so there was no real administration cost. Now it's sent out a notice to what looks like contract vendors that effective January 2 it'll pay its bills in 10 days – for which it expects a 2% discount – or hold payment back for 60 days. It basically says if you think you have better terms coming, you'd better have them in writing.

Honey, I Shrank the RAID Chipset

A San Jose, California stealth operation by the name of **NetCell** Corporation has reportedly gotten yer typical RAID chipset down from practically a score of chips to a mere two aided and abetted by ASIC-for-hire design house **Smart-Sand** Inc. Seems NetCell is after a low-cost, high-performance RAID solution for the workstation, small business and SOHO markets and it's suspected of having a heavy Windows bias.

Free At Last, Free At Last

Java's loyal marketing team, reportedly the object of many a headhunting call, has gotten out from under the heel of the engineering department in the last month. Now we have to watch what it does with its newfound freedom of movement. One thing it would like to fix is how chopped up Java's become. It wants to turn it into more of an umbrella. It'd settle for Java 2 Enterprise Edition on one side and Standard Edition and Micro Edition combined.

Storage Think Tank

Hmmm. This is curious. **IBM** has hired an outside analyst to compare various storage virtualization schemes. Gee and Blue just signed on as a **DataCore** OEM, and its own Storage Tank scheme has been under development for more than three years and is due out in maybe the second quarter. Kinda makes you wonder why IBM's suddenly taking another look at the market. Of course IBM won't say, or tell who it's hired so we can go try and beat it out of him.

Semantically Challenged

Microsoft Group VP Bob Muglia, who ran MSN and Redmond's faltering wireless efforts, is now a senior VP over in servers working on "storage data management." Senior VP David Cole takes over MSN. CEO Steve Ballmer is taking personal charge of the wireless push. Microsoft insists Muglia wasn't demoted, the change in title is a matter of "semantics." Okay, let's call it a lateral shift downward.

Carly Has No Talent for Code Names Either
Maybe Carly herself secretly believes the **HP-Compaq** deal will never come off or that it will turn out badly if it does. In a throwback to her undergraduate days studying medieval history, she code named the merger talks with Compaq "Abelard" after the foremost intellectual of his day, which, in case you're interested, happened to be at the beginning of the 12th century. Carly also dubbed the vehicle set up to acquire Compaq the **Heloise Merger Corporation** after Abelard's most famous student and underage inamorata.

The references are downright funny given the situation. In real life, as even Stanford undergraduates must know – though, alas, Stanford has never been exactly top drawer in medieval studies – Abelard knocked Heloise up, named the baby Astrolab after the foremost invention of the day, married Heloise after the fact though she denied it so as not to ruin his career, got castrated by the 17-year-old's Talaban-anticipating male relatives as a consequence, survived the usually fatal attack, and after a long and painful recuperation – not to put too fine a point on it we're talking total emasculation here – retreated in shame – well, it was the talk of Paris – to a monastery never to see Heloise again. Heloise herself romantically took the veil too and wound up a revered abbess (Carly's alter ego, perhaps), but Abelard's Nominalistic doctrines on the Trinity were eventually declared heretical. The French being French, after both of the famous lovers were dead they were buried in the same tomb, together at last.

Anybody see a pattern here?

How Cute

The market analysts over at **Illuminata**, who have evidently seen one of **HP's** newfangled PowerBar dense servers, say the blades are color-coded so they won't be confused. Server blades are baby blue and the storage blades are lavender. They didn't seem to notice what colors the network switching and management blades are though.

That Hissing Noise Is Compaq

Compaq is making little hissy noises under its breath about **IBM** trying to shanghai the nascent Foster market. IBM is certainly in a rush. It'll start shipping its first x360 Foster boxes a quarter ahead of **Intel** going volume with the chip, an event not expected until March, and says it will declare GA next month. Compaq sniffs that **IBM** forgets to mention that Intel isn't recommending Foster go into any high-risk mission-critical sites until the chip is through validation. Compaq isn't expecting to field its rival Foster boxes until spring (think April) after Foster officially bows. Both companies are using their own proprietary Foster chipsets. IBM's Summit chipset is supposed to be a 16-way and accommodate the upcoming 64-bit McKinley chip; Compaq's prospective F8 chipset is, as the code name implies, more modest and will only go to eight-way. Com-paq's working on another chipset for McKinley that it expects to create 32-way systems. IBM's got one of those too called Summit II.

Ah, The Old Revolving Door

John Cooper, the managing director of corporate development and strategy at **Microsoft**, the guy who did the **Great Plains** acquisition, has pushed on. He's joined e-commerce VC **ThinkTank Holdings** LLC in California. Cooper was at Microsoft's investment and acquisition operation for two years and was involved in 30 transactions and agreements.

Virtual Stealth

There are six companies with stealth storage virtualization software projects underway, according to a source who should know because he says that he's under NDA to all of them. Our blood-

hounds are on the trail.

Jabberwocky

Jabber Inc, the open source answer to **Microsoft** and **AOL's** instant messengers, has landed James Barry, the founder of **IBM's** WebSphere product line as its CTO. More recently he's been working as VP of products and strategy at open source community building specialist **CollabNet**.