



## Market Roundup

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## **IBM and SGI Both Announce New Supercomputing Offerings**

*By Charles King*

IBM has announced Supercomputing On Demand, a new option that allows company customers to access POWER- or Intel-based supercomputer clusters and pay for processing power based on the required capacity or duration of use. According to IBM, the new service, which is part of the company's greater On Demand initiative, will be especially valuable in industry sectors such as petroleum exploration, digital media, and life sciences, where supercomputers are necessary at certain times in product development cycles but are often otherwise underutilized. The first company to access IBM's Supercomputing On Demand is PGS Data Processing, a division of Petroleum Geo-Services, for an advanced seismic imaging project in the Gulf of Mexico. To supply processing power for the new service, IBM will build a grid consisting of hundreds of IBM eServer p655 systems and a massive Linux cluster of Xeon-based eServer x335 and x345 systems. The initial IBM supercomputing hosting facility will be based in Poughkeepsie, NY, with other national and international facilities to follow. In an unrelated event, SGI announced the availability of the new Altrix 3000 family of servers and clusters, systems which combine SGI supercomputing architecture, the company's NUMalink system interconnect fabric, Intel Itanium 2 processors, and Linux. Each Altrix 3000 node can run a single Linux OS image with up to sixty-four Itanium2 processors and 512GB of memory, and can be scaled up to hundreds — and eventually thousands — of processors. The entry level Altrix 3000 server with four processors and up to 32GB of memory will be available in the first quarter of 2003 beginning at \$70,176.

In a sense, these two announcements offer glimpses into current and emerging supercomputing thinking. While the utilization of Itanium 2 processors makes the SGI announcement something of a novelty, the Altrix 3000 also offers the impressive performance and scalability projections SGI has often been noted for. In fact, while SGI has had more than its share of problems in recent years, the company has retained its aura of engineering leadership in high-end technical computing. The question in our minds is whether or not the market will really care. SGI is targeting the Altrix 3000 family at the usual supercomputing suspects (research labs, universities, and government-sponsored agencies) that can afford high end products. But the performance metrics landscape tends to change rather quickly, and solutions that eclipse today's speeds and feeds statistics often look downright anemic in six months' time.

To our way of thinking, the real news in supercomputing and high performance computing is the continuing migration of these technologies from lofty research labs to day-to-day commercial applications. Part of this evolution is being driven by simple price/performance issues, along with the continuing development of high

speed networking and clustering technologies. As a result, solutions that would once have been unaffordable by any measure in commercial enterprises are now seen as cost-effective in the extreme. However, commercial supercomputer installations remain of greatest interest to massive enterprises such as automobile and aircraft manufacturers with scores or even hundreds of products in development. Where does that leave smaller players who would enjoy supercomputing capabilities but do not require full time access to these solutions? That is the sweet spot IBM's initiative is targeted at. By leveraging the company's notable supercomputing expertise and products, IBM will not just benefit customers who need limited access to these systems, but will also likely help seed the market for future sales of standalone solutions. If this initiative is successful, we also believe it will help validate IBM's recently announced On Demand strategy and could inspire similar initiatives among the company's supercomputing competitors.

## Expecting More, Getting More

By Jim Balderston

The Pew Internet and American Life Project has released its latest report entitled *Counting on the Internet*, which measured how much Americans expect, and then actually find, information they are seeking online. The report's findings note that when it comes to government agencies, 65% of all Americans expect the Web to have that information, where 82% of Internet users expected to find the government information while 39% of non-users held the same belief. In the realm of electronic commerce, 63% of Americans expected a business will have a Web site that gives them information about a product they are considering purchasing. Nearly 80% of Internet users held this expectation, as did 38% of non-users. Sixty-nine percent of Americans expect to be able to find reliable, up-to-date news online; 85% of Internet users agree as do 43% of non-users. Two-thirds of Americans expect to find reliable health information online, with 81% of Internet users feeling this way, and 45% of non-users. When combining these four areas, Pew found that 84% of Americans expect to find the information they seek in one of these four categories, with 97% of Internet users in agreement with this expectation as well as 64% of non-users. The report also notes that by September 2002, more than two-thirds of all Internet users in the U.S. had been online for more than three years, and that this is contributing to ever-increasing expectations toward what will be available online.

While the developments outlined in the latest Pew study should not come as a big surprise, there is more at work here — and to take note of — than simply the maturing of the Internet user and the mainstreaming of the medium in American life. There are lessons for decision makers and strategists at enterprises that are planning to — or claiming to — make the Internet a key element of their future strategies for selling products or providing information.

As we see it, the real lesson here is that Internet users are going to go where they want to go, and as they gain more experience they gather the tools necessary to navigate to that end point with ever-increasing levels of success. The information those users seek — about government, products, news, or health information — is in demand and the smart owners of that information are making it readily available. Whether one needs to know how to get a dog license, a camcorder, a weather update, or a recommendation on allergy medicines, the winners in the new-old-new economy are those that make this information easily found. Of real note for enterprises is the fact that as the expectations of customers rises for the availability of a daily weather report, so too have the expectations of finding out pertinent, concise, unambiguous information about their products and services. An IT vendor that makes finding such information about six-, seven-, and eight-figure products or implementations unavailable or incomplete risks playing with fire, as that potential customer — with ever increasing navigation skills — will have the wherewithal to find an alternative. IT vendor Web sites that are still largely seen as marketing or publicity tools are doing their companies a disservice. Images of preening CEOs, their schedules, or tributes to their brilliance or the company's unique place among the stars provide little or no help to potential customers who, seeing this wall of self-promotion where they hoped to find a path to what they sought, may simply go elsewhere. Increasingly, Internet users know where they want to go, and how to get there. The enterprise that impedes that effort does so at its own peril.

## Embedding Intelligence: MontaVista and Microsoft Look to the Future

*By Charles King*

MontaVista Software has announced its new Linux Consumer Electronics Edition (CEE) 3.0 and operating system and cross development for consumer electronics applications such as digital televisions, set top boxes, automotive telematics, and mobile phones. According to the company, CEE is tailored to the demands of highly constrained mobile devices which require low power consumption, restricted memory, and short boot and resume times. CEE will initially support Texas Instruments' OMAP 1510 and OMAP5910 applications processors, the IBM PowerPC405LP and the associated Artic II/III Reference Board. MontaVista's current consumer electronics customer list includes Sony, Panasonic (Matsushita), NEC, Toshiba America, Zintec Holding, and Araneo. The new Linux CEE 3.0 will be available worldwide in the first quarter of 2003. In an unrelated announcement, Microsoft's Bill Gates said that the company will help develop "smart" wristwatches with manufacturers Citizen, Fossil, and Suunto that will reach the market later in 2003. The new watches will be based on Microsoft's Smart Personal Objects Technology (SPOT). SPOT enables devices to interact wirelessly with owners' PCs or DirectBand, a planned nationwide WAN based on FM subcarrier technology and new radio protocols to access news, weather information, sports scores, and stock closing prices. No pricing information for the new watches was discussed.

These two announcements offer starkly different approaches to how technology will enhance future consumer devices. MontaVista's development of Linux-based embedded operating systems and development tools turned the rather staid and proprietary embedded systems sector on its head. Well established players such as Wind River have had to shift strategies to keep up, and relative newcomer Microsoft has seen its plans to drive embedded Windows CE into set top boxes and other consumer electronics gear hit a bump in the road. MontaVista has not fractured relations between Redmond and consumer electronics vendors who use MontaVista products (and have sworn to continue using Windows CE). However, the attraction of CEE 3.0 is simple enough, since it allows tech-savvy vendors to both escape sometimes onerous OS licensing fees and retain more autonomy in product/market development. So does MontaVista Linux CEE 3.0 qualify as a big deal? Shortly before Christmas Sony and Matsushita (both of whom are investors in and customers of MontaVista) announced their intention to develop a Linux-based OS for consumer electronics products that looks remarkably like CEE 3.0. While this week's announcement may qualify as something of a second, commercial coming for CEE 3.0, we regard this wider distribution as potentially disruptive for Wind River and Microsoft, and an opportunity for developers and vendors to experiment with a solid, field-tested Open Source OS that can support a wide range of consumer electronic devices.

While Linux may be making inroads in some parts of the consumer electronics space, what are we to make of SPOT-enabled "smart" watches? First, it is important to remember Microsoft's long strategic efforts to move outside of the box (the PC box, that is). The company has pursued any number of efforts, from new operating systems to productivity apps to enterprise business computing to set top boxes to cable television investments to electronic gaming devices, for good reason. When the PC market takes one of its cyclical dives, income from other sources helps keep the ship afloat. So how do "smart" watches fit into this scenario? To us, the watches are the smallest part of this new initiative. While they might appeal to some gadget-obsessed individuals (the company admits its target demographic is 15- to 35-year-olds), the real story here is DirectBand. If it works as the interactive broadcast medium Microsoft plans, the company could become the owner of a nationwide information network that would support, enable, and enhance any number of new Microsoft-enabled or supported devices. "If" is the operational issue here, since such a network would be hugely complex and expensive to deploy. But if Microsoft succeeds, it could offer the company a way into a much bigger "box" than PC makers ever imagined.

## Internet Sales Tax on Its Way?

*By Jim Balderston*

Michigan legislators are on the verge of approving a measure that would allow the state to collect taxes on purchases made over the Internet or through catalogues. The legislation would be modeled on an ongoing

effort to simplify sales tax codes on interstate purchases so that states could collect those revenues. Thirty-four states have or are considering a simplification of sales taxes, according to the Streamlined Sales Tax Project. The goal of this project is to streamline taxes for all interstate sales, not just those online. While more than thirty states have begun the process of participating in the program, the agreement will not take effect until at least ten participating states (representing 20% of the nation's population) have amended their tax laws to comply with the Streamlined Sales Tax Project's uniform definitions of tax rates for interstate and online goods and services. Michigan officials say they are getting pressure from local, in-state businesses to amend sales tax regulations, so that out-of-state retailers do not have the advantage of avoiding Michigan's 6% state sales tax.

With states across the nation facing huge budget deficits, it is not surprising to see some movement to end the tax moratorium on Internet purchases. With Internet retailing still showing huge year-to-year growth numbers — despite a miserable holiday shopping season for their bricks and mortar cousins — the image of a frail, nascent industry in need of protection is getting a bit frayed at the edges. With states considering huge budget cuts and various revenue schemes, including casinos, the momentum to do away with a special dispensation for the Internet retailers seems largely irresistible. Before any online retailers get too wound up about Michigan's move, they should stop and note that the Streamlined Sales Tax Project is nowhere near being implemented. Even with the most enthusiastic support imaginable in various state legislatures, the implementation of such a uniform tax code across state lines has substantial and time consuming legislative processes to be negotiated before any real change occurs. One only needs to remember that the federal government, not the states, may regulate interstate commerce. Thus, the likelihood of Michigan or any other state enforcing local sales tax rules against a New Hampshire business remains slim, especially in light of the Supreme Court 1992 ruling regarding enforcement of state taxation policy against businesses without an economic nexus in the state in question.

When one considers that many Republican-run state legislators have aversions to any sorts of tax increases, it makes the likelihood of enactment any time soon lesser still. Individual states like Michigan may go ahead and declare taxes on Internet or catalogue goods but it will do them little good if the merchant that sold the product to a Michigan resident cannot be forced to collect the tax or submit information about the transaction. Alone, states can do very little but kick up dust. But for the sake of argument, what happens if the Streamlined Sales Tax process actually accomplishes its goals and most of the states participate? For one thing, how will they determine where an entity is located? Is it in Delaware, or Montana, where there is no sales tax? Or are just its servers? Has it incorporated in one of those states? Or does its warehouse reside there? How states define the "location" of an Internet retailer will be a key element of taxation of their business, and one can't help but wonder if states like Delaware, Montana, New Hampshire, and Oregon will get a host of new business incorporations by Internet retailers seeking sales tax havens. Stay tuned.

## PeopleSoft Announces Sales Incentive Management Solution

*By Myles Suer*

PeopleSoft announced this week the general availability of PeopleSoft Sales Incentive Management (SIM), which will be tailored to various industry verticals. As of this announcement, the company has released the product targeted at high tech and industrial organizations. SIM will be sold as a part of PeopleSoft's Human Capital Management (HCM) offering.

PeopleSoft's action validates what has heretofore been a niche occupied by Motiva, Callius, Incentive Systems, and Syngy. PeopleSoft claims its offering is a full-featured solution, but a feature-by-feature comparison reveals that several of the features found in Motiva, which we believe has the most complete offering in this space, are missing from PeopleSoft's new package. However, it is important to recognize that many of the offerings in this space have been developed to solve different problems. For example, Incentive Management's offering is focused on how a firm manages its sales team, whereas Motiva is about collecting and managing all the costs involved in selling a product. The question for PeopleSoft and others in this niche is: Who is the real customer in the enterprise and what does that customer need? From our perspective, the compelling need is

creating the ability for management to understand the real costs involved in selling products — in particular the soft costs. These costs can have a real effect on an organization's success and profitability. Additionally, the ability to know the real cost of the company's sales channels and partnerships can be a great help to an enterprise that is under margin pressure. Given that these needs would normally be thought of as sales and marketing in focus, we find it very interesting that PeopleSoft has chosen to lead this niche from an HR rather than a CRM/e-sales perspective. Nonetheless, it will be interesting to see whether the niche gains significance due to PeopleSoft's attention or becomes absorbed into the mass of features in an ER offering.