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Compare and Contrast: What a Difference a Year Makes

By Clay Ryder

EMC has reported Q4 03 and overall 2003 financial results. Total consolidated revenue for Q4 03 was $1.86 billion, 25% higher than Q4 02. Net income for Q4 03 was $220 million compared with a net loss of $64 million a year ago. Total consolidated revenue for 2003 was $6.24 billion, up 15% over 2002. Net income for 2003 was $496 million, compared with a net loss of $119 million the previous year. Business segments including Symmetrix, CLARiiON, Centera, Celerra, core software and services, and connectivity revenues experienced double-digit revenue growth from Q3 03 to Q4 03. The company credited its broadened product portfolio, focus on information lifecycle management (ILM), and an improving global economy for its performance during 2003. In a separate announcement, Intel announced Q4 03 revenue of $8.74 billion, up 22% over Q4 02. Q4 03 revenue set a new record, eclipsing that of the previous high set in Q3 00. Net income for Q4 03 was $2.2 billion, up 107% over Q4 02. For the year, revenue was $30.1 billion, up 13% over 2002. Net income was $5.6 billion, up 81% over the previous year. For the year, the company paid cash dividends of $524 million, and used $4.0 billion in cash to repurchase approximately 176 million shares of common stock. The company noted that IA microprocessor units set a record, the average selling price was slightly higher, chipsets were at record levels, motherboards set a record, and Ethernet product units were at record levels. In yet another announcement, Sun announced Q2 FY 04 revenue of $2.89 billion, up 4% over Q1 FY 04, but down 1% over Q3 FY 03. The company indicated its Q1 to Q2 revenue growth was the highest since 1998. Net loss for the quarter was $125 million compared with $2.28 billion one year ago. The company highlighted its release of twenty new products at its SunNetworkSM conference in Berlin and an alliance with AMD as significant achievements for the quarter.

For many in the IT industry 2003 will be remembered as the year that the market finally began to turn around and enterprises actually began to loosen their purse strings. Intel achieved record shipments in their venerable IA CPUs as well as their supporting chipset, motherboard, and Ethernet products. These accomplishments were also marked by impressive financial performance, especially notable in what have been rocky times for any vendor's pricing power. EMC continued down the path of change, apparently for the better, as it has gone from being a money loser to a moneymaker. The high growth rates for its products is impressive, but even more so is that this growth in some cases is coming from new products in an emerging market. Sun has also seen fortunes change for the better. The hemorrhaging of cash it experienced a year ago is down to that of a bad cut, but is clearly no longer life threatening. Sun too announced new products and some change in direction in its quest to recapture its once unassailable position in the marketplace.

So overall things are getting better, right? Well, yes and no. Intel, EMC, and Sun are each major players in the IT space, yet while we see some similarities we believe these players illustrate different positions in the market, each fraught with its own set of risks and opportunities. Intel has clearly maintained its enviable position as the 32-bit commodity-computing powerhouse, complete with both market dominating and ancillary products. However, in

its quest to grow new a market, requiring a 64-bit solution in the form of Itanium, the company continues to fall short of its aspirations. EMC has also taken a lesson from the commodity-computing textbook and began to shift its revenue dependence away from premium-priced hardware to a new market in services and most importantly value-added, standards-based software attacking a new opportunity it has dubbed information lifecycle management (ILM). The challenge of course is cultivating the ILM opportunity, which will not be an automatic slam-dunk. Sun has staunched the bleeding, mostly through a significant reduction in the size of its organization, and is also offering new products. However, the company remains fixated on its "my way or the highway" value proposition. While Sun loyalists remain vociferously supportive, others are finding the siren song of other vendors rather enticing. There are fundamental differences between the market positions typified by these three players. Intel is a stable giant with undeniable past success that is failing to move forward in large part due to its inability to produce a seamless transition and growth path for its customer base. Sun is a shrinking giant that seems only to gaze in the section of the marketplace residing near its navel, but it too has failed to produce a comprehensible, seamless transition and growth path for its customer base, let alone new buyers. In contrast, EMC, no small entity itself, has taken the bull by the horns and put in place a path to expand its markets and create seamless transition and growth for its customers. While it faces a significant challenge in making this come true, EMC's actions smack of a logically crafted, strategic plan — which is in sharp contrast to the other camps.

Bringing Web Services to Grid, and Vice Versa

By Charles King

Akamai, The Globus Alliance, HP, IBM, Sonic Software, and TIBCO have proposed new Web services specifications designed to integrate Grid and Web services standards. The new WS-Notification and WS-Resource Framework represent the first time a common, standards-based infrastructure will be available for sharing across business applications, Grid resources, and systems management. The new specifications will provide a scalable pub/sub messaging model and the ability to model stateful resources including physical entities (such as servers) to logical constructs (such as business agreements and contracts). Access to these resources enables customers to automate solutions just in time procurement with multiple suppliers, systems outage detection and recovery, and Grid-based workload balancing. WS-Notification can be configured to automatically trigger an action in the IT infrastructure, such as notifying a supplier to replenish inventory once current inventory drops to a set level. The WS-Resource Framework includes WS-Resource Properties, which defines how data associated with a stateful resource can be queried and changed, and WS-Resource Lifetime, which allows the user to specify the period during which a resource definition is valid. According to the proponents, the new specifications will help enterprise customers lower costs, speed deployment, and enable integration across and outside of the enterprise.

Spending a couple of hours with the hit film Seabiscuit allows one to bathe luxuriously in the rosy glory of professional horse racing, but rose-tinted glasses cloud the actualities of the Sport of Kings. Overall, it takes thousands of hours of dedication, patience, intensive training, and stable mucking to get a thoroughbred to the winning post on time. What does this have to do with these new Grid and Web Services standards? In a word: everything. Any successful leap forward requires more than a little creative speech writing. Visionary language is what gets people's interest up and blood running, whether it comes in the form of inspiring election year rhetoric or business technology strategizing. In the cases of grid computing and Web services, both efforts have taken up enough newsprint and ink to fell a rainforest and darken the Amazon, and while both efforts boast enthusiasts across the IT industry, they have generally created more light than heat for end users chilled by continually increasing IT complexity.

With that in mind, do the new WS-Notification and WS-Resource Framework specifications have a chance to improve things? Perhaps so. At the end of the day, the success of grid computing and Web service solutions will not depend on visionary rhetoric but by the business value their use provides customers. In the case of WS-Notification and WS-Resource Framework, that value will be found in the ability to increase business efficiency by better managing IT infrastructure, automating business agreements and contracts processes, and setting specific rules and criteria for controlling those processes. What does all this really mean? In creating effective specifications such as WS-Notification and WS-Resource Framework, the Globus Project and its partners are

performing a good bit of proactive IT stable mucking for future grid and Web service customers. By putting in the time and effort now to, proponents of these specifications hope to help their clients beat the field and cross the finish line in record time. By doing so, they should not only earn respect, appreciation, and future sales opportunities from their clients, but will also help drive the vision of fully integrated, automated, and interdependent IT infrastructure across the greater market.

Intel Outlines Broadband Wireless Vision

By Clay Ryder

Intel articulated its plan to work with the industry to dramatically drive down the cost and increase the availability of broadband wireless at the Wireless Communications Association annual symposium. Sean Maloney, Intel EVP and GM of the Intel Communications Group, stated that Intel's efforts in 802.11 (WLAN) and 802.16 Wireless Metropolitan Area Networking (WMAN) that would help attract the next 5 billion users to the Internet, particularly those in emerging markets such as China, India, and Latin America. The vision outlined by Intel includes delivery of standards-based silicon for both WLAN networking and cost-effective and interoperable 802.16 WMAN hardware. The 802.16 silicon — that would be certified by the WiMAX Forum that oversees the compatibility and interoperability of 802.16 technologies — would be developed and deployed by a growing ecosystem of wireless equipment makers and service providers. Intel envisions a three-phased deployment that will begin with fixed outdoor antenna installations, rapidly progressing to indoor antenna installations, and in the third phase, WiMAX certified hardware would be available in portable solutions for users who want to roam within or between service areas. WiMAX certified systems would also be used to connect 802.11 hot spots and enterprises to the Internet. Maloney announced that Intel is working with telecom companies, including Airspan Networks, Alvarion, Aperto Networks, and Redline, to develop and deploy WiMAX certified 802.16 equipment based on Intel silicon. Siemens Mobile and Proxim are also separately in discussion with Intel on areas of collaboration for the WiMAX technology market. Intel's 802.16 silicon is scheduled to be introduced in the second half of 2004.

That dreaded last mile: the object and obstacle of much pain and affliction to service provider and customer alike. The reasoning goes that if the cost and obstacles inhibiting those last mile(s) could be driven down substantially, then users aplenty would flock to the Internet, and other digital services provided over these connections. Combined with the freedom of wireless connectivity, WiMAX certified 802.16 would seem to be the cat's meow in last-mile digital service delivery. Outlying suburban areas would finally be served, as would rural locations, and even those in underdeveloped regions bereft of most any digital communications infrastructure. For the billion or so people who find themselves fortunate enough to live in an industrialized part of the world, overcoming the last mile through wireless would seem feasible, and perhaps even desirable. One of the great ironies of many broadband solutions is that they are available in densely populated urban centers, which may be the workplace for many in the digital literati, but is not representative of the suburban lifestyle commensurate with the digital elite. So in the industrial world, 802.16 could provide a desired service in areas where existing solutions fall short. The enhanced throughput of 802.16 could also overcome the severe limitations experienced by past WMAN services such as Ricochet.

Where we disagree with Intel's vision is in its ability to attract the next 5 billion users to the Internet and/or digital services. In a world where three-quarters of the population lives in substandard housing, deals with diseases long eradicated in the West, lacks running potable water, and scrapes by at a subsistence level of food (on a good day), having wireless access to the Internet is as helpful as providing air conditioning to an Eskimo in the winter. Although many would like to view all technology as the great savior that can bring an end to poverty and blight, the simple reality is that most living outside the industrialized world have barely attained the Physiological Level of Mazlow's hierarchy of needs. Until such time that the world can provide for the basic needs of the majority of the population, we believe the uptake of the Internet by the next 5 billion will be significantly stymied, regardless of how cost-effectively Intel and its buddies can manufacture 802.16 technology and how successful it will be within the domain of those capable of reading this Roundup.

Sun Purchases Nauticus Networks and High-Performance Content Switches

By Joyce Tompsett Becknell

Sun Microsystems has announced plans to acquire Nauticus Networks in a cash transaction for an undisclosed amount. Nautilus Networks is a privately held firm that makes high-performance content switches. The switches handle SSL traffic, security, virtualization, and load balancing. Sun believes that Nauticus, destined to become part of Sun's Volume Services Products organization, will be important for the convergence of compute and network services.

After years of focusing Solaris and SPARC research on high-end big-muscle systems, Sun has recently spent some time putting legs to their volume story and getting that end of the family moving again with specific actions like acquiring (and ultimately killing) Cobalt, and forming an alliance with AMD. For HP, the way to deal with growing the volume server end of the business was to purchase Compaq, the volume leader, and play economies-of-scale and growth-through-downsizing. The two strategies may work for limited time, since with their installed base HP can continue to drive sales of volume products and then shift customers into their Adaptive Enterprise computing infrastructure. IBM had always been rather coy about the volume space, but recently they launched aggressive European marketing campaigns challenging Dell on pricing and established industry leadership with both the x450 for high-end Wintel/Lintel applications, and the BladeCenter, which now runs on POWER as well as x86 architectures. For Sun, the challenge has been a bit different. Despite HP's and IBM's UNIX and proprietary systems focus, they have both always had a leg in the Intel+Microsoft game. Sun on the other hand has not only distanced itself from those two giants but has maintained an adversarial position, particularly against Microsoft. They have dithered back and forth about porting Solaris x86 products and their ongoing commitment has been unclear. As a result, their customer base for those products was shaky, thus weakening executive resolve, and the vicious spiral continued. The recent rise of Linux gave Sun another chance to issue confusing messaging, but after a couple of hapless volleys, they finally seemed to have figured out what their strategy is via hardware and OS in the volume space and appear to be sticking to it.

All of which leads to the purchase of Nauticus. While HP and IBM have stayed relatively distant from the networking side, Sun has maintained for years that the network is the computer. This reasoning has led them to their purchase of Nauticus and its content switch. The technology can be leveraged in their blade servers, and across their N1 plans in order to grow their scale out capabilities. To some degree, Sun will have to play catch-up with IBM in the blade space. On the other hand, Sun is comfortable in the networking space, as much of their client base is telecom, so they may be able to take advantage of their familiarity with the inherent architectural requirements and limitations on some fronts. At the same time, most of N1 has been created by purchases of component parts from other companies and bringing staff from many small companies together. While integrating disparate products is not unusual in the marketplace, most companies reserve their in-house development muscle for products of strategic importance. Using bolt-together techniques of development for N1 says a great deal about Sun's strategic view of this capability. At least in this case, Sun has chosen to own rather than rent the technology. Nevertheless, Sun still runs the risk of creating a camel — which everyone knows is a horse designed by a committee — rather than a thoroughbred.

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