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## IBM Announces SATA/WORM Compliance Offerings

*By Charles King*

IBM has announced new tape and disk storage products designed to help companies address data retention and government regulatory concerns while taking advantage of new, lower-cost technologies. The new IBM TotalStorage FAStT100 Storage Server is an entry-level system that offers many of the capabilities of the company's FAStT600, but is optimized for near-line storage with low-cost SATA drive technology. IBM said the FastT100 offers small and medium-sized companies a high-performance, long-term storage solution for infrequently accessed data, and also allows clients such as those in financial services to retain information such as transaction records and auditing information in an affordable, scalable solution. The FastT100 Storage server will be available with up to fourteen 250GB, 7500 RPM SATA internal drives (for a total 3TB), and can also support up to 11TB of additional SATA storage via the EXP100 disk enclosure. In addition, IBM introduced Write Once Read Many (WORM) media technology for the Model 3592 tape drive, a solution aimed at enterprises that need to securely store large quantities of seldom-accessed electronic records for regulatory and internal audit requirements. Cartridges for the 3592 come in 300GB and 60GB lengths, and are available in both WORM and non-WORM formats. In addition, new models of the IBM Tape Library 3584 will provide support for drives, allowing IBM's Model 3592 and LTO Ultrium Tape Drives to coexist in the same 3584 tape library, and thus offering WORM capability to Model 3584 owners. No pricing or availability information was included in the announcement.

It was not so long ago that SATA was considered a second-rate solution for business critical storage needs, but the increasing performance and reliability of SATA technologies along with the success of EMC's Centera solutions demonstrated that a place for SATA existed in many corporate datacenters. While no one pretends that SATA solutions are the technological equals of comparative Fibre Channel drives, their notable price/performance has created opportunities for entirely new classes of highly available and affordable archived storage. Those are the markets IBM is aiming at with the new FastT100. By incorporating many features/functions of the FastT600 and dropping the price point (as well as performance) via the use of SATA drives, the FastT100 allows IBM to cost-effectively deliver a new solution that fills a notable hole in its storage product family. While the FastT100 does not possess the pedigree of some other compliance-specific solutions, it arrives in a market that has developed an acceptance of and taste for such solutions.

The company accomplished a similar feat by developing WORM cartridges for its Model 3592 tape drive, leveraging the stalwart, multi-purpose enterprise offering into a cost-effective solution for securely storing seldom accessed information. WORM-based media for the 3592 offers a solution for regulatory compliance that is likely to be appreciated both by companies that wish or need to keep as much data in-house as possible, and as a new leverage point for the rafts of existing 3592 tape customers. In addition, IBM's decision to provide support for the 3592 drive in its 3584 tape library provides an easy-to-deploy WORM solution for the company's LTO clientele. Overall, IBM's new FastT100 and WORM media for the 3592 tape drive offer interesting examples of how a

vendor can leverage existing products to meet emerging needs, effectively allowing both the vendor and its customers to have and eat their cake as they please.

## Novell: The Second Time Around

*By AJ Dennis*

This week Novell announced new service/support and product offerings in their Linux portfolio. In the services arena, Novell's Premium Service for Linux will offer tiered, global, and add-on flexibility to Linux support. In the product space, up-graded functionality of Evolution 2.0, scheduled for release in Q3-04, will feature "connectors" built-in for both Microsoft Exchange 2000/2003 and Novell GroupWise email and collaboration servers. This will allow users of these backend services to access and manage their e-mail, calendars, group schedules, address books, public folders, and tasks from Linux desktops. The announcement promoted Evolutions support of the industry's key data exchange and communications standards, such as IMAP, POP, SMTP, LDAP, and iCalendar, and the announced enhancements to Novell Evolution 2.0, which include built-in spam filtering, S/MIME and PGP security certificate management, and tight integration with the Linux desktop and the Gaim instant messaging client. Evolution is currently the most widely used e-mail and collaboration suite on Linux.

Novell, in announcing these two critical and credible components, continues to add critical mass to their vision of providing comprehensive enterprise-level support for the entire Linux environment, from servers in the datacenter to services at the desktop. The company's ecosystem system approach, while markedly different than that of their NetWare franchise, reflects lessons learned and successes remembered from that happy, industry-dominant era. These new services are a critical requirement for today's enterprise customers, who have little time and even less patience for solutions that must (but seldom do) work out of the box and with staffs that may manage well enough but are often not trained to deploy. These product offerings, particularly the Connector for Microsoft Exchange Server, which formerly retailed for \$69.00US per seat but will be freely integrated into Evolution and available as Open Source, are consistent with Novell's direction to build a major franchise from within and to be a primary source for and supporter of Open Source enterprise software.

There's an Academy Award nominated song from the early '60's called "The Second Time Around." Written by Sammy Cahn and Jimmy Heusen, the sentiments of that tune reflect very nicely on what we believe is in store for Novell's customers. This time around, with a range of NetWare services on Linux, integrated with enterprise Open Source sensibilities and commitments and what is touted as a new alternative to the Microsoft desktop, Novell is once again in the game. There have been quite a few careful, strategic steps, well played thus far, that have brought Novell the company and Novell the brand to this point in time and the market. The company's efforts to truly dig itself out of the hole of irrelevance have placed it on level ground to take advantage of new Linux opportunities. After the blind success of "right time, with the right product" and the slow declining spiral of the past decade, it seems that Novell is shaking off the rise and demise of the NetWare era and is stepping up to "do it again."

## IBM, Sony, and SCEI Announce Cell-Based Environment and Solutions

*By Charles King*

IBM, Sony, and Sony Computer Entertainment, Inc. (SCEI) have announced plans to develop a digital content creation environment for the company's Cell processor. Originally announced as a collaborative project between IBM, Sony, and Toshiba in 2001, Cell technology seeks to incorporate "supercomputer on a chip" capabilities including teraflop (1 trillion calculations per second) floating-point calculation performance into a range of digital content creation solutions and consumer entertainment devices. IBM plans to initially develop Cell-based workstations for digital content creation, and will also develop Cell-based server solutions. Sony and SCEI will lead the development of the Cell-based operating environment by providing the architecture, algorithms, middleware, and data structure for tools needed to create digital content for movies and computer entertainment applications. Prototypes of the IBM Cell-based workstations are expected to be available by Q4 of this year.

Like any highly cyclical industry, electronic gaming boasts a variety of highly visible tactical products to boost short term profits while focusing on somewhat more obscure strategic efforts designed to promote long-term financial health. This week's E3 Gaming Conference offered a plethora of the first variety, including an agreement between Microsoft and Electronic Arts to promote Xbox Live, significant cuts in the retail price of the Sony PlayStation2, and the introduction of powerful new handheld game devices by both Nintendo and Sony. But of the week's news, the announcement by IBM, Sony, and SCEI revealing the status of the companies' Cell processor project provided the most interesting food for long-term thought. Cell began with a bit of a PR bang, but the partners have cloaked their efforts since then with a degree of secrecy that the Manhattan Project's leaders might have envied. As such, Cell has been the subject of a good deal of speculation in the gaming industry, with proponents waxing poetic regarding the technology's possible capabilities and detractors suggesting that Cell contains more hot air than hot potential. While this newest announcement is, as usual, thin on details, the planned Q4 availability of Cell prototype workstations suggests that the project is roughly on schedule for delivery of commercial solutions by summer 2005, which is good news for the principals, the industry, and gamers, if not for Sony's competitors.

If Cell performs as planned, how will the world as we know it change? At the high end of the entertainment spectrum, teraflop floating-point performance should make it easier and faster to render and view increasingly complex digital images, vastly improving the quality of electronic games and special effects for film. The use of Cell in consumer products should similarly enhance the quality of home entertainment, via dedicated gaming/media consoles, along with increasingly ubiquitous broadband connections and HD television. But Cell is also about competitive advantage. Sony and Toshiba should both profit from incorporating Cell into consumer devices, and the new processors offer Sony an effective and exclusive tool for beating back Microsoft's aggressive move into the company's electronic gaming turf. While this week's agreement with EA offered good short-term news for the Xbox, it should be remembered that gamers and game vendors choose performance over nostalgia every time. If Cell-enabled PlayStations deliver the order of magnitude performance enhancement the partners expect, Redmond will be the biggest loser. Beyond these virtual battlefields, the potentially biggest winner here is IBM. With Cell apparently on track and the rest of the gaming industry migrating to IBM POWER as the platform of choice, any and every resulting sale signals a win for IBM. In addition, while Cell is being promoted as an entertainment-specific platform, teraflop-on-a-chip floating-point performance offers some intriguing options for the worlds of HPC and supercomputing. IBM has gained considerable stature and market share over the years by leveraging apparently dissimilar technologies to the benefit of multiple company solutions. We would be surprised if Cell did not follow this trend.

## Too Much Information?

*By Jim Balderston*

Time Magazine this week obtained a copy of an email sent to all Pentagon staff members warning them not to go to the Web site of a major news organization to read a copy of the report issued by General Antonio M. Taguba outlining prisoner abuses in the Abu Grahیب prison in Iraq. The email, a copy of which Time placed on its Web site, warned that the Taguba report was classified and that Department of Defense employees should not view, discuss, or disseminate the report. The report is readily available on numerous Web sites, as are many of the photographs of prisoner abuse that sparked the controversy over the prison in the first place. The Pentagon and lawmakers are debating whether they should make additional photographs available to the public which have been viewed by legislators and military staff.

It is ironic that the Department of Defense is struggling to stop the flow of information over a decentralized network the DoD first designed to be redundant and resistant to nuclear attacks based on that decentralization. Perhaps, as it desperately (and somewhat humorously) tries to prevent its employees from seeing a document that is now in worldwide distribution, the DoD might now wonders whether they made DARPA Net just a bit too decentralized. The release of the Taguba report comes just as a group of men who identified themselves as followers of Abu Musab al-Zarqawi posted online a video depicting the murder and beheading of an American, and just a few weeks after pictures of the coffins of American soldiers were acquired and placed online by the

owner of the MemoryHole site. The Pentagon has long banned any news organizations from taping or photographing the coffins. US Air Force personnel took the photographs as part of standard documenting procedures.

This is more than just a tale of the power of the Internet to disseminate information world wide. It is also a tale of the explosion of information, content, data, and knowledge. The amount of knowledge worldwide is doubling at an ever-increasing rate. It took three and a half centuries — from 1650 to 1900 — for the amount of stored knowledge to double. It doubled again within fifty years, then twenty. Now the doubling occurs every two years, and within a decade or so, that time will be reduced to six months. And so on. Such observations probably come as no surprise to IT managers at enterprises of all sizes and shapes, as they see their annual data generation and storage needs growing by fifty, sixty, or even one hundred percent. In such circumstances, enterprises are going to have to continually evolve their information management and access policies, neither “classifying” everything nor letting everything be seen by the world at large. This ongoing refinement of information management granularity will no doubt be a significant challenge in the coming years, but one that should not be seen as insurmountable. In fact, we would argue, some level of information “leakage” not only is inevitable, but in most cases it will be benign or even beneficial to the institution in question. In other words, the value of broadly disseminating information will outweigh the occasional improper disclosure of private data, by orders of magnitude. This is a factor the DoD might keep in mind as it tries to keep a lid on the DARPA Net bottle long after the Taguba genie has exited.