Market Roundup

December 21, 2007

New 3.2 Gigabit FireWire

By Clay Ryder

The 1394 Trade Association has announced a new specification to quadruple the speed of FireWire to reach 3.2 gigabits per second. The new specification, known as S3200, is backwards-compatible with the IEEE 1394b standard and will be able to use the existing cables and connectors already deployed for FireWire 800 products. The Silicon Working Group developed the S3200 specification within the 1394 Trade Association, with participation by Symwave, Texas Instruments, LSI Corporation, and Oxford Semiconductor. Since the 1394 arbitration, data, and service protocols were not modified for S3200, silicon and software vendors should be able to deploy the faster-speed FireWire quickly. Operating without polling, idle times, or continuous software management, FireWire 800 efficiently delivers more than 97% of its bit rate as payload with FireWire 800 hard drives today moving over 90MBps. S3200 preserves the 1394b design efficiency and is planned to deliver payload speeds reaching 400MBps. According to the trade association, the best FireWire 800 hard drives move data almost three times as fast as the best hard drives equipped with USB 2.0 and do so with more electrical power to enable operation without an AC adapter and at higher rotational speeds. Alternative cable options that can carry FireWire 100+ meters, even at high speeds, will be available with S3200 and will make this interconnect competitive with eSATA while delivering electrical power, which eSATA does not. Based on the working group's progress, the Trade Association has set a January 2008 date for the specification to enter a ratification process with ratification expected by early February.

Sometimes it is easy to think of interconnects as nothing more than nuts and bolts. Fasteners are generally not all that exciting and can viewed as a commodity. But in the case of FireWire, and its latest high-speed specification, the potential impact is more than a mere commodity could deliver. We have seen some astonishing improvements in copper wire connectivity speeds as of late. Not all that long ago, 100MBps over wire was considered lightning fast, but today 1GBps is met with a yawn of the mundane. The original FireWire was fast for its time, and easily beat early USB implementations. However, neither of these was generally considered for the highest speed interconnects, as this was left to expensive fabrics and optical cabling. Yet today, with this announcement, the notion of 3GBps through a low-cost established interface with considerable backwards capability is now in the cards.

With respect to disk drives, the new S3200 could have substantial impact in the cost of delivering storage both inside and outside of the desktop and the server. Small form factor external drives connected through S3200 offer a single-cable, high-speed, no-power-pack-required storage solution. This simplicity could simplify external disk drive usage in mobile environment where laptops are on the move, but also reduce the dreaded power vampire syndrome for desktop environments where bulky power-sucking transformers pile up around machines, generating heat and sucking power 24x7 even when the disk drive is turned off. Within storage appliances or other internal applications, the simplification of cabling could lead to cost reduction and greater efficiency in solution packaging.

As FireWire has many uses outside disk drives, including camera, cable and satellite set-top boxes, HDTV, and more, the potential for S3200 to compete in high-bandwidth digital media scenarios is considerable. Under S3200, FireWire should offer sufficient throughput to support uncompressed HD signals over longer distances. If

The Sageza Group, Inc.
32108 Alvarado Blvd #354
Union City, CA 94587
510·675·0700 fax 650·649·2302

further developments permit FireWire to operate over the coaxial cable common in TV installations, the potential of additional data streams coexisting with TV programming should be well received by service providers who are seeking to develop additional revenue streams that leverage the existing infrastructure. But even at present, from the simplistic view of cabling expense, FireWire tends to compare favorably with HDMI, and can easily support storage and other devices that are typically not connective through HDMI. This lends FireWire well to media centers, set-top boxes, etc., as well as its existing base of computing and consumer electronic devices.

Overall, we are intrigued by the potential of S3200 and the potential raising of the bar it implies. As rich media increasingly inundates all aspects of life, the ability to easily and cost-effectively move large numbers of bits between devices becomes all the more important. Further, in an era where green is more than just a color, the leverage of a centralized power distribution source to power devices is well positioned to not only save manufacturing costs and complexity, but lower the overall amount energy consumed by interconnected devices and their users.

nCipher Moves to Attack Encrypted Storage Market

By Lawrence Dietz

nCipher has announced its acquisition of the majority of the intellectual property and assets of NeoScale Systems Inc., a provider of encryption and key management products within the storage security market. nCipher has also purchased certain assets that were previously owned by NeoScale Systems Inc. from Hercules Technology II, LP. NeoScale provides appliance-based encryption products under the CryptoStor brand that are deployed primarily on backup tapes to address concerns over data privacy in the event the backup tapes are stolen or misplaced. This acquisition of the CryptoStor tape product line strengthens nCipher's position in the storage encryption market. nCipher has also acquired the NeoScale KeyVault technology and product line to enhance nCipher's keyAuthority enterprise key management product. The company hopes that this acquisition will strengthen its customer base and provide expansion opportunities in the North American and international markets and expects to harness NeoScale's network of resellers and OEM. nCipher has agreed to acquire the transaction assets, which principally include intellectual property, software, stock of finished goods, production equipment, and CRM information for approximately $1.95 million in cash. nCipher is not taking on any liabilities of NeoScale. In addition, nCipher has recruited key members of the NeoScale team and plans to continue operations from the same Milpitas, CA facility.

Recent publicity associated with the loss of Personally Identifiable Information (PII) by TJ Maxx, the U.S. Veterans Administration, and others has resulted in a barrage of lawsuits and bad publicity. While encryption is viewed as a logical solution, most organizations have avoided taking the plunge perhaps because they feel that the implementation of an encryption project is beyond their technical means or that the perceived cost of these projects is out of balance with the benefits. Combinations like this one and the recent Seagate acquisition of e-discovery vendor MetaLINCS are symptomatic of the trend where vendors seek to ultimately offer an integrated solution addressing the need to secure PII and other sensitive data and coupling applications and hardware.

We believe that the drive towards encryption of sensitive data is unmistakable and that within ten years or so, all sensitive data will be encrypted without end-user intervention. In the Vietnam conflict, most of the voice communications between lower-level combat troops were not encrypted because the necessary equipment was bulky, unreliable, and intolerant of warm weather. Over time, the technology improved so that today's combat communications are all encrypted. In some respects, the evolution of security-sensitive data reminds us of the evolution of secured voice communications in combat. Encryption of lower-level communications has simply not been worth the time and effort. With recent evolutions such as these, what remains to be seen now is how quickly the market responds and if the solutions fielded by nCipher and others are indeed up to the tasks in today's environment.

Red Hat Releases JBoss Developer Studio

By Clay Ryder

Red Hat has announced the global availability of JBoss Developer Studio, its open source, Eclipse-based, IDE that provides an easy-to-use solution for developers utilizing JBoss Enterprise Middleware. JBoss Developer Studio

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eliminates the need to assemble individual development environments, allowing developers and IT departments to utilize the complete solution from JBoss in one easily delivered installation. Featuring pre-integrated tools and out-of-the-box capabilities, the solution leverages the high-caliber Eclipse-based developer tools that were made available on JBoss.org. JBoss Developer Studio incorporates Eclipse tooling, integrated JBoss Enterprise Application Platform, and Red Hat Enterprise Linux for development use with full access to Red Hat Network. Developer Studio also features tooling for technologies, including Java EE, JBoss Seam and Ajax, Hibernate and Persistence, JBoss jBPM, Struts and Spring IDE. JBoss Developer Studio is available for Windows and Linux through subscription from Red Hat for $99.

The Eclipse framework has been established for some time; however, developers have usually had to weave together their test and development environments from multiple frameworks and components. With this announcement, the potential of a comprehensive IDE that supports all development tasks, whether they are Java-, Ajax-, or Linux-based, has become a reality. While the stereotypical Open Source developer may be a command line-driven geek, most corporate developers operate in a reality where that there is never enough time to do everything that needs to be done. Developers are like any other artisans in that the quality of their work is directly affected by the quality of the tools at their disposal. Hence the importance of commercial grade developer tools for any environment, regardless of whether they are open source or not.

While Developer Studio will likely help steer corporate developer activity towards Open Source Architectures in general, and Red Hat solutions specifically; we do not see this solely as self-serving for Red Hat. Corporate developers can now have an integrated Eclipse-based development and runtime environment that is entirely open source and available from a single supplier. Considering that JBoss Seam allows developers to build applications in a consistent manner from a simple operational perspective, the potential to simplify, streamline, and reduce the cost of the developer's toolkit is considerable. Given the 100,000+ downloads of the beta code reported by Red Hat, there has been considerable interest in this offering, and if Developer Studio has met the expectations of the those giving it a try, this solution is well positioned to become the darling of many corporate developers. As such, it illustrates Red Hat's continued focus on broadening its market position as well the breadth and depth of its technology offerings.

Shavlik Patch Management Integrates with VMware

By Lawrence Dietz

Shavlik Technologies, LLC, has announced that it is working with VMware to integrate the capabilities of Shavlik's industry leading patch management technology into VMware Update Manager. VMware Update Manager, a new product that is part of the new update of VMware Infrastructure, automates patch management and tracking in VMware environments. Integration of Shavlik's patch management technology into VMware Update Manager allows customers to automate the assessment and remediation of their online and offline virtual machines, ensuring security and compliance within their virtual infrastructures. Secure patching of offline virtual machines is unique to virtual environments and enforces higher levels of compliance to patch standards than what is available in physical environments. In addition to these capabilities from Shavlik, VMware Update Manager fully integrates with VMware Distributed Resource Scheduler to provide low-touch, non-disruptive patching of VMware ESX Server hosts.

Virtualization is one of the hottest topics in 2007 and likely to continue to be so in 2008. End-user organizations are highly motivated to explore the potential of virtualization as a means to optimize IT and lower costs. However, since the technology is not mainstream as yet, there are significant opportunities for vendors to harness themselves to this bandwagon. Clearly patch management is a high-profile need for the virtualized environment. The need for patch management may actually be more critical in the virtualization environment than in today's environment because of the attenuated nature of the architecture.

Security for virtualization has also garnered its share of attention and concern. We believe that security vendors need to insert themselves in the virtualization market chiefly because we don't believe that the virtualization vendors themselves will be sufficiently incented to incorporate adequate enough security for all applications and data. Consequently we expect to see other security vendors expand their efforts into working with VMware products and others in the virtualization market place.

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