



# NEWSletter

Volume 1, Issue 3



## Bend, Don't Break

The ability to adapt to any condition or requirement is an attribute needed to succeed in business.

IT managers worth their salt should have a storage strategy in place that benefits the business rather than limits it. Archiving and backup schemes need to operate seamlessly in the background with minimal operational requirements.

Everyone these days knows what benefits hard drive and tape bring to the party. But what people are beginning to realize is that the two technologies by themselves are not an entire solution, but merely components of an incomplete plan. A bridging technology is needed to complete the puzzle that will let online data (hard disk) operate smoothly with offline data (tape) allowing companies to bend, not break, when faced with business challenges.

Nearline storage represents that bridge between online and offline data, as its robust shelf life, random access and high-availability factor play well in virtually any network environment. Reliance on volatile storage mediums, such as hard disk drives and magnetic tape, are reduced and instead complemented by robust and easy-to-use DVD or MO storage.

This quarter we announced the first in a series of upgradeable storage libraries. These products from DISC give our customers the scalability and capacity required for today's enterprise storage environments. As the demand for nearline and archival storage grows, DISC will continue to bring to market products and technologies that will address the growing storage requirements of our customers.

Robert W. Riland III  
President & CEO

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## >> In the News

### DISC Announces Next-Generation Storage Systems

DISC introduced the upgradeable NSM3000U and NSM4000U archival storage libraries to market in September. The new upgradeable models allow customers the ability to scale their storage capacity up to four times within the same chassis with field upgradeable modules.

The NSM3000U and NSM4000U models are flexible and robust storage solutions designed to address changing storage requirements of many industries and markets, including government agencies, graphics/multimedia, financial institutions and medical imaging. The NSM Series modular design architecture allows users to customize their solution by configuring drives, media slots, removable disk packs or adding a CapacityDoubler for double sided media. NSM3000U models are field upgradeable to a capacity of 2.54 TB, while the NSM4000U models can scale up to 3.76 TB per system.

"DISC's modular series libraries offer a secure storage archive that ensure data integrity with an availability rate that allows IT managers a way to efficiently maximize storage without breaking the budget," stated Bob Riland, President of DISC. "In addition, with the passage of the U.S. Health Insurance Portability and Accountability Act (HIPAA), health organizations face new security standards that regulate how a patient's health information is electronically maintained and transmitted. The archival capabilities of DISC's modular series libraries are a perfect fit for any organization needing to be compliant with the new HIPAA standards."

### Product Specifications

Model	NSM3000U	NSM4000U
Media Slots	145	260
Upgradeable Slots (Max)	285	415
Maximum # of drives	6	7
Max Capacity (9.4 GB)	2.54 TB	3.76 TB
Media Exchange Time	3 sec avg	4 sec avg
Intelligent Pack Technology	3 packs	4 packs
CapacityDoubler	Optional	Optional
Data Interface	Single/dual bus	Single/dual bus
	SCSI-2 / LVD	SCSI-2 / LVD
	optional	optional
<b>System</b>		
MSBF (Robotic)	2,500,000 cycles	2,500,000 cycles
MTBF (Electronic)	60,000 poh	60,000 poh
MLBF (Drive)	250,000 cycles	250,000 cycles
Weight	54kg / 120 lbs	62 kg / 137 lbs
<b>Dimensions</b>		
Width	365/487 mm	365/621 mm
	14.4/19.2 in	14.4 in/24.4 in
Height	778 mm	980 mm
	30.6 in	38.6 in
Depth	655 mm	655 mm
	25.8 in	25.8 in

## DVD-R Support for DISC Libraries

DISC recently announced DVD-R support for its NSM Series libraries, offering users Write Once Read Many (WORM) storage. DVD-R technology offers secure archive capabilities that fulfill legal and financial applications where large amounts of data require audit trails and tamper-proof attributes. Refer to the chart below for software compatibility made through our ISVs, or contact your local sales manager for more information.

Software	Rel.	OS	File System		Recording type	Volume Sets	Scaling Drives/bus	Media	
			UDF	Other				Single	Dual
IXOS	V 5.0	NT/2000, SUN Solaris 7,8 IBM AIX 4.3.2, 5.0 HP-UX 11.0, 11i	---	ISO9660	X	---	1	X	X
K-Par	Archimedia V4.1	NT/2000, Solaris 2.x	X	---	X	HDD Image => DAO	1 or 2	X	X
OTG	ArchiveXtender V4.2	NT/2000	X	X	X	X	1 or 2 (1 if aggregate)	X	X
	Jukeman V3.03	NT/2000, Sun Solaris, Linux, HP-UX, IBM AIX	---	ISO9660		ISO incremental write by tracks, max. 990 trks	1 or 2	X	X
	DiskXtender V5.4	NT/2000	X	---	X	Jukeman reads ISO only/UDF read thru ISO/UDF bridge	1	X	X
PoINT	JBM V4.0	NT/2000	If incremental	If DAO	X	X	X (HSM)	1 or 2	X
QStar	Master V4.9	NT/2000, IBM AIX, HP-UX, SUN Solaris, SGI IRIX, Compaq Tru64, Linux	X	ISO9660	X	---	1	X	X

### >> ISV Spotlight



PoINT Software & Systems specializes in software solutions for the optical storage market. Formed in a management buyout from parent company Philips in 1995, PoINT has played an important role in the development and standardization efforts for CD and DVD technology.

The combination of DISC nearline storage devices and PoINT software products provide reliable, high-capacity storage solutions for a wide variety of applications and markets. PoINT has always worked closely with DISC to provide complete support for all devices and features and will continue to do so as demand for DVD-based storage solutions grow.

The PoINT Jukebox Manager provides transparent, read-write drive-letter access to any of DISC's libraries, allowing multiple users to access the library simultaneously and record different data streams to different media in parallel. The enhanced security and permission control of the Windows NT / 2000 operating system is used to provide network access and control.

Product features and functionality include support for all DISC CD, DVD and MO libraries including mixed media and drive configurations, remote configuration and administration, automated CD and DVD recording and HSM file management. With the recent release of PoINT Jukebox Manager v4.0, the new "Volume Sets" feature provides media spanning, allowing multiple physical media to appear a single "logical" volume. When combined with DISC's Intelligent Pack Technology, the result is the most advanced system of Online and Offline data management available.

For more information on PoINT products, please contact your local DISC sales manager.

### >> Application Story

#### National Aeronautics and Space Administration

Scientists have known that billions of years ago, Mars and Earth shared many similar planetary conditions, but have yet to understand why the two planets have evolved so differently over time. The launch of the Mars Global Surveyor (MGS) spacecraft marked the first major step in attempting to solve this mystery in twenty years. A joint project of NASA and the Jet Propulsion Laboratory, the MGS Project's purpose is to obtain information about the surface of Mars, as well as its atmospheric and magnetic properties. This mission critical data is permanently secured on CD/DVD technology and used to learn more about the Earth and to provide valuable information for future NASA missions.

As it orbits Mars, the MGS is equipped with many instruments that are used to gather the atmospheric, magnetic, and surface data scientists are interested in studying. Two of the instruments designed to measure the magnetic attributes of Mars are the Magnetometer (MAG) and the Electron Reflectometer (ER). These two instruments yield a tremendous amount of data that is all transmitted back to the Laboratory for Extraterrestrial Physics at NASA's Goddard Space Flight Center (GSFC).

In turn, Raytheon STX Corporation, is one of the companies assisting the laboratory in managing the data and ensuring it's immunity to damage. Mike Powell, a senior program analyst with Raytheon, is responsible with the daunting task of managing the daily download of mission critical data from the magnetic instruments located on the MGS spacecraft. To put the amount of data being transmitted from the MGS into perspective, it can send out as much as 85,333 bits per second. In contrast, modems on home computers transmit data at an average speed of only 28,800 bits per second.

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NASA (continued)

"Once I realized the enormous amount of data the MAG and the ER would be producing, I knew I needed to find a cost-effective way to process and archive the information," said Powell. In doing so, Powell sought out the expertise of NetCon, Inc., a value-added reseller that specializes in the design, development, and implementation of technology solutions for government and commercial customers. NetCon also offers a particular expertise in the area of CD/DVD storage and imaging solutions for its customers.

Ultimately, NetCon recommended the installation of the DISC Mercury CD/DVD library for several reasons. "We feel comfortable endorsing the DISC product family because they help us to accomplish our mission better. They have an excellent technical support team and are always on the cutting edge of CD/DVD storage technology," said Al Sivick, president of NetCon. The Mercury 31 was appropriate for Raytheon's data management responsibilities in the MGS Project. Its 150 disc capacity (100 gigabyte data storage) meets the demands to handle the tremendous amount of data the MGS Project will yield over the next few years. It was also highly compatible and portable. "We had to have a jukebox that could run off of our Sun server as well as export to both Macintosh and Sun PCs," said Powell. "The Mercury 31 offered this platform compatibility, gave us the best price for its disc capacity, and a great warranty." Powell added that the concurrent read/write functionality of the Mercury 31 met the demands for archival management.

National, state and local government offices are following in NASA's footsteps of implementing CD/DVD library systems. These include: Department of Defense, Federal Bureau of Investigation, U.S. Patent Office, U.S. Air Force, Naval Training Facility, and Department of the Navy.

## >> Upcoming Events

DISC is scheduled to participate in the following tradeshows:



Dates: Sept 9 - 12, 2002  
Location: Philadelphia, PA  
Booth #: 948



Dates: Oct 6 - 9, 2002  
Location: Salt Lake City, UT  
Booth #: 1643



Dates: Oct 14 - 18, 2002  
Location: Munich, Germany  
Booth #: Hall B1.330



Dates: Oct 16 - 17, 2002  
Location: Birmingham, UK  
Booth #: 435



Dates: Oct 28 - 30, 2002  
Location: Orlando, FL  
Booth #: PP15



Dates: Nov 18 - 22, 2002  
Location: Las Vegas, NV  
Booth #: 7064

## >> Reseller Spotlight

DISC works with an extensive network of resellers. Please contact us if you would like to locate your local reseller, or are interested in partnering with DISC.



Unylogix Technologies Inc, a Canadian VAR based out of Montreal, Quebec focuses on providing specific solutions geared towards helping customers store, and manage, their data.

Originally a Unix-driven organization, Unylogix recognized a market opportunity as business became increasingly reliant upon network systems. "We were finding that virtually our entire customer base needed, or would be needing, a method to cope with the vast amounts of data that they were creating on a daily basis," said Antonio D'Amore, Director of Operations. "Unylogix's area of expertise is in providing smart, efficient data storage and management solutions."

DISC and Unylogix have been working closely together for the past year, integrating the highly versatile NSM Series DVD libraries into customer sites. Nick Antonuccio, Northeast Region Sales Manager for DISC, commented "DISC libraries fit nicely into the Unylogix product portfolio because of the company's considerable storage hardware and software background." Mr. D'Amore added, "DISC products give us an edge-up on the competition because we can offer our customers a complete storage solution that will store, manage and protect their data. DISC provides us with CD, DVD and MO solutions ranging from 84 GB to 10 TB. Exciting new markets are opening up, as more customers familiarize themselves with the benefits that DISC products bring to the table. We look forward to working with DISC in the future."

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## >> Comments? Questions?

Do you have an idea for our next newsletter? We're always on the lookout for success stories. If you know of a company that might be interested in serving as a reference site, please let us know!

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This newsletter contains forward-looking statements that are made pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. Statements about the performance, cost and ease of integration of our Capacity Doubler™ technology, adoption of our technology by the data storage market and our customers' ability to benefit from our services and technology are forward-looking statements. These statements are made based on our current beliefs and expectations. Investors are cautioned that all forward-looking statements involve risk and uncertainties. Actual results may differ materially from the results predicted. Risk factors that could affect our future include business conditions, economic conditions and growth in the data storage market, market acceptance of our products, our ability to keep pace with technological innovation and competitive developments, our ability to respond to changes in the data storage market, our ability to raise further capital which we anticipate will be required to finance our operations, the loss of key personnel, our history of losses, the loss of customers or distributors and increased competition and pricing pressure. For more information about factors that could potentially affect our financial results, please refer to our filings with the Securities and Exchange Commission, copies of which may be accessed through the SEC's web site at <http://www.sec.gov>. We do not undertake to update any forward-looking statement that may be made from time to time by or on behalf of DISC.