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SPECIAL REPORT

COMPUTERWORLD DIALOGUES - STORAGE & BACKUP

An exchange of views

While the actual cost of storage hardware has been falling dramatically over the years, it does not make an organisation's storage strategy any easier. The advent of the Internet has seen to it that data within an organisation increases at an inordinate rate. Add to that the need to bring together data from multiple and diverse systems and organisations, and the difficulty is compounded.

To address the situation, Computerworld has brought together the leading storage vendors, users, and specialists together to discuss the intricacies of storage in this installment of Computerworld Dialogues.

Computer Associates

Tony Lim is consulting director at Computer Associates International (CA). The company addresses all aspects of ebusiness process management, information management, and infrastructure management in six focus areas: enterprise management, security, storage, eBusiness transformation and integration, portal and knowledge management, and predictive analysis and visualisation. BrightStor is CA's end-to-end storage management solution, helping customers protect and manage data, from an application perspective, across all major platforms and storage architectures. Solutions supporting different devices, applications, and protocols include: high-performance backup/recovery from the laptop through workgroup and enterprise servers to the mainframe; storage network management for SAN and NAS; storage infrastructure including data replication; storage resource management; and centralised enterprise storage management. For more information, visit www.cai.com.

Data Storage Institute

Patrick Khoo is program manager of the Modular Connected Storage Architecture Group at Data Storage Institute's (DSI) Network Storage Technology Division. The mission of DSI is to establish Singapore as an R&D centre of excellence in data storage technologies. DSI develops niche technologies and core competencies by collaborating with local and international research institutions and universities. Its policy is to deepen technology capability development so as to value-add to the Singapore data storage industry. DSI assists the technology and manpower development in the industry so as to ensure that the industry remains competitive in the short term and well into the 21st century. Through rapid commercialisation of technology, DSI aims to contribute to the data storage industry and to attract more R&D and manufacturing activities into Singapore. It is at www.dsi.nus.edu.sg.

Discovery Asia

Victor Tai is director, information systems and services, Discovery Asia. Discovery Networks Asia is the leading non-fiction broadcaster in Asia with three 24 hour channels: Discovery Channel, Animal Planet, and Discovery Travel and Adventure. In Asia, Discovery reaches over 80 million subscribers throughout the region including viewers in Taiwan, Thailand, Malaysia, Philippines, Australia, New Zealand, India, Singapore and Indonesia. It can be found on dsc.discovery.com.

EMC

Peter Kallviks is director, product marketing, Asia Pacific at EMC Asia Pacific. EMC is the world leader in information storage systems, software, networks and services, and the provider of the most robust, secure and trusted information storage infrastructure in the world. It helps build flexible information infrastructures for uninterrupted access to data and sharing it across the enterprise. EMC is recognised as a customer-centric company and can be found at www.emc.com.

International Data Corporation

Martin Wijaya (left) is senior analyst, Storage at IDC Asia Pacific. IDC is the foremost global market intelligence and advisory firm helping clients gain insight into technology and ebusiness trends to develop sound business strategies. Using a combination of rigorous primary research, in-depth analysis, and client interaction, IDC forecasts worldwide markets and trends to deliver dependable service and client advice. More than 700 analysts in 43 countries provide global research with local content. IDC's customers comprise the world's leading IT suppliers, IT organisations, ebusiness companies, and the financial community. Additional information can be found at www.idc.com.

Jobstreet.com

Ted Targosz (right) is business development and operations manager at Jobstreet.com. JobStreet.com is one of Asia's leading online employment and career exchange companies, facilitating the recruiting process between employers and job seekers. Its suite of services eliminate many of the inefficiencies created by traditional recruitment methods, enabling employers to reach, attract and hire qualified jobseekers in a cost effective and timely manner. Targosz manages the hardware and network infrastructure at JobStreet.com and is responsible for providing all the hardware platforms that JobStreet uses to run and grow its business. Jobstreet.com is at www.jobstreet.com.

PTC System

S S Lim is general manager of PTC System. PTC System offers solutions that enable enterprises to excel in storage, backup management, and content delivery management. Its solutions work within existing infrastructures to simplify data manangement, and its services empower customers to achieve greater performance with total commitment.

Rajah & Tann

Benjamin Ang is partner and executive director of Rajah & Tann. Rajah & Tann is one of the largest law firms in Singapore, providing legal services to clients throughout south-east Asia, the United States and Europe. Lawyers are supported by comprehensive knowledge bases, international remote access through VPN and secure extranets for major projects. For more on the firm, see www.rajahtann.com.

Seagate Technology

Teh Ban Seng is managing director, Asia of Seagate Technology. Seagate is the world's leading provider of storage technology for Internet, business and consumer applications. The company's products include disk drives for the enterprise, personal computing and consumer electronics, as well as Storage Area Network (SAN) solutions. Seagate can be found around the globe and at www.seagate.com.

Simmons

Benjamin Wong (left) is group financial controller at Simmons (Southeast Asia). The company entered the Singapore market in 1977 and introduced the first pocketed coil mattress to the bedding industry here. Simmons has grown rapidly over the years and in 1994, pioneered the local bedding industry's first and only one-stop bedding store, Simmons Gallery. At the gallery, customers can buy all their bedding needs under one roof. Simmons now has three wholly-owned and two franchised galleries. Apart from the consumer market, Simmons has also established a strong presence in the institutional business. Through its Better Sleep Through Science programme, Simmons remains committed to constantly creating better beds to deliver better sleep. Through this programme, the company works with medical and industry experts to educate the public on the

StorageTek

Ong Chee Beng is Singapore country manager for StorageTek South Asia with extensive experience in the planning and implementation of data centres and enterprise infrastructure solutions for leading edge technology companies as well as multinational companies. StorageTek is the global leader in total storage solutions in disk, tape and networking for digitised data. It is well known for its innovation of virtual storage solutions. For more information, see www.storagetek.com.

Transit Link

S Vasanth Kumar is systems specialist at Transit Link. Transit Link is a public transport integrating company through a common ticketing system for buses, the mass rapid transit (MRT) and the light rail transit (LRT). With the launch of ez-link card - a contactless smart card - by LTA, the company expects to expand its services very soon. For more information, see www.transitlink.com.sg.

Veritas Software

Craig Stevens is vice president, Asia Pacific sales, for Veritas Software. Veritas is the leading provider of storage management software for data protection, disaster recovery, storage virtualisation, storage area networks and application availability. It is in the forefront of providing interoperable software solutions which span data protection, file system and volume management, clustering, replication, SAN and application solutions. Veritas is at www.veritas.com.

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COVERSTORY

Operation Interop
New Data Storage Institute facility will conduct interoperability testing as part of an effort to push network storage technologies.
By Gerald Wee

Storage interoperability will be a key area of focus for a new research, training and testing laboratory that will be opened by the Data Storage Institute (DSI) in May.

Located at Ayer Rajah Crescent, the 6,000 square foot Network Storage Laboratory will be equipped with training facilities, advanced network storage infrastructure, and testing and benchmarking equipment, said Patrick Khoo, DSI's programme manager, Modular Connected Storage Architecture Group, Network Storage Technology Division. Khoo was speaking at a recent Computerworld Dialogues roundtable discussion on Storage and Backup.

The opening of the Network Storage Laboratory is in keeping with DSI's stated vision to spearhead world-class research and development (R&D) in next generation data storage technologies.

"We want to be a vital node in a global community of knowledge generation and innovation, nurturing research -talents and capabilities for world class R&D in next generation technologies," said Dr Chong Tow Chong, director, DSI.

Describing the laboratory as "the only one of its kind in the region", Khoo said it will function as a platform for promoting the network storage industry through education, technology demonstration, system benchmarking, application testing, and interoperability studies.

Ensuring interoperability in networked storage solutions is critical for organisations to enjoy the maximum returns on investment.

"Our research shows that ensuring interoperability among the various elements of networked storage environments accounts for up to 15 per cent of IT expenditure, or nearly US$100 billion ($182 billion)," said Peter Kallviks, director, product marketing Asia Pacific, EMC Asia Pacific.

Hailing the new DSI facility, he added, "An initiative like the Network Storage Laboratory is applaudable and a significant step towards helping organisations who cannot afford the high costs associated with interoperability testing and want to rely on an independent party for verification."

"Besides testing that two components work together, it is more important to test the components in different real-world scenarios in an organisation's environment."

For example, a storage area network (SAN) - which is a network infrastructure of storage and server resources - can reduce the cost and ease the manageability of diverse storage types by bringing together islands of disparate storage devices together in a single robust operational environment.

However, because of the myriad networking, computing, storage, and management components involved, the actual implementation of a SAN can be complex. A facility like the Network Storage Laboratory can be instrumental in the rolling out of such technologies.

The Network Storage Laboratory will also play a key educational role.

"The laboratory seeks to support local enterprises in understanding and adopting network storage technologies," said Khoo of DSI.

"It will also be the primary facility for the Open Storage Networking LIUP (Local Industry Upgrading Programme), a training program which has the support of 10 major storage companies," Khoo noted.

These industry heavyweights are Sun, EMC, IBM, NetApp, Veritas, Compaq, HP, Brocade, Cisco, and Maxtor, all of which will be working with DSI to develop the education programmes.

DSI is at www.dsi.nus.edu.sg.

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COMPUTERWORLD DIALOGUES - STORAGE & BACKUP

World class storage
By Gerald Wee

With a vision to spearhead world-class research and development (R&D) in next generation data storage technologies, the Data Storage Institute (DSI) is positioning itself to lead and support the growth of the data storage industry in Singapore.

"DSI's vision is to be a vital node in a global community of knowledge generation and innovation," said Dr Chong Tow Chong, director of DSI.

The national research institute was established in April 1996 through the expansion of the Magnetics Technology Centre (MTC), an R&D centre founded by the National Science and Technology Board (now Agency for Science, Technology & Research) and the National University of Singapore.

Through the years, it has built up its core competencies in niche technology areas that support the hard disk and optical drives industries. Its expertise is consolidated under five major research divisions:

- Head, Media and Materials

- Mechanical, Electronics System Design

- Optical Technology

- Technology Support

- Network Storage Technologies

These core competencies form the base for both basic and applied research, enabling DSI to stay in the forefront of research and collaborate closely with industry. The collaborations take various forms including single-partner collaborations, multi-partner consortia, pre-competitive research, failure analysis, and product design and prototyping.

DSI also plays a major role in developing manpower.

According to Patrick Khoo (left) , the institute's program manager for modular connected storage architecture, DSI is actively involved in the Open Storage Networking Local Industry Upgrading Programme, which is run by the Infocomm Development Authority in tandem with different industry players. "DSI is actively involved in training," he said.

DSI has also integrated upstream research activities with universities by forming joint research laboratories and establishing professorships in the area of data storage technologies.

With its strong technology capability and through various R&D collaborations, DSI continues to develop new processes and has filed a number of patents and published a number of international papers.

In a 1999 report by The Information Storage Industry Center, University of California San Diego, DSI has been ranked among the top six storage R&D centres worldwide.

DSI is at www.dsi.nus.edu.sg.