Tech Focus

Central Depository System makes share trade look easy

SAAD BIN FAZLE HAMMADI

THE country's capital market got a boost with the implementation of the Central Depository System (CDS) last year, was it offered an effective solution to the share market transactions replacing the manual procedures.

The Central Depository Bangladesh Limited (CDBL) operates the system that maintains the electronic book entry including investor services and facilitates secondary market trading of treasury bills and government bonds issued by Bangladesh Bank.

The CDS, which can be compared to a bank, keeps shares of shareholders in book entry form and acts like a bank of shares. So the delivery of shares in settlement of a transfer of shares executed between a seller and buyer can be easily achieved with change of records in the central depository instead of physical exchange of certificates.

The lengthy process of handling share transactions through handheld verifications also had risks associated with physical certificates such as fake or duplicate shares, protection against loss, mutilation or theft of share certificates. CDS has promoted the capital market with its fast and reliable service.

The participation of stock brokers/dealers, banks, financial institutions, insurance companies, statutory organisations, merchant bankers, asset managers, custodians, and other Securities and Exchange Commission (SEC) registered capital market intermediaries make the process of CDS transparent and reliable. All physical certificates are converted into electronic accounting records as a record of ownership of securities. A shareholder can also open an account with a participant or CDBL to do this and can also convert it into the physical form through re-materialisation.

Technical operation of CDBL

The main data centre of CDBL has been deployed with HP 9000 risk processor7400 Enterprise Class Servers that maintain the database. HP Sure Store E Disk Array FC60 Controller which performs the read and write function and stores data. HP Sure Store E Digital Linear Tape (DLT) Library 4/40 Deskside is used for data backup regularly after daily operation. The library carries four magazines of what each contains 10 tapes of 40 gigabytes each. Along with these core technologies, additional equipments are also in operation such as tapes, shadows servers and DVD writers.

Two disaster recovery or Failover servers equipped with similar set of machineries are located at Grameen IT Park, Mirpur and CDBL's main office at Karwan Bazar. The Failover server at the main office is connected with the parent system through Ethernet, while the other one connects through radio link. Data is updated every 15 minutes via radio link using Cisco Aironet 350 devices.

Application software, VeDAS (Versatile Engine for Depository Accounting System), built on three-tier architecture, runs the CDS. The front end has been developed with Visual Basic while TUXEDO as the middle tier transaction manager and Oracle 8i as the back end centralises database.

CDBL is interlinked with Dhaka Stock Exchange (DSE) and its participants through Public Switched Telephone Network (PSTN). The investors in Chittagong Stock Exchange (CSE) and Syhlet communicate with brokers of the respective regions who then send the data to CSE and CSE Sylhet liaison office using PSTN.

For the operation of CDS, CDBL has established networks at Chittagong and Sylhet to transfer data to CSE Dhaka centre through Digital Data Network. The CSE Dhaka centre is connected with CDBL through long-reach Ethernet and it is also connected to the disaster recovery centre for data update through radio link.

PHOTO: SK ENAMUL HUQ

HP 9000 risk processor7400 Enterprise Class Servers at the CDBL data centre

The first flashmob supercomputer

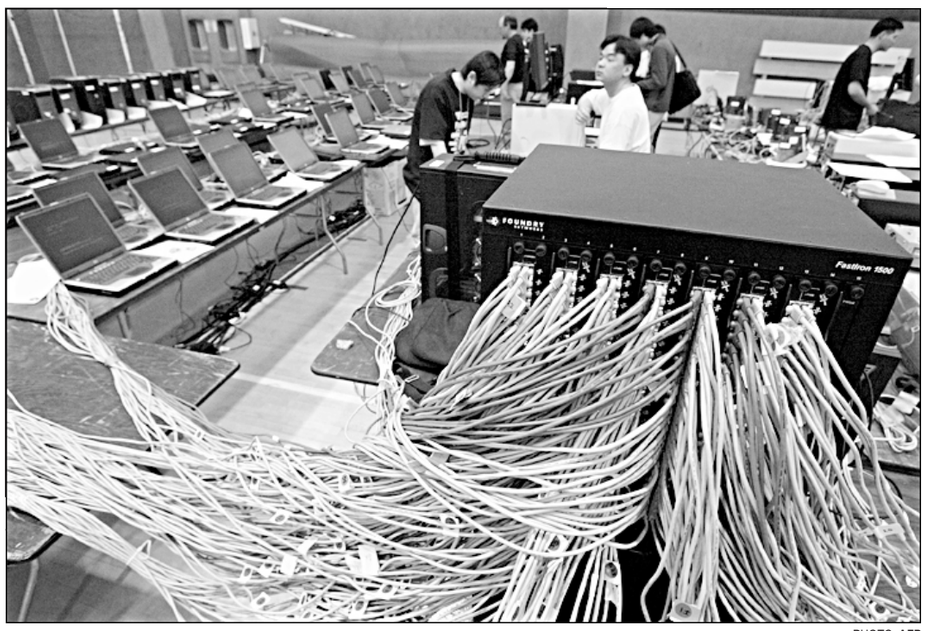


PHOTO: AFP

Hundreds of ethernet cables are connected to rows of laptops for Flashmob 1, the first flashmob supercomputer 03 April 2004 at the University of San Francisco in San Francisco, California. Hundreds of computer enthusiasts connected hundreds of computers via high-speed LAN to work together as a single supercomputer in hopes to place in the top 500 fastest supercomputers on earth.

Tech News

Oracle, Dell stretch their strategic global alliance to Asian market

One-stop solution for Linux and Grid Computing

STAR TECH DESK

ORACLE Corporation, the world's largest enterprise software company, and Dell, the world's leading provider of computer systems and services, announced the extension of their successful strategic global alliance to the China market, on March 18 in Shanghai, says a press release. This will provide customers with a one-stop solution and single point of contact for their Linux and Grid Computing requirements.

With this partnership, which builds on the companies' existing global sales agreement, it will be easier and more affordable for customers in China to deploy Oracle products on Dell servers running Linux, enabling them to have a powerful, reliable and fully integrated solution that can scale as their business grows while maintaining low total cost of ownership. These Oracle products include Oracle Database, Oracle Application Server and Oracle Collaboration Suite.

"We are pleased that Oracle and Dell have extended their partnership in China which will provide customers like us with a single point of contact, stronger customer support and better access to new technologies," said Lin Dabin, director of the basic data department of the government administration information centre under the Xiamen government. Last year, the centre deployed Dell servers with Oracle Real Application Clusters on Linux to better manage the increasing volume of corporate data.

Currently, Oracle is certifying Dell PowerEdge servers with Red Flag DC 4.0 and Oracle Database 10g at its China Development Centre in Beijing. Dell servers thus become the first platform to be certified in China with Oracle Database 10g and Red Flag Linux solutions.

Under the bilateral agreement, Dell will rely on its strength in direct sales to provide customers in China with enterprise solutions integrating both hardware and software. To achieve the goal, both companies have put dedicated teams in place to collaboratively carry out activities including cross training, joint marketing and sales tracking.

"Our growing partnership with Oracle reflects our customers' increasing demand and preference for one-stop solution and a single point of contact," said Foo Piau Phang, president of Dell China. "The extension of our partnership in China today further demonstrates our mutual commitment to deliver fully integrated enterprise solutions that can scale to meet customers' future business requirements, while delivering low total cost of ownership."

"Dell and Oracle have long supported a low-cost, standards-based approach to enterprise computing," said Loke Soon Choo, regional managing director for Oracle Greater China. "With more than 22,000 Oracle-to-Dell installations worldwide, we have clearly demonstrated success in delivering compelling value to a wide range of customers, which we hope to continue as we extend our partnership to the China market."

Best 0 Websites

Category: Music Formats & Surround Sound

WMA
Windows Media Audio - 24 bit 96Khz multi-channel sound.
URL: http://www.microsoft.com/windows/windowsmedia/default.aspx

AAC
Advanced Audio Codec - audio standard for MPEG-4.
URL: http://www.apple.com/mpeg4/aac/

DVD-Audio
Nice introduction to DVD-Audio (24 bit 96 Khz).
URL: http://www.disctronics.co.uk/technology/dvdaudio/dvdaud_links.htm

SACD
High resolution multi channel audio format from Sony.
URL: http://www.sonymusic.com/sacd/

HDCD
HDCD encodes 20 bits of audio data .
URL: http://www.hdcd.com/

DTS
Digital Theatre Sound (20 bit audio) is the high end sound format found on lots of top movies.
URL: http://www.5point1.com/dts.html

Dolby
Dolby Audio (18 bit format) is an almost universal format for surround sound & movie applications.
URL: http://www.dolby.com/

WinAmp
Very popular MP3 player for PCs.
URL: http://www.winamp.com/

Musicmatch Jukebox
Play music, listen to online radio, burn CD's with this .
URL: http://www.musicmatch.com/

RIM 456
Resources & links to multichannel sound formats & more.
http://www.mtsu.edu/%7Edsmitche/rim456/456links.html

Tech News

Satellite to test Einstein forecasts

AP, *Los Angeles*

A satellite designed to test two fundamental predictions made by Albert Einstein about the universe is ready for launch, 45 years after it was first proposed, Nasa and Stanford University officials said.

Since 1959, Gravity Probe B has overcome a half-dozen attempts at cancellation, countless technical hurdles and several delayed launches. The Nasa-funded, university-developed spacecraft is now scheduled to begin its mission following an April 17 lift-off from Vandenberg Air Force Base, California.

The unmanned, Earth-orbiting satellite is designed to test two of Einstein's predictions about the nature of space and time, and how the Earth and other bodies warp and twist the fabric that combines the two.

At the spacecraft's heart are four pingpong-sized balls of quartz, the most perfect spheres ever made. To ensure accuracy, the balls must be kept chilled to near absolute zero, in the vacuum of the largest thermos ever flown in space, and isolated from any disturbances in the quietest environment ever produced, Anne Kinney, director of the National Aeronautics and Space Administration's division of astronomy and physics, said Friday.

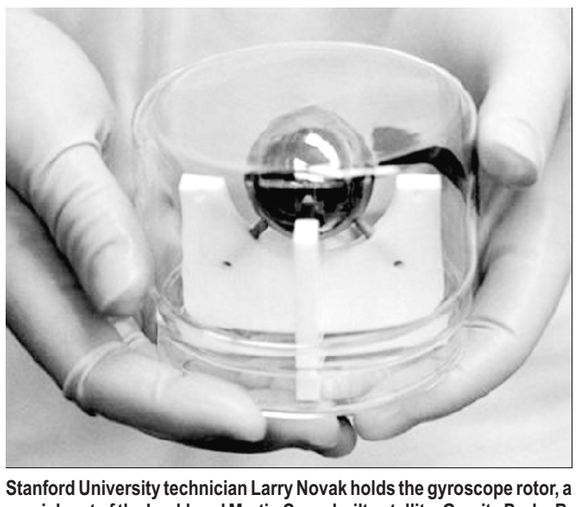
Once in space and set spinning, the orientation of the balls should change unless Einstein was wrong.

He proposed in 1916 that space and time form a structure that can be curved by the presence of a body, like the Earth, warping it like the dimple created by the heft of bowling ball resting on a soft mattress. That distortion accounts for gravity.

Two years later, others suggested that the rotation of such a mass should drag space-time with it, twisting the structure of the fabric.

If theory holds, the mass and rotation of the Earth, 397 miles below the probe, should throw the alignment of the spinning balls off kilter in subtle but measurable ways.

The warping effect has been measured before. The twisting effect, called frame-dragging, has never been directly detected. Gravity Probe B aims to detect both.



Stanford University technician Larry Novak holds the gyroscope rotor, a crucial part of the Lockheed Martin Corp.-built satellite, Gravity Probe B, in this undated promotional photo. Stanford University officials said on April 2, that the $750-million satellite is ready for launch, 45 years after it was first proposed at the dawn of the space age.

Photo Tech

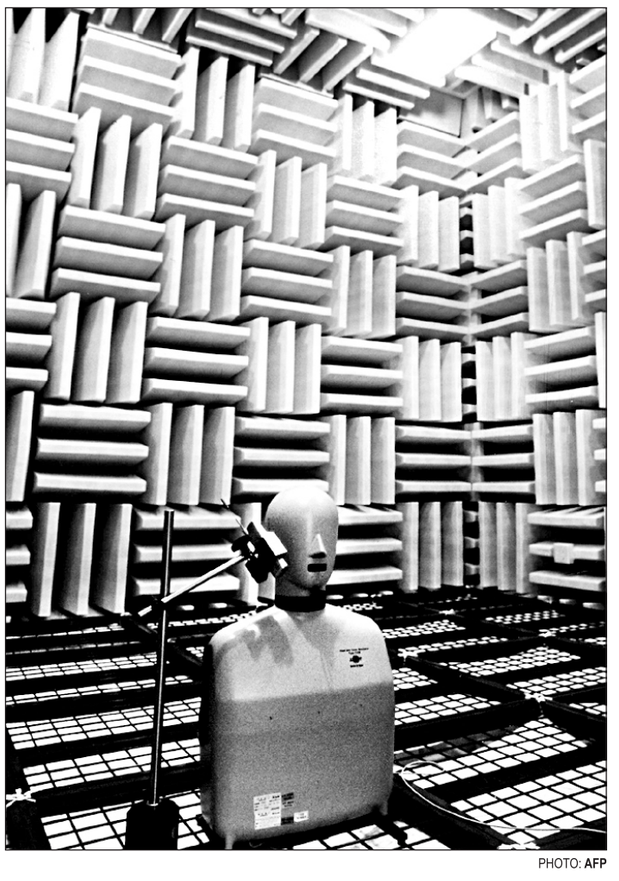


PHOTO: AFP

Japanese telecommunication giant NTT DoCoMo released this undated picture showing their mobile phone handset being tested in a radio anechoic chamber at the Yokosuka Research Park R and D centre.