



# China's Leading TV Network Goes Digital with New Storage Infrastructure

## SOLUTIONS

### Executive Summary

**Technology Challenge:**

Implement a storage solution to improve application performance in support of the broadcast and production of digitized programs by CCTV's Multimedia Library.

**Solution:**

Dual fabric Storage Area Network (SAN) comprising four Brocade® SilkWorm® 3900 and eight SilkWorm 3800 Fibre Channel switches with associated fabric management and health and performance monitoring applications. The Brocade SAN solutions are connecting storage arrays from Hitachi Data Systems to a network comprising Windows 2000 and Windows XP platforms, and video editing software and IBM Tivoli SANergy enterprise application.

**Benefits:**

- Improved application performance, production quality and efficiencies
- Trouble-free digitalization of programs
- More efficient use of storage resources
- Reduced interruption for downtime

### CCTV's Multimedia Library Deploys SAN to Improve Application Performance, Deliver Higher-Quality Programming to Worldwide Audience

China Central Television (CCTV) is the country's leading national TV network broadcasting to 90% of China's population with a viewership of more than 1.1 billion. As China's largest and most influential television station, CCTV currently has 12 channels and broadcasts an aggregate 240 hours of programs daily, of which 76.5% is produced in-house.

At a time when the world is working towards globalization and entering the information age, CCTV is making an effort to increase the number of channels for more and better-quality programs through recruiting new talent, working towards the goal of expanding its broadcast presence worldwide. For this to happen, CCTV has committed to improving its infrastructure as well as using advanced information systems and modern management techniques.

**DIGITIZING FOR THE FUTURE**

A major component to improving its infrastructure was CCTV's intent to digitize its programs through its newly developed Multimedia Library for China Broadcast, so that not only would this mean higher-quality programs, but also better increased production efficiencies. The challenge was to build a system that can be used for the production and broadcast of digitized programs, but also one that could broadcast programs in the

old formats. The new Digital Satellite News Gathering (DSNG) system that the Multimedia Library was planning to build would also act as a database to store the network's more than 600,000 hours of programming produced to date. This system would enable live broadcast of important issues happening anywhere and any time. The program production, broadcast transmission, satellite relay and news broadcast would need to be digitalized. A fast and reliable multimedia network system would be used to realize resources sharing, forming a preliminary office automation and intelligent management system.

CCTV's Multimedia Library for China Broadcast could not afford system downtime because that would mean a significant decrease in efficiency and productivity of the system's users. In addition, an unreliable, poor- or non-functioning system cannot fulfill its requirement of continuous high-speed data access and sharing. For media streaming, the network needed to significantly speed up application performance in order to be able to handle high volume of data on a daily basis.

**DEPLOYING SANS IMPROVES APPLICATION PERFORMANCE**

To support reliable, high-speed backend data access for digitized video program

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CCTV

editing and auditing and broadcast, the Multimedia Library installed four SilkWorm 3900 and eight SilkWorm 3800 Fibre Channel switches. According to an engineer from the library, the broadcaster chose the Brocade SAN infrastructure solution because of its extremely high volume of data requiring an advanced SAN storage system that could offer reliable high application performance.

“We evaluated numerous solutions from other vendors, but we chose Brocade’s switches because of the many customer case studies that we were able to refer from, that clearly demonstrated how well their solutions and services were implemented,” says the engineer.

CCTV’s Multimedia Library purchased the Brocade switches through Beijing Yun Xian Company, a Brocade Premier Fabric Partner in China. The company helped the library deploy and integrate the Brocade SAN solution seamlessly into its IP network and Fibre Channel network.

The engineer also notes that CCTV has previously deployed Brocade’s SAN solutions to help improve efficiency and reliability of storage for mission-critical, bandwidth-intensive media production. He says that this very successful deployment of Brocade’s SAN solutions further solidified CCTV’s choice in going with Brocade this time to help improve the performance of the DSNG system’s applications to handle data more efficiently.

“With Brocade’s great track record, our previously successful deployment of Brocade’s SAN solutions and large contingent of satisfied customers, we believed that they were the right SAN solution provider for us from both a solutions point of view as well as getting excellent support services,” adds the engineer.

Brocade is the de facto industry standard in SAN storage, with the highest market share worldwide. According to a Dell’Oro report published in February 2003, Brocade has 58% of the Fibre Channel fabric switch market.

## WORLD-CLASS PROGRAMMING

Implementation of the Brocade switches has been very smooth so far. CCTV’s Multimedia Library for China Broadcast has yet to experience any issues while developing and growing its SAN.

“We have been very satisfied with the performance and data sharing capabilities from our applications since moving to the Brocade SAN solution,” explains the engineer from the Multimedia Library. “We found that the DSNG’s application performance improved by 30%. Our employees using the system found it to be more convenient and easy to use. We’re happy to report that we’ve seen productivity go up significantly by 30%.”

The Brocade solution fits seamlessly into the library’s existing IT systems—compatibility and interoperability between different vendor products has been very good. This paves the way for the network to expand on its SAN and add new applications to improve the overall system.

“As we’re in the process of digitizing the 600,000 hours of programs, we expect the SAN to expand every year and thus need an increase in the number of SAN switches. Thanks to the Brocade SAN solution enabling improved application performance, CCTV is confident that we will become a high-quality, world-class broadcaster opening the world’s eyes to China,” concludes the engineer from the Multimedia Library.



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