

## Capitol Broadcasting Deploys StoneFly IP SAN Technology to Support New BladeCenter, E-Mail Archiving and Disk-Based Backup Initiatives

Capitol Broadcasting Company (CBC) is well known across North Carolina's distinguished Research Triangle Region, with diverse business holdings that span the state. As the area's largest broadcaster, the Raleigh-based company operates five television stations, a radio station and a radio network. If that's not enough, it also owns a satellite provider, several high-profile real estate interests, and the Durham Bulls minor league baseball team.

### Challenges

- Organization has outgrown direct attached storage deployments
- Escalating storage requirements for an email archiving project
- New Blade Servers require centralized storage
- Fibre Channel SAN technology was too expensive

### Solution

Two StoneFly Integrated Storage Concentrators, which support up to 18TB of storage in a single chassis, feature the StoneFusion Intelligent Network Storage Platform supporting block-level virtualization, StoneFly Snapshot™, and StoneFly Reflection™ synchronous mirroring for advanced data recovery.

### Benefits

- 100 percent increase in backup performance
- Reliable, efficient solution for e-mail archiving
- Cost-saving storage solution for new server consolidation initiative

CBC's rich history began in 1937 when A.J. Fletcher, a Raleigh lawyer and businessman, applied for a 250-watt AM radio station. WRAL-AM went on the air in 1939 as only the second radio station in Raleigh. Over the years, Fletcher, along with his sons and his grandson, worked alongside other dedicated employees to make CBC and WRAL household names in central North Carolina. His grandson, Jim Goodmon, now heads the company as president and CEO, with his own sons rising up the ranks to help guide CBC's ongoing leadership in the community.

### *The Challenge*

Today, CBC continues its pioneering ways. WRAL-TV was the first station in the nation to transmit public broadcasting in high-definition television (HDTV) and the first station in the world to air an entire news broadcast using HDTV. In

addition, WRAL.com is the largest news web site on the East Coast.

The company's IT department thrives on innovation as well. In 2006, when WRAL's data storage requirements outpaced existing direct-attached storage (DAS) resources, the company found itself in the market for an entirely new approach to data management. WRAL's most pressing storage challenges came to light when the company embarked upon a plan to implement a new e-mail archiving system.

"With DAS, we chewed through a 250GB local disk for e-mail archiving alone in less than two

**The StoneFly IP SAN allows us to expand our storage on the fly, enabling us to keep pace with the ever-changing storage demands of this dynamic organization.**

*Chris Welty  
Systems Engineer  
Capital Broadcasting Company*

months," said Christopher Welty, systems engineer for WRAL. "My options were to either throw more disks into the fray, or go the SAN route, which would allow me to take storage and allocate it across several systems."

According to Welty, while e-mail archiving was the catalyst to move beyond DAS, other looming IT challenges were also driving the need for more robust storage, including an IBM BladeCenter initiative, and the desire to upgrade to a more effective backup system.

Welty, who had relied upon big Fibre Channel SANs in the past, knew that they represented more than CBC needed. He also knew that adding disk after disk was not an efficient answer, especially for the long term. However, his experience with IP SANs, although somewhat limited, gave him the confidence to recognize that the technology – which offers centralized storage management and leverages an organization's existing IP infrastructure -- would be more than sufficient for the company. In addition, the price was right, at thousands of dollars less than Fibre Channel.

With a go-ahead from upper management, Welty began surveying the IP SAN landscape. He looked at NetApp's IP SAN offerings, which he found to be prohibitively expensive. He also evaluated solutions from other leading market players, such as StoneFly, Inc. and LeftHand Networks. In the end, Welty determined that StoneFly's all-inclusive solutions offered the most SAN for the money, with built-in Snapshot and replication capabilities to prevent against the loss of critical data, as well as centralized storage management, control and monitoring of logical storage volumes.

Welty turned to Jim Addlesberger, CEO of NavigateStorage LLC, for support with his decision. A veteran storage VAR and national solutions provider, NavigateStorage has deployed IP SANs for applications as diverse as e-mail archiving, disk-to-disk backup, managed services, document management and disaster recovery. In addition, Addlesberger had been instrumental in the past with other storage projects that Welty had been involved with at his prior company.

"I called Jim right away because I trust his opinion and expertise, and I knew he would recommend the best overall storage solution for CBC," said Welty. "We both came to the conclusion that the StoneFly IP SAN was the best choice for supporting our needs over time, with options that will allow us to cost-effectively add a terabyte here and a terabyte there as our storage demands grow."

## ***The Solution***

CBC chose dual StoneFly Integrated Storage Concentrators (ISC) to support its wide-ranging storage endeavors. Configured for CBC as an active-active cluster for load balancing and complete redundancy, the ISC systems offer all the scalability needed for the company's expanding IT requirements. As the cornerstone of StoneFly's IP SAN product family, which has been shipping since June 2002, all StoneFly ISC systems are designed from the ground up to support next-

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generation storage technologies including SAS, 4Gb Fibre Channel and 10Gb iSCSI, as well as large-scale IP SAN deployments. In addition, they are capable of reutilizing direct attached storage resources, and they work in conjunction with StoneFly's StoneFusion Storage Virtualization Technology. StoneFusion incorporates Snapshot capabilities for instantaneous data recovery; block-level virtualization for increased storage utilization and capacity provisioning; and a comprehensive range of storage services such as clustering, storage consolidation, access control, volume

management, and synchronous and asynchronous mirroring.

Prior to installation, Addlesberger consulted with Welty on key design factors, such as how he wanted the Logical Unit Numbers (LUNs) for the SAN set up. He then shipped the pre-configured system directly to CBC. Welty handled the installation himself, quickly and without a challenge.

"The StoneFly ISC was extremely easy to install," he said. "We simply put it in a rack, gave it an IP address, and we were ready to go."

## ***The Benefits***

Welty immediately went to work to set up the SAN to support CBC's business-critical e-mail archiving system, which is designed to meet important FCC regulations. Said Welty, "The performance of the IP SAN has been outstanding from the start. We are not only able to retrieve archived items quickly and easily, but we are resting much more easily knowing that the reliability of the IP SAN is now behind this extremely important endeavor."

At the same time, the StoneFly SAN has also made a dramatic impact on CBC's demanding backup requirements. Once required to perform tedious local backups across the enterprise, Welty and the CBC IT team now implement backups to disk using the SAN. The organization has experienced a 100 percent increase in backup performance through use of this new streamlined process, cutting CBC's backup window in half. With six TBs of data to manage overall, Welty has designed a routine that entails full e-mail backups on a nightly basis, and differential backups at regular intervals for other aspects of the enterprise.

CBC was able to further leverage the new SAN to support WRAL's main file server, which failed in the midst of the new e-mail archiving project. Welty assigned another volume to the SAN and hooked it up to a new server, eliminating the need for a hard drive.



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