

# Hitachi Storage Solutions at Work

## Alberta Justice

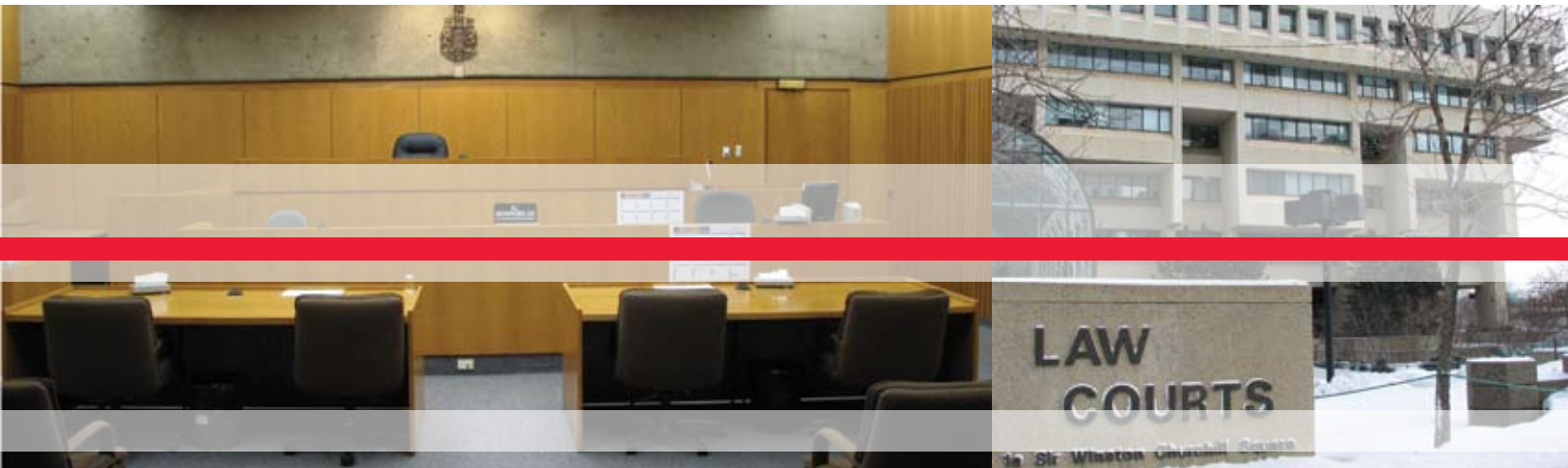
**INDUSTRY** Government

**SOLUTIONS** Tiered Storage and Business Continuity/Backup

**Hardware**—Hitachi TagmaStore® Network Storage Controller model NSC55 and Hitachi TagmaStore Adaptable Modular Storage model AMS500

**Software**—Hitachi Data Protection Suite, powered by CommVault®, and Hitachi Universal Volume Manager software

**Services**—Provided by Hitachi TrueNorth™ Channel Partner Axidata Inc.



“Alberta Justice has a highly flexible, scalable, and reliable design to meet exponential demands for storage, compliance, and even future media formats that will emerge in tomorrow’s electronic courtrooms. Hitachi Data Systems has served us well.”

*Robin Seaman  
Network Manager  
Alberta Justice*



# Hitachi Data Systems Serves Alberta Justice with Tiered Storage to Speed Judicial Processes

The IT department for the Alberta, Canada, justice system was inundated with demands for labor-intensive data retrievals. On the brink of impeding judicial processes, Alberta Justice IT wanted to replace its direct attached storage (DAS) environment and sluggish archival processes. Now in session: high-speed mirrored storage area networks (SANs) based on the Hitachi TagmaStore® Network Storage Controller and Hitachi TagmaStore Adaptable Modular Storage.

Backlog is a word often heard in many court systems. Obvious culprits of the overburden include busy dockets with more cases to hear, wider use of digital capabilities resulting in more digital transcriptions to store, and swelling requirements for retention of evidence. But in the Western Canadian province of Alberta—home to 3 million people and more than 240 courtrooms in 17 locations—the buzzwords are growth, efficiency, and security. That's because the Alberta justice system is focused on reforming its backend data storage operations to better manage vital court data.

## For the Record

Every day, new electronic records are created in each Alberta court and require data storage. In just the few years since changing to digital transcription, for example, Alberta Justice has accumulated more than 5.1 million audio files of court proceedings. "For the record," an audio capture application typically produces over 90MB of audio data files per hour. In order to make search and playback easier, the audio files are broken down into smaller file segments. Each file averages 5MB in size and must be stored for lengthy periods of time to comply with government retention laws. Data retention policies dictate that some court documents be accessible for 10 years, and there is even government deliberation about extending to 25 years.

But these recordings need to be accessed by court staff intermittently when referring to older cases, some dating back several years. With a predominantly DAS environment as well as optical jukebox storage, Alberta Justice IT staff spent many hours each week helping to manage retrieval requests from judges, lawyers, and court clerks. Data storage volumes and requirements, as well as continual requests for timely data retrieval, were increasing.

"We were seeing a 14 percent increase in storage needs for audio files alone. Without a centralized or easily accessible storage infrastructure, Alberta Justice could not meet future retention requirements. We needed technology and architecture to viably support court needs for the long term," says Alberta Network Manager Robin Seaman.

## The Matter of DAS versus SAN

Alberta's existing storage and retrieval processes involved many steps. Audio files, e-mail, and other information were generated and held locally on Novell servers for 30 days at courthouses. Rural sites had to archive first to CD, then manually copy to courthouse servers. Then data was migrated to Novell NetWare®-based storage sites for 90 days at either Edmonton or Calgary before being offloaded to an optical disk library or "jukebox" that held 200 cartridges. As disks filled, IT staff would export and shelve them: Alberta already had more than 2,400 disks. When court employees initiated a recall request for a stored file, IT would pull the correct disk, then load and shuffle the jukebox to locate and "de-migrate" that file, a process that took as much as four work hours. Each year, IT was purchasing 1,000 cartridges—at a cost of almost Can\$100 each—to keep up with volume demand.

The evidence was clear: Alberta Justice IT needed an ultra-reliable and nimble storage network to manage court records. Seaman's specific requirements included open standards, limitless scalability, and highest availability to dynamically expand data storage as needed. He wanted to consolidate storage, automate processes, and reduce inefficiency, as well as tap into more advanced technologies.

“We were operating a costly enterprise, in terms of man hours, hardware, and user wait time. We knew a SAN was the way to go, but we were looking for a technology partner to help us sculpt the solution,” says Seaman. Among the vendors considered were Hitachi Data Systems and incumbent Hewlett-Packard.

“Other vendors expected us to know exactly what we wanted. Hitachi Data Systems came in asking questions, listening, tailoring solutions, and offering RAID-6—huge advantages for our security and peace of mind,” Seaman recalls.

## All Rise for Tiered Storage

The Hitachi Data Systems solution for Alberta replaced the cumbersome DAS environment with two identical tiered SANs—one in Edmonton, the other in Calgary. Each site is constructed with Hitachi TagmaStore® storage virtualization technology using a Hitachi TagmaStore Network Storage Controller model



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NSC55 to manage the SAN and Tier 1 Fibre Channel storage. Attached behind each NSC55 is a Hitachi TagmaStore Adaptable Modular Storage model AMS500 for Tier 2 SATA storage. And Hitachi Universal Volume Manager software flawlessly virtualizes it all into an aggregate storage pool. Now all daily court production data and the current year’s court records are stored on the NSC55, and audio recordings of previous years are housed on the AMS500.

Alberta also installed the Hitachi Data Protection Suite, powered by CommVault.® The Data Protection Suite’s Hitachi Backup and Recovery software enables disk-to-disk backup and recovery. The Data Protection Suite provides Alberta with a unified platform for data backup and recovery, as well as migration, archiving, and replication—all through a single, easy-to-use interface. Further, the Data Protection Suite integrates with Linux, Novell, and Windows; it provides simplified and nondisruptive backup of Alberta’s key Windows applications.

Since implementing its SAN architecture, Alberta Justice has also been able to join the Alberta SuperNet, a secure, broadband network linking public sector facilities across the province. So all of Alberta Justice’s locations—including previously non-networked, rural court offices—can hop onto SuperNet and Alberta Justice networks to directly store and access documents, including legacy files. No intervention by Alberta Justice IT is required.

## Expunging Inefficiency

Alberta Justice’s busy data storage dockets are now clear for aggressive growth and expansion, without the reliability or availability issues of earlier infrastructure. The awkward and time-consuming archival process has been completely eliminated because the NSC55 and AMS200 directly accommodate user requests—in a matter of seconds—without tying up IT resources. The IT department also consolidated servers and no longer purchases optical cartridges either, saving up to

Can\$100,000 annually. Now staff time and budget are better spent on other IT priorities.

“More importantly, Alberta Justice has a highly flexible, scalable, and reliable design to meet exponential demands for storage, compliance, and even future media formats that will emerge in tomorrow’s electronic courtrooms. Hitachi Data Systems has served us well,” says Seaman.

## About Axdata Inc.

Axdata Inc., a leading National Data Center Solutions provider, specializes in enterprise data storage networking and data center physical infrastructure. These specializations, along with direct partnerships, engineering and consulting capabilities, allow Axdata to deliver successful data center solutions to 5000 public and corporate customers.

Strategic alliances with companies like Hitachi Data Systems support effective and efficient real-world Axdata solutions for: data storage management, business continuance, disaster recovery, consolidation, regulatory compliance and high-performance highly reliable storage environments.

Axdata’s understanding of Alberta Justice’s issues, budget, future direction and its subsequent recommendations, resulted in the installation of a SAN solution from Hitachi Data Systems.

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