Remittance Imaging at Allstate Insurance Company

Lindsay F. Taylor

Remittance Imaging
at Allstate Insurance Company

By Lindsay F. Taylor
Allstate Insurance Company
Southwest Data Center
Information Technology

October, 1998

Executive Summary

The Allstate Insurance Company has implemented a process for indexing and archiving large volumes of remittance items (checks and payment coupons) via electronic image. Utilizing existing remittance processing equipment for image capture, third party software for indexing and image archive management, and existing Automated Cartridge Libraries and high-density tape media for mass storage of document images, Allstate eliminated microfilm for the viewing of premium check images. The new process has also enabled on-line, enterprise-wide viewing of checks images from any network-attached workstation running the third party image viewing software.

Benefits realized from the check imaging application include:

- a reduction of 12 people country-wide
- faster access for on-line viewing of checks
- improved reliability and security for the storage of check images
- significant savings over 5 years

Background Information

Company Organization

Allstate Insurance Company is headquartered in Northbrook, Illinois. Policy and claim processing is handled by three Data Centers. Each Data Center houses a Money Management Center (MMC) which processes premium payments for the company. Approximately 150,000 checks and a like number of bills are processed daily by each Money Management Center.

Production Environment

In 1992 Allstate installed new remittance processing equipment. This new equipment used image technology to process bills and checks. However, there was no provision for creating an electronic long-term archive of the items being processed. Long-term retention of these documents is necessary to investigate questions concerning premium payments.

Even though an electronic image of each document was being captured, only the most recent 3 days were retained due to the high storage costs on the MMC LAN server (each Data Center was generating approximately 1 gigabyte of image data to be managed and stored each day). There was no ability to transport these captured images to another platform for storage. Instead, microfilm of the processed items was created for long-term document storage.

Approach

While the remittance microfilm met the basic retention requirements, there were some obvious limitations:
- the high cost associated with the development of the microfilm
- limited access to document archives (limited number of microfilm readers)
- look-up time (an average of 15 minutes to locate a document on microfilm)
- microfilm documents not shareable between offices
- no backup or disaster recovery for the microfilm
- ongoing maintenance for the microfilm readers

By 1995, new high-density tape technology became available that allowed Allstate to leverage their existing investment in automated cartridge libraries as well as in-house mainframe processing environment to drive the storage costs of remittance images down to a cost-effective level.

Most vendors proposed the use of optical disk jukeboxes to solve our storage problem. However, we identified many disadvantages to the optical disk jukebox solution, including:

- daily maintenance required for moving media in and out of the jukebox
- relative high cost of optical disk media
- relatively limited storage space within the jukeboxes
- limited users at one time
- technology upgrades needed each year
- industry changes in optical disk standards may make archive formats obsolete (and unsupported by the vendor)
- this solution did not utilize our existing infrastructure that was already in place for large scale data storage (automated cartridge libraries)

A vendor was identified that could provide a software solution that would use our current infrastructure (DASD and mainframe tape) for the storage and management of large numbers of check images. The vendor offered a software package that would take our images, create a set of indices for each image, and archive the images for long-term storage. These archives could be maintained either on DASD for quick retrieval or on mainframe tape for cost-effective long-term storage.

However, there was still an outstanding issue concerning the number of tapes that would be required to maintain the long-term archives of check images. Given the expected volumes, each Data Center would be creating approximately one standard 36-track tape of check images each processing day. For this application, the required retention period ranged from seven years to permanent storage, depending on state and local requirements. Over several years, the maintenance required for thousands of volumes of check image tapes would have become cumbersome, and additional hardware might have been required to expand our automated cartridge libraries to accommodate this growth.

Fortunately, at about the same time as our investigation, our tape storage system vendor was developing a cartridge tape format that could hold as much as 50 to 100 times more data than our current tape format. This new format would allow us to condense our deep archives for check images by a 50 to 1 ratio, minimizing tape handling and maximizing the storage capacity of our automated cartridge libraries.

There was a consensus that this combination of third party software, mainframe tape technology, and our existing processing capacity would provide a cost-effective solution with all of the functionality required for the archival of check images. In addition, it was thought that this solution may provide the core to a much broader image and document archive. The project was approved in July, 1996.

User Requirements

During the initial discussions with the primary user groups, requirements were collected in terms of volumes to be archived, numbers of document retrievals, changes in retrieval patterns over time, retention requirements, etc. In addition, the existing technology infrastructure and information technology skill set was assessed to determine solution requirements. The following is a summary of access requirements identified for the check imaging project:

- *100% Image Capture* - all documents processed on the remittance equipment to be imaged

- *Image Manipulation* - solution must provide the user with the capability to change the size and direction of the image while viewing

- *Indices* - customer payments to be indexed by date, policy number, dollar amount, batch number, bank routing number, and pocket cut number

- *Image Availability* - solution requires the ability for enterprise-wide viewing of MMC processed checks - view any image, stored in any of the three Data Centers, from any workstation

- *Scale-ability* - solution must reflect an open architecture design that can be enhanced and increased in size and scope as we increase the number of users as well as expand the data storage types

- *Access* - solution must provide access from any standard configuration workstation in the enterprise (given proper security and access controls)

- *Cost-Effectiveness* - solution must not add any to the bottom line expense total, and reduce expenses if possible

- *Leverage Existing Technology* - wherever possible, the solution selected should leverage any suitable existing technology already in place, i.e., automated cartridge libraries, mainframe systems, Wide Area Network, Local Area Network, etc.

284

Implementation

The software to index and archive the images was purchased and installed in one of the three Data Centers in October 1996. By January 1997, all of the acceptance criteria was met by the vendor. The software was installed in the remaining two Data Centers later in 1997.

Each implementation went smoothly with a minimum disruption to the users. A few adjustments were required to the original design plan and were accomplished with a minimum amount of effort:

1) The network infrastructure between the MMC LAN and the mainframe needed to be upgraded due to the high bandwidth requirements of the image archival
2) The storage model was changed from a 2-tier (DASD and high-density tape) to a 3-tier design (due to the high demand for retrievals on the high density tape media). In addition to DASD and high-density tape, standard 36-track tape was added to take advantage of the 40+ tape transports available for image viewing. In addition, the seek time on a 1 gigabyte 36-track cartridge was found to be more acceptable for the high-access rate recent archives. The 50 gigabyte high-density tape media was found to be better suited for deep archive - mass volumes of images retained indefinitely.

User training on the third party desktop image viewing software went very smoothly. User training averaged an hour per user. Feedback from the users has been that the viewer is easy to use and met all image viewing needs.

Results

Everything we do at Allstate is measured in terms of impact to these constituent groups: **the customer, the shareholder, and the employee.**

The insured is **our customer** and the reason we are in business. The check imaging project has had a positive impact on the customer in two very real and tangible ways. First, it has had a significant positive impact on customer service. Customer payment inquires that used to take days to research and resolve, now take only minutes. Employees now have on-line access to check images from the desks and bottle-necks at the microfiche viewers have been eliminated. Image quality is improved and it is now easier to see the details on the check image for both the customer service representative and the customer.

Secondly, image availability was improved. The previous process required microfilm to be developed overnight and was available the following day. The new process allows images to be viewed the same day that they are processed. Also, the same image can be viewed by multiple users simultaneously. Finally, the check image solution

has driven costs out of the system (more on this to follow). Lower operating costs leads to a lower expense ratio, which translates to a more competitive price for our product and additional value to the customer.

An equally important constituent is the **shareholder**. Allstate is a publicly held company. It is important for us to continue to find ways to provide additional value to our shareholder. Lower expenses, competitive pricing, and increased levels of customer service drive business results in a direction that is beneficial to our shareholders. The check imaging project, while reducing costs and improving service levels to our customers, will help us attain business results that meet our shareholder expectations.

The third constituent group is **our employees**. Our employees are the vital link that ties business objectives to our customers and our results. The check imaging application has had the following positive effects on our employees:

- increased employee productivity
- access to check images from employee desktops
- elimination of delays in waiting for an available microfilm reader
- human resource savings have created the opportunity for employees to pursue alternative career paths within the company
- increased employee satisfaction by eliminating barriers to getting their jobs done quickly and efficiently

Feedback from the employees using the check imaging system has been overwhelmingly positive. The image viewing application is easy to learn and easy to use and has improved employee productivity and employee satisfaction levels.

Summary

The Remittance Imaging Application at Allstate has provided significant benefits to the corporation. The application has met functional and performance requirements and has provided a foundation for other applications that require mass document indexing and storage capabilities.