



# CASE STUDY

## Solution at-a-glance

### Company

Wachovia Corporation

### Industry

Financial services

### Environment size

Enterprise

### Employees

95,000

### Customer application

- Archiving data
- Managing data

### StorageTek® solutions

- Lifecycle Director™ software
- PowderHorn® 9310 tape libraries
- T9840B tape drives

### Business results

- More productive and thinner workforce
- Reduced labor costs
- Quicker problem resolution
- Reduced access time
- Improved work flow
- Enhanced customer service

## Wachovia Corporation

### Transaction and Image Archive software makes managing data simple, predictable and reliable.

Wachovia Corporation's heritage reaches back to 1879. In that year a bank opened in the town of Winston, N.C. on a tract of land named after the Der Wachau valley along the Danube River. After more than a century of mergers, the diversified financial institution provides a broad range of Asset Management, Brokerage, Commercial Banking, Retail Banking and Wealth Management products and services.

Wachovia utilizes its own Enterprise Image Archive application to store over 20 million check and lockbox items per day as well as all other electronic transactions posted in the bank's Demand Deposit application. The Image Archive application also supports over one million inquiries per day with 600,000 to 1,000,000 images being retrieved from disk and 30,000 to 60,000 images being retrieved from tape. The Image Archive application utilizes the StorageTek Lifecycle Director product to support access to data that has been migrated to tape.

### Business issues

Prior to the implementation of the Image Archive, check images were captured and stored on microfilm. Given the high volume and long-term retention requirements, the bank needed a solution that would line up the storage patterns with the retrieval patterns.

"Legacy Wachovia's Research and Adjustments department employed a number of research specialists that retrieved approximately 200,000 microfilm-based images per month," explained Douglas G. Daniel, Jr., vice president and manager of Image Architecture and Performance.

"While microfilm storage media was the industry standard, customers' needs were not being met efficiently because the microfilm-based solutions were slow, incapable of being automated and induced high labor costs."

The passage of Check 21 legislation, which allows banks to process checks electronically, reduces the cost of physically handling and transporting paper checks but increases the demand for image archiving.

### The solution

Wachovia currently utilizes Lifecycle Director to migrate data, transaction and image, to tape media on six PowderHorn 9310 tape libraries. The data is organized more efficiently than it was structured previously. The software allows the bank to deal better with the data's lifecycle. For example, "The storage solution allows the Exceptions application to get current signatures from recent check images which often provides a better reflection of the customer's signature than the original signature card," explains Daniel. "And we don't have to pay the higher cost usually associated with disk storage. By putting the images on tape media via Lifecycle Director, we reduced storage cost, increased the amount of information stored about an image and extended our data availability. All of this resulted in enhanced customer service.

"I probably have encountered six other image archiving solutions in the market," Daniel continued. "None of those solutions utilized a tape storage tier that addressed our customer's needs as well as the Lifecycle Director product does."

"The StorageTek solution continues to be the best solution I have encountered. When using tape storage hardware for direct access, you really want your retrieval patterns to line up with your storage patterns. If a customer goes to another financial institution and wants to see five related checks, they will probably be on up to five different tapes. But at Wachovia, all five checks will generally be on the same tape. This adds up to more efficiency and better customer service."

The software allows Wachovia to access more historical data through a single interface. "We don't have to go to multiple screens and/or applications because the data has aged," said Daniel. "I don't have to worry about my storage tier because the application determines whether the request data is stored on disk or tape. It allows us to extend the life and quantity of the data stored."

## Business benefits

With legal requirements to keep the check image data from seven to 10 years, throwing the images away after the first year is not an option. Keeping it on disk for seven to 10 years would be too expensive; thus disk is not an option either. These characteristics must also be balanced with the fact that when an image is needed the requestor is only willing to wait for a certain period of time.

With the Lifecycle Director solution in place, the banker can pull up a document in less than a second if it's on disk and in one to 45 seconds if it's on tape. "Doing research faster helps the banker sell more," Daniel said. "A customer with a transaction problem gets the answer instantly rather than later. By getting the problem solved immediately, the customer may be more receptive to other products being offered by the banker.

"Because storage on tape is less expensive, we are able to store more information about the transaction. With traditional disk-based solutions I would have to limit the number of

fields related to a transaction in order to maintain a lower storage cost. But with high-performing tape, I can keep more information about each transaction and still meet my storage cost goals. I don't have to cut corners to store all the data we need."

Legacy Wachovia previously had five Exception sites reviewing images of exceptions. "When the image archiving solution was implemented, we consolidated Exceptions processing down to one site," Daniel commented. "When Wachovia merged with First Union in 2001, the new Wachovia Corporation further consolidated from 10 Exception sites to three."

## Financial benefits

"After the Image Archive application was implemented at legacy Wachovia the Research and Adjustments department was substantially reduced, and the bank went from viewing 200,000 film based images per month to 150,000 electronic images per day. With a more productive and thinner workforce, the bank saved on labor costs while increasing customer service. When we have to correct an item, we can do it faster."

"The software assisted us in our mergers as well," Daniel remarked. "For example, different banks utilize different check MICR rules which can cause issues during a merger. These issues were corrected much quicker because the Image Archive allowed fast, efficient and global access to the data.

"This technology has also allowed us to archive our indexes to tape while maintaining fast search times," Daniel continued. "When you talk about an index that contains a minimum or robust volume of fields for a 7 to ten year retention period, that's a huge savings."

## Technology benefits

Daniel estimates that the bank has nearly 25 billion images stored on tape. The retrieval pattern dictates where the data is stored, so the lifecycles can be managed differently.

"The Lifecycle Director software implementation was straightforward," Daniels said. "I got the manual on Friday, figured out the software application by Monday, started building models on Tuesday and lived happily ever after."

Daniel also comments that "The T9840 tape drives are faster, quicker, cheaper and more reliable than any of the alternate tape solutions. You don't normally get all of those attributes in a product comparison. But we got it all with the StorageTek T9840s.

"In terms of storing more data longer, Lifecycle Director fills that void," said Daniel. "It's been a great piece of software and so much more stable than our previous solution. It would be great for anybody who would like long-term, direct access for any kind of application. I don't think it's been pushed to the extent it could be used."

## About Wachovia

Wachovia Corporation serves banking, brokerage and corporate customers primarily on the East Coast with investment banking offices in other selected locations. Wachovia Securities offers full-service retail brokerage services in 49 states and Washington, D.C. Global services are provided through 33 international offices.

## ABOUT STORAGETEK

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### StorageTek performance metrics summary

Goal	Before StorageTek solution	After StorageTek solution	Result
Faster customer problem resolution	3 days	1-45 seconds	Satisfied customers turned into prospects
Number of checks viewed per day	150,000 per day	1,000,000 per day	More service needs met
Reduction in labor force	10 Exception Sites	3 Exception Sites	Labor cost savings
Reduced disk storage	7-10 years	1 year	Extend quantity of data stored
Image accessibility	Selected internal departments	Entire enterprise and external customer base	Increased self-service and reduced backroom staff

Case study company: **Wachovia Corporation**  
[www.wachovia.com](http://www.wachovia.com)

*"In terms of storing more data longer, the Lifecycle Director software fills that void. It's a great product. I'd think it would be great for anybody who would like affordable long-term direct access storage without paying the cost of traditional disk storage."*

Douglas G. Daniel, Jr., Vice President / Manager of Image Architecture, Wachovia Corporation