

ImageMark™ Archive

To compete in payment transaction processing, banks require flexibility, scalability and innovative business imaging solutions. These solutions need to satisfy customer demand for better service, strengthen customer relationships and reduce processing costs.

NCR's ImageMark Archive is an image-based, payment transaction repository with a suite of value-add business applications that fit with the new digital era, and support the truncation of paper in check processing. ImageMark Archive embraces the check truncation requirements supporting industry wide standards and digitization. Prominent features include full solution scalability, industry leading performance, configuration flexibility and an architecture with a full Disaster Resistance workflow. These features enable banks to reduce operating costs, provide the highest quality of customer service and generate new service revenue opportunities.



The Benefits of ImageMark Archive

Banks want solutions that increase revenue, reduce operating costs, lower exposure to fraud, reduce operational risks, and personalize the customer experience in a platform that enables continued evolution in the payment processing market space. Many of the world's leading banks have already adopted the ImageMark Archive solution and are realizing the following benefits:

Increased and New Revenue Streams

Differentiated service and new customer acquisition

- Faster personalized services, enhanced customer relationship management and improved customer retention
- Image statements/check image delivery on CD-ROM, DVD, e-Delivery or via the Internet
- Web banking and other sophisticated Internet-based image applications for Retail and Corporate market segments
- Increased fee income from new services such as CD-ROM/DVD Delivery, Positive Pay, Image Statements and WebView
- High Availability and Disaster Recovery allow banks to differentiate their services to prospective customers based on superior reliability

Reduced Operating Costs

Elimination or reduction of costly processes improving overall ROI

- Digitized handling and delivery providing quick access image retrieval
- Improvement of overall productivity by eliminating time-consuming retrieval and photocopying
- Geographic consolidation of operations and information to a central location
- Configurations that can potentially use the lowest telecomm costs while still retaining a high level of performance
- Reduction of materials cost eliminating paper sorting and handling, preparation time, and postage expenses
- Centralization of administration and security to streamline product usage

Superior Risk Management

Reduction in write-offs and overall risk exposure

- More effective decision making through image-enabling risk applications
- Lower operational risks through inherent workflow design and higher business up-time with embedded disaster resistant architecture
- Improvement of internal efficiency in payment and processing controls—ease of access to images for signature verification and review of suspect items
- Reduction of fraud exposure using an image platform for applications designed for proactive, early detection of forged endorsements, kiting, new account fraud and counterfeits

Enhanced Customer Service

High performance platform to serve limitless number of customers and end-users

- Personalization and rapid end-user self-service for reporting, on-line statement delivery, confirmation of deposit and Positive Pay
- Configuration flexibility for internal and external customers to search, retrieve and view images over the Internet and from electronic media
- Various delivery options from physical media to e-Delivery allowing anytime, anywhere, anyhow access to results from check images and other objects such as PDF and payment transaction data

A Foundation for the Future

New Era of Digitization

- Interbank image exchange, and image-based truncation
- Supports digitized services and the electronic handling of checks
- Key enabler for message retention sequences for interbank image exchange and image-based truncation
- Provides the foundation for message history in emerging real-time or faster payment schemes, making the information available to case management and exception processing applications

ImageMark Archive Architecture

Core Archive Services

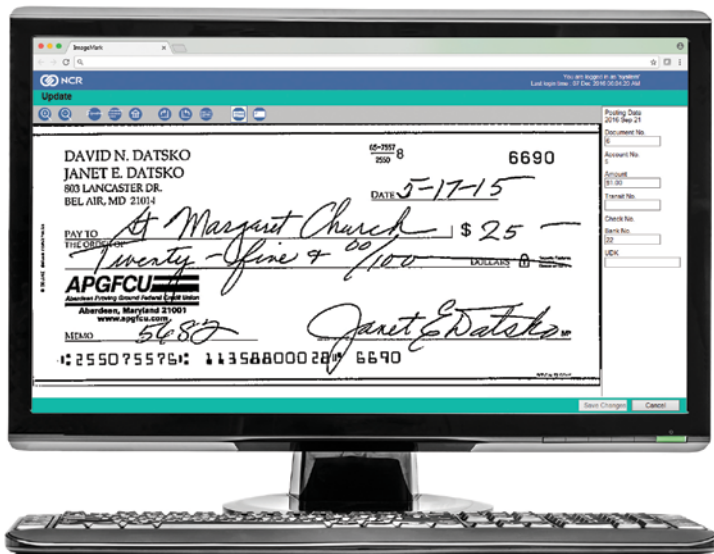
NCR's ImageMark Archive solution is customized to meet your specific needs and lets you import transaction images (e.g. check) and data from a wide range of external image-capture systems and storage media. You protect your existing investment with the option to enhance your offering with NCR or third-party capture systems.

ImageMark Archive Passport

ImageMark Archive Passport lets you store virtually any object using industry standard formats such as PDFs of customer statements or commercial ARP reports using our flexible XML import. As well, images and data can be transferred from omni or remote deposit, NCR's Transaction Manager software, Partner imaging solutions or other back office data perfection systems directly into the Core Archive.

ImageMark Core Archive

The Core Archive is the central engine of the ImageMark Archive solution. As your images and data are being captured or imported, the Core Archive simultaneously indexes and saves them to a variety of storage tiers including disk array (fiber-channel RAID), mid-tier ATA-based RAID, and tape libraries.



WebView and Application Interfaces

ImageMark Archive provides a powerful and rapidly deployable web-based research application called WebView. NCR also ensures that your best-of-breed applications can easily access the Archive through the interaction services interface.

ImageMark WebView for Inquiry

ImageMark WebView for Inquiry is a browser-based application that lets your staff and customers search, retrieve, and view check images and data on-line. In-house, it eliminates physical searching or retrieving copies from microfilm and lets your staff answer customer inquiries much faster and more accurately.

ImageMark WebView for DecisionPay

ImageMark DecisionPay is a Web-based exceptions application that allows banks to process any type of exception in a workflow application. Exception items can be presented for payment authorization both internally to the bank and externally to commercial customers within a browser-based environment.

Interaction Services Interface is comprised of the following:

- **ImageMark WebView Services**

ImageMark WebView Services is the application server and presentation layer portion required to run the WebView business applications.

- **a) ImageMark Archive Interaction Services (AIS)**

ImageMark Archive Interaction Services is the base interface used to retrieve items from the Archive. AIS is a high-speed retrieval interface that provides a wide range of services and is ideal for bulk-type retrieval applications. It uses XML request and response documents over a TCP/IP socket to perform online retrievals. AIS also provides the required security, administration, and batch retrieval functionality.

- **b) ImageMark Archive Content Services (ACS)**

ImageMark Archive Content Services is an optional web-based interface. It transcodes images for more efficient delivery and provides image manipulation capabilities.

ImageMark Archive Architecture

Other Business Applications

The suite of optional ImageMark Archive applications improves traditional banking services with innovative, flexible delivery channels to allow banks to overcome business challenges and achieve strategic goals.

ImageMark Media Delivery

ImageMark Media Delivery is an output delivery application that provides your corporate customers with images of their paid checks for each accounting period. In addition to data and images, you also have the option of providing your corporate customers with their account statements and other banking reports. Data can be delivered using traditional physical media of CD/DVD or e-Delivery methods that include e-Statements that allow clients easy access and download via web banking. Our solution is able to seamlessly transition a customer from an existing CD/DVD delivery method to e-Delivery. Media Delivery can also include “pass-through” data from other data management systems to be burned onto the corresponding media. Commercial checks can be truncated reducing costs for internal check handling and delivery by mail or courier.

ImageMark Media Viewer

ImageMark Media Viewer enables your corporate customers to search and view images and electronic files CD/DVDs or via e-Delivery. ImageMark Archive Media Delivery manages item retrieval and provides the information along with the Media Viewer application to the requester; either physically on a CD/DVD or electronically via a download through your web banking site.

ImageMark Image Statements

ImageMark Image Statements provides formatting and printing of data and corresponding check images into fully composed checking account statements. Image Statements formats the output to fit a configurable page layout template before printing and mailing. As well, the Image Statements can be stored in ImageMark Archive for future use.

System Health Monitor

System Health Monitor is a customizable, extendable software module that monitors your complete ImageMark Archive system, including archive processes, databases, servers, disks, and associated application components.

WebSAT Administration

WebSAT provides a web browser-based security administration tool to simplify the roll-out and management of security profiles and permission changes.



Key Features of ImageMark Archive

ImageMark Archive delivers unique value as an integrated solution and has several innovative features that distinguish it from the competition.

Flexibility in Data Capture Methods	ImageMark Archive provides a flexible mechanism to import images, other generic objects and related payment transaction or associated data and indexes into ImageMark Archive.
Disaster Recovery Capability	ImageMark Archive provides options for embedded disaster resistance architecture and workflow that deliver the high availability and DR elements required by 7 x 24 solutions.
Flexible Object Index Management	With ImageMark's Flexible Object Model, banks can designate checks, remittance stubs, deposit slips and various reports in PDF format such as statements or ARP reports. etc. as unique object types with index structures. Fields can be added incrementally without the need to regenerate the index database. In this way, the index schema can evolve with the needs of the business without the need to re-build the database.
Flexible, Scalable Storage Management	Configuration flexibility to use high performance primary fiber-channel RAID and long-term tape storage with complementary mid-tier ATA disk storage (in association with ImageMark Mid-tier Workflow software). The mid-tier disk option allows banks to provide end-users with price per retrieval performance options between primary fiber channel RAID and tape. This enables banks to provide affordable disk retrieval performance for longer periods than with just standard primary RAID and tape.
Full Suite of Business and System Administration Applications	On-line Research: <ul style="list-style-type: none">• WebView for Inquiry Fraud Detection: <ul style="list-style-type: none">• DecisionPay and WebView for DecisionPay• Payee Positive Pay High Volume Production Applications: <ul style="list-style-type: none">• Image Statements• Media Delivery with Media Viewer Web-based System Monitoring, Reporting and Administration: <ul style="list-style-type: none">• System Health Monitor• WebSAT
Flexible Web Retrieval Interfaces	Archive Interaction Services (AIS) is the primary retrieval interface for ImageMark Archive's suite of business applications. Archive Content Services (ACS) is an optional http interface enhancement that enables image manipulation and image transcoding capabilities for applications.
Highly Scalable Architecture	Configurable to meet the high volume archiving and retrieval requirements of the largest financial institutions—while providing cost effective solutions for medium sized institutions. Daily insertion capacity is expanding beyond 30 million item images, and AIS can fulfill daily retrieval requests of up to 30% of daily image insertions. and AIS can fulfill daily retrieval requests of up to 30% of daily image insertions.
Broad Platform and Integration of Best-in-Class Components	ImageMark Archive's client-server architecture integrates components from industry leading vendors including Linux, Oracle, Microsoft, Dell, Rimage, and others. All Partner components are certified with the solution and integrated by NCR's Professional Services organization.

ImageMark Archive Services

Professional Services

NCR boasts an industry-leading team of professional services experts specializing in rapidly deploying your ImageMark Archive, allowing you to begin realizing business value quickly.

Solution Integration Consulting Service

Helps you plan and implement the changes in processes, workflow, and job skills for maximum value over the long-term.

Project Management Service

NCR's proven state-of-the-art GlobalPM™ process ensures that your solution comes in on time, within budget and delivers the capabilities you expect.

Solution Implementation Service

An NCR Installation Specialist works with your bank's facility planners, performs a "hot-stage" installation and oversees installation and integration testing.

Customer Education Services

ImageMark Archive Customer Education Services is integral to every ImageMark Archive solution. These services address the education and training needs within every level of your organization.

ImageMark Archive System Administration

A hands-on course instructing new Archive system administrators how to perform daily administrative and operational tasks on the Core Archive system. An in-depth overview of Business Applications is also provided.

Installation Knowledge Transfer

ImageMark Archive Professional Services consultants conduct initial knowledge transfer sessions with customers about the operation and administration of the installed ImageMark Archive solution.

Customer Support Services

Once your ImageMark Archive system is up and running, NCR offers one-stop shopping for all your support needs. Along with the technical support team ready to address system problems, NCR's High Availability service offer provides you with a designated HA Specialist. This resource is your primary contact for escalations to ensure that proper resources are assigned to your reported problem.

Proactive and Predictive Maintenance Service

An innovative maintenance program based on a detailed, customized support plan, automated tools, and a remote Customer Care Link. Essential for maintaining high availability and ensuring that your Archive system meets your mission-critical requirements.

Software and Hardware Maintenance

NCR remote support centers and field service organizations offer a full, flexible range of support options, as well as front-end support for the third-party products that are integrated into your ImageMark Archive solution.



ImageMark Archive Platform

Hardware

Linux Servers	<ul style="list-style-type: none">• Linux servers manage multiple functions for ImageMark Archive, including image and object insertion and indexing; automated storage management, system administration, and production of image CD-ROMs or preparation of files for e-Delivery
Windows Operating System for Servers	<ul style="list-style-type: none">• Windows Server compatible. Talk with your Account Manager for current version of operating system for servers
Workstations	<ul style="list-style-type: none">• ImageMark Archive Business Applications support Web-enabled client workstations running under Microsoft Windows. Talk to your Account Manager for current version of operating system
Storage Systems and Peripherals	<ul style="list-style-type: none">• NCR provides for interoperation with various storage modalities - from SAN disk to CAS and NAS storage• RAID tier options include Fiber Channel and ATA disk systems from EMC and Engenio in High Availability and Disaster Recovery configurations
CD/DVD Burners	<ul style="list-style-type: none">• The latest high performance, high availability products configured for CD and DVD writing and labeling

Software

Relational Database Management System	<ul style="list-style-type: none">• Oracle Enterprise Edition
Platform Software	<ul style="list-style-type: none">• Core Archive: core storage, indexing, and retrieval engine for the ImageMark Archive—includes the high performance UNIX-based Archive Interaction Services (AIS) interface• ImageMark Passport: software for importing document images and data into the Core• ImageMark WebView Services• ImageMark Archive Content Services
NCR ImageMark Archive Business Applications	<ul style="list-style-type: none">• ImageMark WebView for Inquiry• ImageMark DecisionPay (including WebView for DecisionPay)• ImageMark Media Delivery• ImageMark Media Viewer• ImageMark Image Statements• System Health Monitor• WebSAT Administration (web-based Security Administration Tool)

Why NCR ImageMark Archive?

NCR maintains strategic partnerships with the best-in-class providers of image-based applications and solutions to enhance the value of the ImageMark Archive solution and provide the banking industry with end-to-end image capabilities. We provide a solution that will work with any platform certified and supported by Oracle, Linux and Windows and are fully compatible with VM-based implementation. Solutions are built modularly to offer choice and fit for different bank strategies.

We can help you define a clear vision of the strategy to meet your business objectives and maximize return on investment throughout your enterprise. Whether you are looking for a cloud-based or on-premise solution, let us show you how NCR ImageMark Archive supports your bank's success in the digital economy of the 21st century.

Why NCR?

NCR Corporation (NYSE: NCR) is the global leader in consumer transaction technologies, turning everyday interactions with businesses into exceptional experiences. With its software, hardware, and portfolio of services, NCR enables more than 550 million transactions daily across retail, financial, travel, hospitality, telecom and technology, and small business. NCR solutions run the everyday transactions that make your life easier.

NCR is headquartered in Duluth, Georgia with over 30,000 employees and does business in 180 countries. NCR is a trademark of NCR Corporation in the United States and other countries. The company encourages investors to visit its web site which is updated regularly with financial and other important information about NCR.

NCR continually improves products as new technologies and components become available. NCR, therefore, reserves the right to change specifications without prior notice.

All features, functions and operations described herein may not be marketed by NCR in all parts of the world. Consult your NCR representative or NCR office for the latest information.

NCR ImageMark Archive is either a registered trademark or trademark of NCR Corporation in the United States and/or other countries. All brand and product names appearing in this document are trademarks, registered trademarks or service marks of their respective holders.

