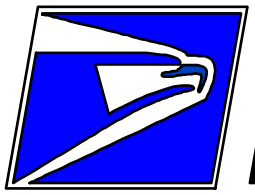

UNITED STATES
POSTAL SERVICE

Corporate Automation Plan
Phase 2

Prepared by Strategic Operations Planning
May 2004

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UNITED STATES POSTAL SERVICE

May 2004

This release of the Corporate Automation Plan (CAP) is the second update to the original 1992 document and continues to reflect the Postal Service's strong commitment to the automation program. The updated CAP clearly lays out the strategy for the future. We need to ensure that we capitalize on the cost savings that investment in technology offers because investment alone will not ensure a vibrant Postal Service that will be viable into the future.

This edition of the CAP updates the vision of how the Postal Service is continuing its collaboration with the mailing industry to automate letter, flat and parcel sorting, as well as bundle, tray and container processing. The strategy is to seek methods to attain the "lowest combined cost for the customer and the Postal Service" through the joint efforts of the Postal Service and the mailing industry.

We continue to reduce distribution costs through our commitment to developing innovative technologies that automate distribution and material handling. I expect that you will become familiar with the contents of this document and that you will do all that you can to ensure the successful implementation of a "fully automated" operating environment as described in the introduction.

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INTRODUCTION

The Corporate Automation Plan (CAP) was developed by the Postal Service to provide direction for its automation program and to determine the activities, issues and opportunities related to automating mail distribution and was originally issued in the late 1980s. Information in the CAP was organized into sections describing how letters, flats and parcels would be barcoded and their distribution automated. Periodic revisions to the CAP (the most recent being in 1996) incorporated advances in technology and changes in strategic direction. Previous editions of the CAP focused primarily on letter sorting technology initiatives and strategies that would be employed to increase the volume of barcoded letters. Less emphasis was placed on flat and parcel technology because that technology was not as mature as letter technology. Over time, the flats and parcel sorting technology improved, matured and benefited from technology adapted from letter automation systems.

In order to ensure an efficient application of corporate resources, the Postal Service forecasted in the CAP the amount of automation compatible letters and the methods that could be used for barcoding them. This forecast led to the "40-40-20" percentage prediction which reflected the percentage of letters barcoded by customers (40%), by the Postal Service's optical character reader (OCR) technology (40%) and by the soon to be deployed Remote Bar Coding System (20%). As automated letter volumes increased, the Letter Sorting Machines became redundant and were removed, freeing up much needed space within the processing facilities.

The CAP stated that flat mail automation would prove more difficult than letter mail. Using the projected costs as a basis, the Postal Service considered the project to barcode flats internally too expensive. Instead a corporate decision was made to work with the mailing industry to increase the amount of presorted carrier route volumes to reduce flats distribution costs. As a result, a new rate structure was developed that supported and encouraged the mailing industry to generate automation compatible (OCR readable) or barcoded flats. Savings related to automated flats distribution would depend entirely on the level of customer participation in these worksharing programs.

The CAP also stated that the cost of spraying barcodes directly onto individual parcels would be too high and this meant that an expensive technological solution to barcode parcels would not be pursued. In order to increase the amount of automatable parcels, discounts similar to those used to increase barcoded flat volumes were offered to mailers who barcoded parcels. Non-barcoded parcels were processed by machine operators at Bulk Mail Centers who applied peelable barcoded stickers to parcels which reduced secondary or subsequent parcel keying costs.

In CAP Phase 2, the Postal Service is pursuing a combination of entirely new systems and upgrades to existing systems. This is the same successful formula that was used for the move from manual to mechanical and then to an automated environment. The key is that the Postal Service will move forward in a manner that allows it to optimize its network. The technology is not dependent upon the structure of the network. Network rationalization may require the Postal Service to relocate equipment, but the technology itself is unaffected by any networking decisions. The network rationalization initiative, now in the modeling phase, is not discussed in CAP Phase 2.

Although automated equipment has been a part of postal operations for almost two decades, a clear understanding of "automated processing" may still not exist among all postal employees or customers. For many, the sole definition of this term might be "Optical Character Readers" or "barcodes," but automated processing, in the broader sense, incorporates concepts such as presort, readability, finest depth of code, delivery point processing and most recently the Intelligent Mail initiative. CAP Phase 2 seeks to provide additional insight into how the Postal Service can continue to partner with the mailing industry to fully automate not only letter, flat and parcel sorting, but also bundle, tray and container processing. Listed below are the overall goals for generating and processing automated mail as detailed within CAP Phase 2. The strategy to achieve these goals will continue to be predicated on a joint customer and Postal Service effort. The guiding principle is to seek methods to attain the "lowest combined cost for the customer and the Postal Service". These methods must include innovative worksharing programs that support postage rate stabilization and customer participation. Over time, customer applied barcodes have proven to be the most economical and efficient way to increase automated volumes.

The Postal Service can use CAP Phase 2 to attain a "fully automated" operating environment by:

- encouraging mailers to prebarcode and presort letters, flats, parcels, bundles, trays and containers to help control postal costs.
- placing either an identification tag (ID TAG) or a barcode on each non-barcoded letter, flat and parcel that requires a primary sort or that can be sorted to a delivery point or finalized by a potential mail packaging process.
- exploring alternative barcode formats to expand scanning, tracking and reporting capabilities.
- using barcodes on trays, pallets and containers to permit transportation provider and service performance to be evaluated.
- using barcodes to process bundles and parcels requiring either a primary or subsequent sort.
- deploying the Automated Package Processing System to make bundle and parcel sorting more efficient.
- improving mailpiece image processing software to reduce the amount of images needing manual resolution.
- increasing the efficiency of the Remote Encoding Center operations to reduce overall image processing costs.
- extending Postal Automated Redirection System (PARS) to include flats and parcels to reduce processing related costs.
- expanding the use of Mail Evaluation Readability Lookup Instrument (MERLIN) to increase presort and prebarcode quality.
- reducing manual distribution and casing volumes to decrease costs.
- standardizing the equipment sets in the processing centers to increase performance.
- standardizing mail flows and operations to attain the lowest possible mail preparation and distribution costs.

DOCUMENT OVERVIEW

The information contained in this version of Corporate Automation Plan (CAP Phase 2) seeks to provide the reader with an overview of the actions that the Postal Service can take to place either a barcode or an identification tag (ID TAG) on each piece of mail destined for delivery within an automated zone. The definition of an automated zone depends on the depth of sort needed for processing and the type of barcode may differ for each mailpiece, shape or container type. An example of this difference is the requirement for an 11-digit POSTNET barcode (where it can be used for sequencing incoming secondary letter volumes) and the current style (non-POSTNET) barcode requirement for parcel, bundle or container processing.

A majority of the volume that the Postal Service processes is letters and most are being sorted into delivery sequence order using automated equipment. CAP Phase 2 includes information on future barcode generation plans, plans to improve automated letter processing equipment and initiatives to develop the next generation of letter and letter image processing systems.

The Corporate Flats Strategy, which was previously a separate program to advance flat mail automation, and the flats related information contained in the Integrated Plan for Operations have been merged into CAP Phase 2. Rather than have several individual documents that address many of the same flats-related issues, the Postal Service has decided to combine them into this version of the CAP.

The CAP Phase 2 also highlights advances in parcel and bundle automation by discussing how the Automated Package Processing System allows rapid handling of parcels, bundles and other irregular-shaped mail using both barcodes and dimensional scanning. Improvements to the formatting of information contained within the address block such as Optional Endorsement Lines are also discussed.

In addition to discussing letter, flat, parcel and bundle strategies, CAP Phase 2 also includes material handling equipment strategies that may need to be redefined as a result of changes in manual handling requirements for not only individual mailpieces (outsides), but also trays and bundles – including equipment to perform tasks such as banding and unbanding trays, sleeving and unsleeving trays.

The Automating Mail Transportation section of CAP Phase 2 describes how the Postal Service will update the transportation network used to move mail between processing points to support automated mail processing and delivery. This section includes an overview of the Transportation Visibility Strategy and explains how adhering to it provides the maximum amount of operating flexibility at the lowest possible combined cost.

The section on Automating Mail Delivery provides information about programs that improve delivery performance and position the Postal Service to implement its Delivery Vision which supports automating many of the letter carrier casing functions.

CAP Phase 2 recognizes that there may be a need for increased and improved scanning, both active and passive, to help mailers track not only individual letters and flats, but also packages, bundles, trays and pallets and that this requirement may involve some form of an enhanced data management system. In order to satisfy that requirement, work is underway to determine if postal related data can be loaded into an Enterprise Data Warehouse System which would integrate the many different databases currently in use and instead provide a continuous flow of information.

The Scanning and Tracking Automated Mail section describes how the Postal Service can use the Intelligent Mail program to provide mail flow and processing information.

The Automation Plan Support section contains information on how the Postal Service intends to capture automation program savings while effectively managing the complement.

At the end of the document is a section summarizing the goals and outlook for CAP Phase 2 followed by an automation program timeline.

LETTER MAIL AUTOMATION

Generating and processing automated letters requires either a readable POSTNET barcode or a representative mailpiece Identification (ID) Tag. Letters will continue to be barcoded either by the Postal Service's automated equipment and systems or by the customer through worksharing efforts. POSTNET barcodes are sprayed on letters by Multi-Line Optical Character Readers, Bar Code Sorters with Output Sub-System capability or by customers using similar equipment. ID Tags are generated internally by the Postal Service using various components of the Remote Bar Coding System (RBCS) with the associated address information located in an easily accessible database.

Over time, automated letter mail processing has benefited from most of the technological and software advances. However, because the automated letter mail program has progressed so far in a relatively short time-frame, it would be safe to say that only minor changes may be made to letter operations over the next few years. Therefore, letter mail processing must make optimal use of the information contained in barcodes or ID Tags to permit the potential benefits of those changes to be maximized.

With the goal of achieving a "fully automated" operating environment, the Postal Service will focus its resources on:

- Continuing to use POSTNET barcode format for letter mail automation
- Exploring and deploying technological advances in letter mail processing
- Increasing the efficiency of the Remote Encoding Centers
- Increasing Delivery Point Sequence (DPS) letter volumes
- Deploying the Postal Automated Redirection System
- Optimizing the performance of the letter processing equipment
- Reducing manual letter distribution and casing

Continue to Use POSTNET Barcode Format for Letter Mail Automation

At the start of the automation program, the Postal Service developed the Postal Numeric Encoding Technique (POSTNET) to provide an optimized barcode system. POSTNET continues to offer a compact barcode format that provides error detection and correction capability and can be reliably read and decoded at high speeds by optical reading systems.

The Postal Service will study the technology available to the mailing industry and the currently installed base of technology before making any decisions about future coding symbologies to ensure that the costs of mailer conversion are taken into account. However, consideration of any new barcode format for letter mail would need to take into account any technological and business implications of code application, scanning and storage. Two of the key requirements that must be considered would be "ease of printing" and "ease of reading."

Even though other types of barcodes will be evaluated, both the Postal Service and the mailing industry can continue to rely on the POSTNET system to encode ZIP Code information on letter mail at least through the end of FY2005.

Maintaining a commitment to use the POSTNET barcoding format reassures the mailing industry that their investment in this technology will provide a positive return and that the Postal Service will continue to rely on customers to increase the amount of customer applied barcodes. The table[1] below provides an estimate of how barcoded letter volumes have increased during the last 4 fiscal years:

CAP Phase 2 Letter Automation	FY2000	FY2001	FY2002	FY2003
Total Letters (in billions)	146.4	148.1	146.2	145.8
Total Barcoded Letters (in billions)	126.8	132.4	132.9	137.6
Customer Applied (in billions)	83.5	89.7	92.2	96.9
Postal Applied (in billions)	43.3	42.7	40.7	40.7
% of Total Letters Barcoded	86.6%	89.4%	90.9%	94.4%

Explore and Deploy Technological Advances in Letter Mail Processing

The continued investment in technology to support letter mail processing and delivery is a key enabling element to allow the Postal Service to achieve performance targets for FY2004 and beyond. To attain a fully automated environment, this investment must encompass both software improvements as well as hardware development. Much of the letter mail processing equipment that was deployed during the late 1980s is nearing the end of its useful service life and is becoming more and more expensive to maintain.

Fortunately, the Postal Service has maintained a continuing business interchange with many of the equipment manufacturers and is in a position to quickly deploy replacement hardware systems. Software changes can reduce the cost of existing letter mail processing operations by reducing remote keying requirements, decreasing the number of times a letter must be rehandled and by moving more mail out of manual distribution operations. The Postal Service will continue to make technological improvements to its letter processing systems as long as the machines remain technically viable.

The Advanced Facer Canceller System (AFCS) can separate prebarcoded letters, OCR readable letters (mostly machine-printed) and script (mostly handwritten) letters. As each letter is cancelled, it is sorted into a stacker containing mailpieces with the same characteristics and then routed to the most efficient distribution system. A subsequent retrofit enables the AFCS to capture the image for each machine-printed or script mailpiece and reduces the workload on the Multi-Line Optical Character Reader (MLOCR). Images of mailpieces that are lifted by the AFCS and cannot be finalized by the Remote Computer Reader (an on-site digital image processing system) are sent to the Remote Encoding Center for processing, with the actual mailpieces bypassing the MLOCR.

[1] The numbers contained in this table are estimates only and were derived from the Revenue, Pieces, and Weight by Classes of Mail and Special Services and the Management Operating Data System reports for FYs 2000 through 2003.

To improve the performance capability levels of the AFCS:

- Each machine will be upgraded with a doubles detector to identify double-fed mailpieces and eject them at the fine cull stage. The double-feed detector recognizes double feeds as they occur and create a more efficient rehandling process. This upgrade produces labor savings in post-cancellation mail processing and re-labeling operations by reducing the amount of mail that is miscoded and missorted by the AFCS. Additionally, remote keying of double-fed mailpieces and AFCS cancellation costs associated with miscoded mail can be reduced.

- Each machine will also be modified with an Ink Jet Printer Cancellation unit to indelibly cancel stamps with an oil-based ink which helps to reduce maintenance related costs. Adding an ink jet printer modification automates the mechanized operation that presently exists for changing the date on the AFCS's rotating stamp die. In addition, some components of the cancellation subsystem can be removed, thus reducing the associated maintenance costs for those items.

- Of the 1,086 AFCS machines, 358 have had Video Facing Modification (VFM) kits added to provide a face-only mode that enables the machine to face mail that does not have phosphorescent or fluorescent ink in the stamp, meter impression or indicia imprint. This modification allows mail that is rejected by a non-modified AFCS to avoid the labor intensive manual handling required today to face and cancel the rejected mail. At least one machine at each major processing facility has been modified with a VFM kit.

- A separate program will add OCR capability to each AFCS. This upgrade will enable an AFCS machine to identify and separate OCR-readable letters that are addressed to a predetermined Local Service Area (often referred to as turnaround mail) from mail going to other destinations without increasing the number of stackers or the machine footprint. Separating turnaround mail on the AFCS will help to reduce the number of handlings during the outgoing operation and this should allow us to shrink the outgoing processing window and start incoming processing earlier. The AFCSs that were retrofitted with OCRs as part of the Video Facing Modification program will receive a software upgrade while the remaining AFCSs can be upgraded with the same primary co-processor and OCR software. All of the AFCS machines can be networked into a second processor, the Remote Computer Reader (RCR), to differentiate this co-processor from the Video Facing unit.

The Multi-Line Optical Character Readers (MLOCRs) were originally deployed to replace less efficient first generation systems. However, these machines are now reaching the end of their productive life cycle and rather than replace them, their functions will be shifted to a Delivery Input Output Sub System – Expanded Capacity (DIOSS-EC) machine. The DIOSS-EC machines provide an increased depth of sort as compared to the MLOCRs they are replacing to reduce subsequent handlings. The DIOSS-EC machines process mail that would be sorted manually thus moving mail up the ladder into automation.

The Delivery Bar Code Sorter was originally developed to expand the capacity for sorting barcoded letter mail and replace earlier, less efficient first generation barcode Mail Processing Bar Code Sorters (MPBCS). Over time, many of these MPBCS and DBCS machines were connected to the RBCS ID Tag database and provided with the ability to spray POSTNET barcodes. These retrofits enabled the Postal Service to expand barcode generation capability and continues to provide that benefit with each operating software update.

The table[2] below provides an inventory for each type of equipment in use as of the end of FY2003 and estimates for FY2008:

CAP Phase 2 Letter Automation	FY2003	FY2008 (est.)
AFCS	1,086	1,086
AFCS with Integrated Units	173	
AFCS with Video Facing Units	358	
AFCS upgraded with OCRs		1,086
MLOCRs	875	229
MPBCS (all versions)	1,340	TBD
DBCS (all versions)	5,180	TBD
DBCS-EC / DIOSS-EC	94	489

Increase the Efficiency of the Remote Encoding Centers

The Postal Service relies on two primary systems to process script and other non-OCR readable letter mail: the Remote Computer Reader (RCR) and the Remote Encoding Center (REC). As letter mail is processed, phosphorescent orange ID Tags are applied to each piece either by the Advanced Facer Canceller System (AFCS) or by the MLOCRs. These tag identifiers are linked electronically to each letter's image. The image is processed in turn by several of the RBCS components, where each attempts to resolve the information contained in the address and produce a POSTNET equivalent barcode.

The RCR processing rates for both handwritten script and machine-printed addresses continues to exceed expectations. Improvements to RCR technology have reduced the amount of images sent to the REC as well as the workhours spent keying information by hand. As a result, the Postal Service is rapidly moving forward with RCR software improvements that continue reducing the need to transmit letter images to the RECs.

[2] USPS Equipment/Vehicles Deployment – FY2004 Report (October 2003).

Another image processing enhancement, the Letter Recognition Improvement Program (LRIP), further enhances the handwritten and machine-print address recognition technology used in letter mail automation equipment. LRIP allows the RCR to resolve address information faster and more accurately. The table[3] below provides an estimate of postal applied barcodes by system type (the RBCS category includes both the RCR and REC contribution):

CAP Phase 2 Letter Automation	FY2000	FY2001	FY2002	FY2003
Postal Applied Barcodes (in billions)	43.3	42.7	40.7	40.7
MLOCR (in billions)	19.7	17.3	18.4	17.7
RBCS (in billions)	19.9	18.8	17.4	18.1
CFS, PC or Other (in billions)	3.7	6.6	4.9	4.9

As the image volume being sent to the REC decreases, the need for remote keying services declines accordingly. REC reconfiguration planning continues to optimize the REC network. Thirty-eight of the original fifty-five RECs have been closed, and the workload transfer has been absorbed into the existing REC network. The table[4] below shows the decrease in RECs over time:

CAP Phase 2 Letter Automation	FY1999	FY2000	FY2001	FY2002	FY2004
RECs Closed by Year	2	21	7	5	3
RECs Remaining	53	32	25	20	17

Over the next several years, the Postal Service will continue to evaluate the REC network in order to capture those savings made possible by technological improvements. The Postal Service will also continue to deploy software upgrades and advances as they are developed. New operations such as PARS, APPS image keying and other future image processing programs will be incorporated into the existing REC network. Advances in technology may mean that future image processing requirements can be met using a much smaller REC network comprised of 5 to 7 centers.

Increase Delivery Point Sequence (DPS) Letter Volumes

Delivery point sequencing of letter mail continues to provide the Postal Service with the ability to sort letter mail in the carrier's walk or travel sequence, which includes individual residences, arrow locks and sections of lock boxes in multi-occupant buildings. POSTNET barcoded letters will continue to be sorted in delivery point sequence for zones generally having five or more city carriers or rural carriers with city style addressing and to the carrier route level for zones having five to nine carriers. The Postal Service can continue extending worksharing discounts to mailers who have access to POSTNET barcoding capabilities in order to increase delivery sequenced letter volume.

[3] The numbers contained in this table are estimates only and were derived from the Revenue, Pieces, and Weight by Classes of Mail and Special Services Report, the Management Operating Data System report and the RBCS volume tracking system for FYs 2000 through 2003.
[4] These numbers reflect the actual or projected closing dates.

Deploy the Postal Automated Redirection System

The Postal Service is structured to deliver large quantities of mail at a low unit cost to the addresses that appears on each mail piece. In certain cases, some mail cannot be delivered because parts of the address are incorrect, illegible or insufficient. Each day, while sorting non-automated mail into a delivery case, the carrier sets aside mailpieces that cannot be delivered. While on the street, the carrier may find more of this undeliverable mail within pre-sequenced bundles or trays. However, even mail that is not deliverable because specific address related information is missing must still be processed until a final disposition has been made. Eventually, all of this mail is either:

- redirected within the delivery unit;
- redirected out of the delivery unit to other postal facilities;
- sent to the local Computerized Forwarding System (CFS) unit;
- sent to the serving processing and distribution facility; or
- designated as waste at the delivery unit, with subsequent appropriate disposition.

Persons who move expect their mail to be rerouted to them in a timely manner and that those senders who request their new address will be notified by the Postal Service. When customers move, they can advise the Postal Service of a change-of-address (COA) by submitting a card-sized form, via the internet or other written notice. The COA is a request to the Postal Service to redirect mail to a new delivery address. In FY2002, the Postal Service processed 42.9 million change-of-address orders and forwarded over 2 billion pieces of mail.

For a variety of reasons, however, mail will often continue to be addressed to a person's original address for several months after they have relocated. Mail that needs to be forwarded or mail that cannot be forwarded or delivered as addressed is generally referred to "Undeliverable as Addressed" mail or UAA. In 2003, the amount of UAA mail was estimated to be 2.8 billion pieces. By 2005, UAA volume is projected to grow to almost 3.2 billion pieces.

The primary responsibility of a CFS site is to process forwardable mail that is captured at the destination delivery unit. Because of the work involved, over time, mail forwarding has become a labor intensive process forced to utilize mechanized terminals for processing letter sized mail. Even though forwarding address labels are applied to the letters at the terminals automatically, similar labels for flats are applied with manual assistance from an operator. In the case of parcels, the address labels are applied exclusively by hand.

The Postal Automated Redirection System (PARS) can replace CFS letter processing and it is planned that most of the mechanized CFS terminals will be removed during the first phase of PARS site deployments with a proportional reduction in the number of operators. The Postal Service will modify certain pieces of mail processing equipment using recognition technology that allows identification, interception and redirection for First Class and other forwardable mail for which a change of address order has been filed. An image of each letter can be sent to an Advanced Forwarding Reader for processing and if not successfully resolved can be sent to a Remote Encoding Center for keying.

Optimize the Performance of the Letter Processing Equipment

Many of the barcode sorters in use were originally deployed with a barcode reader that had a limited scanning area. These first-generation readers were in time replaced by the Wide Area Bar Code Readers (WABCRs) which were able to scan a wider area on each mail piece.

In line with the goal to maximize equipment performance, the Postal Service has replaced the WABCRs on the Delivery Bar Code Sorters and Carrier Sequence Bar Code Sorters with the Wide Field Of View Cameras. These cameras provide better address resolution and read information based indicia postage and other 2-dimensional barcodes. The cameras have improved reader acceptance rates and should reduce instances of operational disruption due to equipment failures.

Reduce Manual Letter Distribution and Casing

Reducing manual letter distribution and casing remains a key goal of operations. Customer Service facilities that perform mail processing and distribution will continue to work closely with their plant processing counterparts to maximize the amount of destinating volume sorted on automation. In those areas where the distance between processing centers and delivery units is a factor, automated letter processing equipment can be relocated closer to the delivery unit. As the amount of barcoded letter volume increases, volumes sorted manually should decrease. The Postal Service will continue to stress the value of automated processing through service talks and employee communications.

FLAT MAIL AUTOMATION

Previous editions of the CAP have reiterated a corporate decision to rely mainly on customers to generate POSTNET barcoded flats rather than using postal resources. That decision was based on existing flats processing technology, handling cost factor considerations and the anticipated growth in carrier routed presort volumes. However, that decision also meant that in order to increase the amount of flats sorted using automation, the Postal Service would eventually need to explore other technological alternatives to supplement customer barcoding. Like letter mail, barcode technology offers the most efficient and cost-effective means of processing flat mail while offering price advantages for customers who presort. In the current flats environment three distribution methods continue to be utilized: automated, mechanized and manual.

The Postal Service is working to increase automated flats distribution efficiency (reduce manual flat mail sorting), extend technological benefits to flats processing and use automation to reduce overall flats processing costs. Listed below are some of the actions that the Postal Service can take to position itself for future improvements:

- Minimize operating costs by modifying flats automation equipment with technological advancements
- Reduce flat mail preparation costs
- Standardize flats operational processes
- Improve flats manual productivity
- Reduce mail flow to manual distribution operations while simultaneously benchmarking operations

With the goal of achieving a “fully automated” operating environment, the Postal Service will focus its resources on:

- Continuing to use POSTNET barcode format for flat mail automation
- Increasing flats processing equipment performance
- Automate most of the flat mail preparation activities
- Improving flat mail image processing efficiency
- Using technological advances to increase flats automation
- Reducing manual flat distribution and casing
- Deploying an automated system to process undeliverable as addressed flats

In the longer term, sequencing flats into delivery-ready condition as well as to the carrier route level must be considered.

Continue Using POSTNET Barcode Format for Flat Mail Automation

As with letter mail, the Postal Service remains committed to using the same Postal Numeric Encoding Technique (POSTNET) system for automating flats. However, one difference is that flat mail processing requires only a 9-digit ZIP+4 barcode, while letter mail requires an 11-digit delivery point barcode. Pending development of a cost effective flats sequencing system, the preferred processing strategy for flat mail remains sorting non-carrier route presort flat mail to the carrier route, box, firm or other level using ZIP+4 POSTNET barcode information.

The Postal Service encourages mailers to begin 11-digit barcoding voluntarily. Should the strategy to prepare flats in delivery ready condition progress and require 11-digit POSTNET barcoding, worksharing discounts would be reexamined and refocused.

The table[5] below provides an estimate of total flats, total carrier routed presort flats and how barcoded flat volumes have changed during the last 4 fiscal years:

CAP Phase 2 Flat Automation	FY2000	FY2001	FY2002	FY2003
Total Flats (in billions)	54.7	55.6	51.6	51.0
Total CR Presorted Flats (in billions)	28.2	28.3	27.1	27.8
% of Total Flats	51.5%	50.9%	52.5%	51.5%
Total non-CR Flats (in billions)	26.5	27.3	24.5	23.2
Total Barcoded Flats (in billions)	17.6	17.7	16.3	16.5
% of non-CR Flats Barcoded	66.4%	64.8%	60.1%	71.1%

Even though other types of barcodes will be evaluated, both the Postal Service and the mailing industry can continue to rely on the POSTNET system to encode ZIP Code information on flat mail at least through the end of FY2005.

[5] The numbers contained in this table are estimates only and were derived from the Revenue, Pieces, and Weight by Classes of Mail and Special Services reports for FYs 2000 through 2003.

Increase Flats Processing Equipment Performance

Customer application of barcodes has created the opportunity to substitute low cost automated distribution for more expensive mechanized or manual distribution. Deploying flat sorting technology has enabled the Postal Service to increase productivity, maintain distribution quality and improve service levels.

In order to lift performance to even higher levels, significant capital investment has been required. This investment has led to the development of improvements that can further increase operational performance:

- The AFSM 100 Feeder Enhancement program upgrades the feeders on the machines to reduce mail damage, jams and double feeds and enable higher machine throughputs.
- The Automatic Tray Handling System (ATHS) adds take-away conveyors to the AFSM 100 for a more efficient system that offloads full trays and reloads empty trays.
- The Flats Sorting Machine 1000 was originally deployed to process oversized (non-machinable) flat mail. Prior to the FSM 1000 deployment, this type of mail required manual handling because it could not be processed on MPFSM 775 or 881 equipment. The UFSM 1000 Conversion program upgrades the FSM 1000 machines with Automated Flats Feeders and OCRs (AFF/OCR). The Upgraded Flats Sorting Machine 1000 (UFSM) sorts over 9,000 flat mail pieces per hour. The UFSM 1000 Conversion program increased machine throughput to enable over 70% of the mailpieces that were sorted manually to be keyed.
- The ATHS for the UFSM 1000 is being developed and automatically detects and removes full trays from the tray rack and places them on to the machine's take-away belt and reloads an empty tray in its place.

Automate Most of the Flat Mail Preparation Activities

The Postal Service has identified the flat mail preparation operation as a high priority for labor reduction and ergonomic improvement. The design of the current flat mail preparation operation involves opening bundles from mailers and then placing the loose flat mail onto a Flat Mail Cart for transport and subsequent processing on either an Automated Flats Sorting Machine (AFSM l00) or an FSM 1000. A new concept being investigated would provide a direct connection between the flat mail preparation operation and the AFSM 100 processing operation. Flat Mail Carts and other types of transport units would be replaced by conveyors delivering flat mail directly to the machine. Besides reducing handling and in-plant transport, such a change would make flats preparation a machine-paced operation, in contrast to the present off-line operation. Further analysis would be performed during any preliminary testing activities to determine if further operational savings could be realized by automating the induction of flats into the AFSM 100. An automation compatible mail tray (or other equipment type) would then be developed to carry prepared flat mail from the mail preparation point to the AFSM 100, where a modified induction station would automatically transfer the flats to the existing induction belt.

The AFSM-Automated Induction (AFSM-AI) system can automate the preparation and feeding of flat mail for the AFSM 100. The AFSM-AI is being designed with two separate systems. The first system is a flat preparation portion which consists of one container dumper, a distribution conveyor, three to four prep workstations and a debris collection system. An operator moves a container of bundled flats into the container dumper and empties the container onto the distribution conveyor. The conveyor then feeds these bundles to operators positioned at up to four prep stations. The operators at the prep stations would open each bundle, depositing the shrink wrap, strapping or rubber bands into a debris collection system. Then the flats are faced and placed into an Automation Compatible Tub (ACT). The ACT next travels on a transport conveyor, up a vertical lift and on to the feed end of the AFSM 100. The same conveyor system returns empty ACTs back to the prep stations.

The second system is the automatic induction portion. As ACTs full of flats arrive on the conveyors above the feed end of the AFSM 100, they are staged for feeding into the machine. As needed, the ACTs would travel down a vertical lift and move into position at the feed table of the AFSM. The Auto Induct system slides the ACT over to the feeder, opens the removable cover and slides the flat mail into the feeder to maintain proper pressure behind the stack of flats. Then the cover is replaced, the empty ACT is sent back to the end of the feed table, where it travels up the vertical lift and continues its journey back to the preparation area.

Improve Flat Mail Image Processing Efficiency

Even though the Postal Service has gone from mostly manual and mechanized processing to automation (i.e., processing that required no piece-by-piece handling of mail), the flats that are not prebarcoded or OCR readable continue to require sorting by slower and more expensive methods.

The deployment of the Automated Flat Sorter 100s (AFSMs) enabled the Postal Service to expand the use of OCR technology by incorporating video coding of flat mail images. This image processing activity was originally designed to occur at or near the machine's physical location. However, this keying operation proved to be inefficient, costly and difficult to manage.

In order to resolve this situation most of the AFSM 100 Video Coding Systems (VCS) were moved out of the processing plants and into the Remote Encoding Centers (RECs). This change in keying location in effect simply "stretched" the wire between the AFSM 100 and the relocated VCS operation using the same VCS hardware and software. Relocation of the flats keying operation to the RECs allowed up to ten AFSM 100s from the same or different sites to be pooled together on a single Video Coding System (VCS).

However, a problem soon developed where each REC had multiple flats VCS systems to manage. The REC managers were faced with moving Data Conversion Operators (DCOs) from one flats VCS to another or to letter image keying when flats image volumes fluctuate. The multiple flats VCS system problem can be resolved using the Flats Remote Encoding System (FRES). FRES replaces the interim system and standardizes and improves REC efficiency by streamlining and consolidating AFSM 100 Video Coding System operations to increase productivity and improve service. FRES provides load balancing by 'pooling' flat video coding personnel capabilities and increases REC productivity.

Use Technological Advances to Increase Flats Automation

Even though the flats image lift process works well, at the time it was deployed there was no method of applying a POSTNET barcode or ID Tag to each flat as the image was keyed. This meant that when the same flat was being processed at multiple sites its image had to be relifted and keyed again. In order to reduce the amount of non-barcoded flat images being sent to the REC for coding, the Postal Service can deploy three programs:

- The Flats Recognition Improvement Program (FRIP) uses advanced address recognition technology to improve Optical Character Reader (OCR) acceptance rates and reduce error rates on all AFSM 100 and UFSM 1000 equipment.

- The Secondary Address Reader (SAR) program further increases address recognition rates and decreases errors by upgrading the existing OCR hardware and improving software applications. The AFSM 100's OCR system scans each flat mailpiece for the barcode and printed address. To accomplish this, the mailpieces are passed in front of a

scanner as they move through the OCR module. The scanner lifts an image of the flat and sends a binary and gray version of the image to the Flat Address Reader Computer (FARC). The FARC searches the image and identifies the barcode and address information then interprets the information and sends the results to a system processor. The primary goals for the SAR program are to provide a higher read rate, as well as reduce the error rate and number of images that are being sent to the Remote Encoding Center. The SAR computer provides additional OCR read engines for the AFSM 100. Both the SAR and the FAR computers attempt to read each image and independently search for the result. The results from FAR and SAR are arbitrated to produce a final result to the machine control software.

- The Flat Identification Code Sort (FICS) program adds the capability of placing a small label on the front of each non-barcoded flat and then printing an Identification Tag for each mailpiece as it is processed on the AFSM 100. FICS enables the Postal Service to reduce image volume, improve remote keying efficiency and increase the accuracy of subsequent mail sorts. The ability to uniquely identify each non-barcoded flat incorporates the capabilities of the Identification Code Sort/Code Track (ICS/CT) into flats processing. The ICS/CT program is already active for letter mail. FICS adds the capability to utilize the information contained in each fluorescent barcode to identify the machine, date and time that the fluorescent code was applied. Subsequent automated flat operations can access a database to determine a delivery point for that particular ID Code. Use of the ICS/CT system can provide expanded service diagnostic and mail tracking information such as when and where a piece enters the system, how long it was at each machine and the time it took to go from machine to machine or facility to facility.

Reduce Manual Flat Distribution and Casing

Reducing manual flat distribution and casing is an important goal of operations. However, because automating flats processing has taken longer than letter automation, the Postal Service has had to be somewhat less aggressive in reducing the number of manual distribution cases. Improvements to the AFSM 100 and the FSM 1000 (now referred to as the UFSM 1000) along with new programs such as the Flats Identification Coding System will increase automated volumes and lessen the need for manual sortation.

Deploy an Automated System to Process Undeliverable As Addressed (UAA) Flats

The Postal Service will also pursue a system to automatically intercept and forward UAA mechanized flats, similar to the Postal Automated Redirection System (PARS) being proposed for UAA letter mail. The AFSM100 could be modified for flats interception to identify UAA due to a flats move.

ENSURE ADDRESS, BARCODE AND LABEL QUALITY

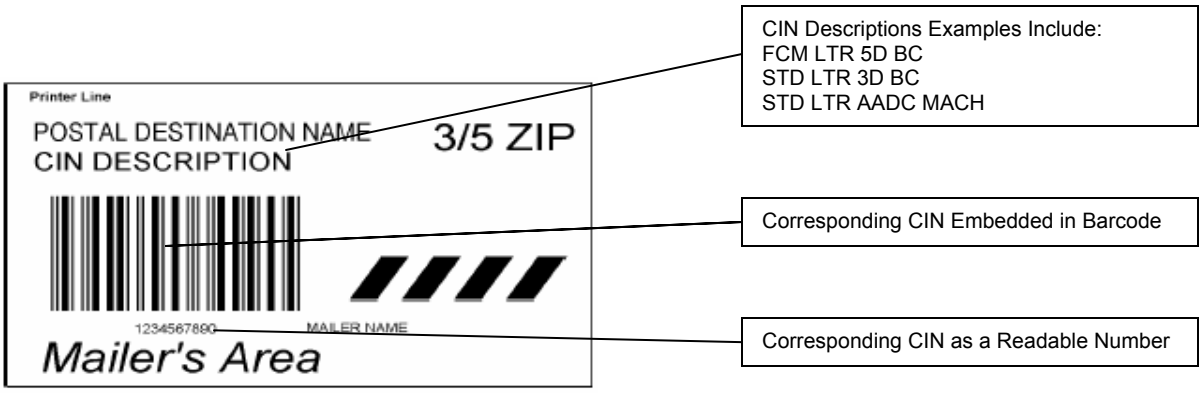
Even though the Postal Service plans to implement several new letter and flat mail automation initiatives, it is the customers who address and barcode the individual mail pieces who will determine whether a program is successful or not. Continual improvements in address, barcode and label readability and quality have, over time, enabled the Postal Service to realize significant savings and service improvements since the start of the automation program. CAP Phase 2 supports the existing quality related programs and seeks to incorporate initiatives such as MERLIN, PostalOne!, PAVE, Mail Preparation Total Quality Management (MPTQM) and the Second Generation Delivery Sequence File (DSF²) which are described here.

Deploy MERLIN

The Postal Service uses the Mail Evaluation Readability Lookup Instrument (MERLIN) to automate the bulk mail acceptance process while performing addressing and barcode quality checks to ensure that the mail qualifies for workshare discounts. Poor mail quality can cause processing and delivery delays and increases the cost of the affected processes. MERLIN has the capability to evaluate virtually every mailing requirement for both letter and flat mail and should perform these tasks at speed and efficiency rates that allow increased sampling and reduced acceptance time. MERLIN is the equipment used to verify bulk mailings of all classes at Postal Service mail acceptance units. The equipment performs a variety of checks on samples of large mailings to make certain they meet required preparation standards. First deployed in 2001, one of the equipment's main purposes is to verify that barcodes meet the requirement of the Domestic Mail Manual.

Beginning in 2004, the Postal Service can begin checking the accuracy of barcodes on high volume mailings. Verifying that such mailings are eligible for automation rates ensures that the high quality of mail accepted at discount postage rates is maintained. With the final installation of more than 1,200 units, the Postal Service can also check for ZIP Code errors as represented in the barcode. MERLIN can begin to detect such errors as ZIP Codes with 0000 or 9999 in the ZIP+4 portion of the mailing address. The analysis of barcode digit strings is the first of a phased-in strategy to improve address accuracy. Business Mail Entry Units, equipped with MERLIN, test all mailings with 10,000 or more pieces and about one in every six mailings with piece counts of 10,000 or less. Using MERLIN to verify address accuracy can benefit both the Postal Service and our customers by helping to eliminate incorrect addresses that are both costly and inefficient.

Another item that MERLIN can closely verify is the relationship between the Content Identification Number (CIN) on the tray label and the tray contents. The CIN is a 3-digit number used to describe mail characteristics, generally, mail class, shape, sort level and barcode status. The CIN comprises a critical element of the information necessary to enable automated tray processing systems to perform efficiently. The label shown below[6] provides an example of how the CIN information is displayed and incorporated into the printed barcode.



A picture of a MERLIN unit is also provided for reference purposes:

MERLIN can ensure that a consistent verification process will be in place at each mail entry point. MERLIN can simultaneously verify:

- ►Presort/Mail Makeup
- ►Weight and Piece Count
- ►Barcode Readability
- ►Tray Label Accuracy
- ►Address and Barcode Accuracy
- ►Walk Sequence Accuracy
- ►Mailpiece Dimensions
- ►Endorsements and Rate Markings
- ►Combined Mailings
- ►Meter Identification and Date

[6] The information provided here is for example purposes only. Any changes or updates to this information are available in the Domestic Mail Manual.

Acceptance and tolerance rates for mailings measured using MERLIN are set at levels that reflect postal equipment performance. The Postal Service has established a website (illustrated below) to keep mailers informed about changes;

and has published numerous articles, many in conjunction with the Mailers Technical Advisory Committee (MTAC), such as the one shown below.

Enhance PostalOne!

The Postal Service has also developed PostalOne!, a Web-based alternative to the existing manual bulk mailing process, to provide an electronic suite of services designed exclusively for business mailers. PostalOne! features an automated, streamlined alternative to the existing hardcopy documentation used in the business mail acceptance process. The system links a customer's mailing information electronically with Postal Service acceptance, verification and payment systems, eliminating most of the paperwork. PostalOne! provides a wealth of online information customers can use to manage their businesses more efficiently. For example, PostalOne! features the benefits of an integrated, Web-based solution providing:

- Simplified mail acceptance
- System-generated electronic documentation and postage statements
- Improved tracking of mailing jobs and access to mailing information
- Enhanced account management capability

The next major software release for the PostalOne! system can complete the foundation work started earlier and expand the functionality available to business mail entry users. It will also enhance the online fee payments and implement an "eCheck" capability that will allow users to make deposits from the comfort of their own home or office, without having to stand in line at a postal retail unit. Users will be able to submit postage statements and other forms through the Postage Statement Wizard® software and have them arrive electronically at Post Offices and business mail entry units across the country. Future updates can also build on the Web Service data exchange foundation, and its enhanced functionality can provide the ability to submit additional forms, such as international postage statements and some ancillary forms, such as the Plant-Verified Drop Shipment (PVDS) – Verification and Clearance document (PS Form 8125). All customers will be able to obtain logon user IDs and passwords to begin accessing their transactions online and managing their own accounts through a variety of self-service and administrative functions designed to put the users in control of their information.

Encourage Use of PAVE (Presort Accuracy, Validation, and Evaluation)

The PAVE (Presort Accuracy, Validation, and Evaluation) program is a process designed in cooperation with the mailing industry to evaluate presort software and determine its accuracy in sorting address files according to Domestic Mail Manual (DMM) standards. PAVE is available only to software and hardware developers, i.e., companies that develop presort software or manufacture presorting equipment for resale or internal use. Participation in the program is voluntary.

Although this program evaluates and validates presort products manufactured by developers, PAVE does not guarantee acceptance of mail prepared using PAVE-certified hardware and/or software; however, it does provide national approval of computer-generated facsimiles of Postal Service postage statements, standardized documentation and other presort documentation.

The Postal Service defines a PAVE-certified software product as a presorting product with source code specifically written to operate on a particular platform or operating system and assigned a specific version number. Many products use different language compilers to process files within different operating systems or on different hardware platforms. Therefore, to maintain the highest standards of quality assurance, PAVE can certify each product that operates on a particular platform at the current version number. One platform will be tested completely according to the test files ordered, and additional platforms will be tested randomly. The developer may either submit all platforms or just a few for certification. PAVE can evaluate each platform of the presort product separately and issue a certificate for each platform that meets the PAVE accuracy requirements.

Utilize MPTQM (Mail Preparation Total Quality Management)

Business mail passes through many stages before it arrives at the delivery address. Its timely, intact arrival depends upon all the right things happening along the way. Mail Preparation Total Quality Management (MPTQM) is designed to help Postal Service business customers and their contracted agents ensure quality during the design and preparation stages of the mail. When quality exists "up front", then the Postal Service has a better opportunity to do a quality job when it gets the mail. MPTQM exists because of the National Association of Presort Mailers' commitment and support through many working sessions and program iterations. MPTQM is a model of how partnership from concept to implementation produces a product that adds value to everyone's business.

Offer Delivery Point Validation

The Postal Service has developed a technology product to help mailers validate the accuracy of their address information, right down to the physical delivery point. Mailers are able to identify individual addresses within a mailing list that are potentially undeliverable-as-addressed due to an addressing deficiency. Through a network of licensed service providers, mailers can also obtain unique address attributes such as "Is the delivery address a residential or business location?" or "Is the delivery address currently vacant?" This new technology is called the Delivery Point Validation (DPV) product and is made available under license from the Postal Service.

Match Addresses With Second Generation Delivery Sequence File (DSF²)

With the implementation of the new DPV product, the Postal Service has elected to transition from the use of the original Delivery Sequence File (DSF) data to the new DPV product. Where the original DSF product is currently licensed, the Postal Service has substituted the data with the new DPV product along with additional data sets to fully replicate the current DSF² services. To help distinguish the services available under the original DSF License Agreement from the new services based upon the DPV product, the Postal Service is referring to the new service as Second Generation Delivery Sequence File – Licensed Service or by its service mark DSF².

Previously, mailers could process their address records using commercial address-matching software products that standardized the address records and assigned postal codes, including ZIP Codes, ZIP + 4 Codes and carrier route codes utilizing data provided by the Postal Service. However, these address-matching software products were unable to validate addresses at the specific delivery-point level; they could only confirm whether an address fell within the low-to-high address range encoded for the named street. By incorporating DPV into the matching process, mailers are able to determine whether the actual address exists, all the way down to the apartment or suite information. DPV allows mailers to validate that the address information they have is an address served by the Postal Service. Using DPV reduces undeliverable-as-addressed mail volume that results from inaccurate addresses, saving postage costs for mailers while reducing processing and delivery costs for the Postal Service.

The Postal Service is restricted under Title 39, United States Code, Section 412, from providing mailers with a complete listing of address information. Since the DSF² data is "clear-text" data, meaning that a user can physically read the data, e.g., "123 Main St and 125 Main St", etc., the data constitutes a list of addresses. To comply with the language in Section 412, the Postal Service has restricted the release of the DSF² data to a limited number of licensees. The Licensees to whom the Postal Service provides DSF² data are closely monitored to ensure they comply with the licensing requirements and are using the DSF² data in only the prescribed manner.

PARCEL AUTOMATION

Previous editions of the CAP have noted that processing parcels differs from letter and flat mail distribution in several aspects:

- The Postal Service relied primarily on internal methods to barcode parcels such as peelable labels and window service terminals rather than customers.
- The barcode format used was one of the following four symbologies: UCC/EAN Code 128, USS Code 128, USS Code Interleaved 2/5, or USS Code 39 which were very different from the POSTNET barcodes.
- Barcodes were used to sort parcels to the five-digit ZIP Code level only.

Automated parcel distribution related activities occur mainly at the Bulk Mail Centers (BMC) that have mechanized Parcel Sorting Machines, which process machinable Standard Class parcels and other compatible mail items. BMCs often must perform two mechanized distribution handlings (both a primary and secondary sort) to finalize machinable parcels. A Primary Parcel Sorting Machine can be used to perform the initial sort and to distribute parcels to other BMCs, high volume delivery offices and to Secondary Parcel Sorting Machines located within the same facility. High Speed Induction Units located on many of these machines are equipped with Parcel Bar Code Sorter scanners, printers and applicators and serve to automate many of the distribution-related functions. When pre-barcoded parcels arrive at a BMC, they are scanned and automatically bypass the manual keying process.

When non-barcoded parcels require processing, operators must key the five-digit destination ZIP Code in order to have label printers generate corresponding Interleaved 2-of-5 barcoded labels that are then automatically applied. Using information contained within this barcode, the parcel can be sorted to the appropriate discharge run-out or to another parcel sorter. Operators must also face parcels on the induction line to allow the barcode reader to sort the parcel to its next processing point.

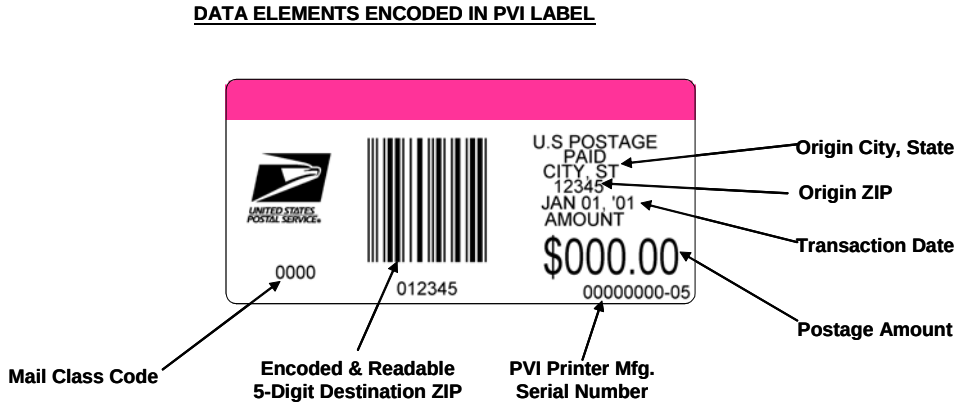
The Postal Service created the BMC Network to reduce operating costs through mechanization and centralized processing and improve the speed of delivery to a reasonable and predictable level. Parcel processing activities outside of the BMCs and their associated service facilities are to a large degree using manual distribution. This manual processing is performed at most post offices across the country and separates 5-digit volumes received from the BMC Network to the carrier route level. CAP Phase 2 supports examining whether a smaller footprint parcel sorter or automating parts of this manual process could increase operating efficiency. In the future, ZIP+4 barcoding may be required to reduce the overall costs associated with manual sorting in large volume carrier offices.

In order to automate parcel processing the Postal Service can:

- Expand parcel barcode generation points,
- Work with the industry to enhance parcel barcoding opportunities,
- Resolve parcel barcode application and readability constraints,
- Deploy the Automated Package Processing System,
- Automate incoming secondary parcel distribution, and
- Explore new automated parcel opportunities.

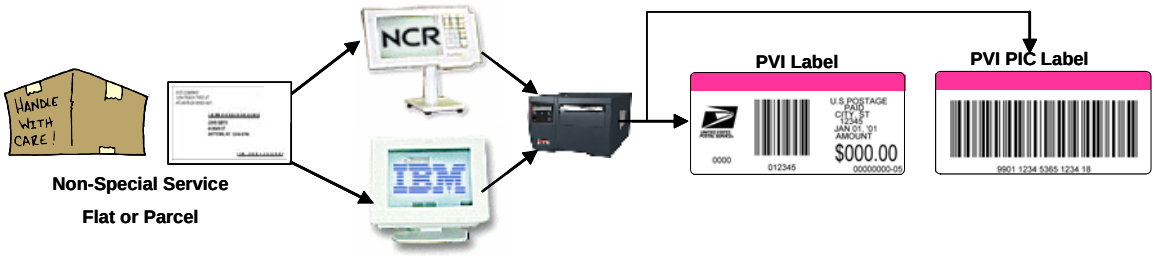
Expand Parcel Barcode Generation Points

As referenced in the introduction to this section, the Postal Service had decided to rely exclusively on internal processes to generate barcoded parcels, either by the Package Bar Code Sorting (PBCS) printers located at the BMCs or by the Postage Validation Imprint (PVI) meters located at most larger post offices. A sample PVI barcoded label with data element descriptions is provided below:



However, since most Parcel Post volume was generated by commercial parcel customers, that decision severely limited the potential growth of automated parcel volume. In order to increase barcoded parcel volumes, the Postal Service has since developed rate discounts to provide incentive to customers who chose to barcode parcels. The desired outcome is lower parcel processing costs resulting from a reduction in manual parcel keying.

As a parallel effort, the Postal Service evaluated what actions could be taken to ensure that both the PBCS and the PVI systems produced parcels that would support the CAP Phase 2 goals. The result was the decision to have the POS ONE terminals apply a second barcoded label, a Package Identification Code (PIC), to each parcel. POS ONE terminals are equipped with printers that can generate the unique PVI PIC labels. As each POS ONE retail transaction is completed, the PVI printer first generates a PVI postage label, and then generates a second PVI PIC tracking label if no other special service or unique label is attached to the mailpiece. The retail window clerk can sequentially apply both labels to the mailpiece as they print.



The Package Identification Code label is shown below along with a listing of data elements:

DATA ELEMENTS ENCODED IN CODE 128 BARCODE

1-2	Label Identification Code (1 Alpha + overhead)
3-6	Mail Class Code
7-12	USPS PVI Serial Number
13-15	Julian Date (DDD)
16-21	Julian Time (HH:MM:SS)
22	Mod 10 Check Digit

Note: The Code 128 barcode shown above is for illustration purposes only and may not reflect the actual result.

Work With the Industry to Enhance Parcel Barcoding

The Postal Service will continue to work closely with the mailing industry to increase the amount of barcoded parcel volume. Discounts are offered for parcels that bear a properly prepared UCC/EAN Code 128 barcode representing the correct ZIP Code information for the delivery address of the mailpiece.

Resolve Parcel Barcode Application and Readability Constraints

CAP Phase 2 recognizes that spraying readable barcodes directly onto parcels remains difficult because of the vast differences in package size and shape and the packaging material used. Certain packaging materials of a non-rigid design may not retain their original shape. During processing, these type packages often have corners that can be easily folded over and as a result cover or obscure either the address or barcode, or in many cases both. When this situation occurs it results in increased manual processing costs.

The Postal Service is working to resolve problems with customer applied barcodes that are not readable and fail to sort during processing. When these parcels reach the keying stations, operators have no recourse but to process them as if they were non-barcoded parcels, key the five-digit destination ZIP Code and then wait for the printer/applicators to produce the appropriate barcoded labels.

The Postal Service recognizes that these type of problems can be solved by working with the mailing industry to develop new packaging materials and by exploring additional barcode printing methods.

Deploy the Automated Package Processing System

For over a decade, the Small Parcel and Bundle Sorter (SPBS) has been the most efficient system for processing parcels. However, these machines are now reaching the end of their useful lives and cannot continue to meet the Postal Service's parcel processing requirements. Therefore, the Postal Service will be deploying the Automated Package Processing System (APPS) to replace many of the SPBS machines as the primary parcel processing system. The APPS machine can automate parcel processing by providing greater capacity through automatic induction, singulation and address recognition. A carousel-type cross belt sorter subsystem capable of processing 9,500 pieces per hour provides a sustained high-speed throughput.

The APPS machine incorporates much of the original Video Coding System (VCS) technology used to process flats on the AFSM 100. A state-of-the-art Optical Character Reader/Barcode Reader (OCR/BCR) together with the APPS Automatic Address Recognition Subsystem (AARS) lifts parcel images to determine the type of parcel and the correct destination ZIP Code. The parcel induction stations have been positioned to provide adequate AARS processing time should VCS processing be required while minimizing the need to re-circulate the parcel. If OCR/BCR processing is unsuccessful, the images are transmitted to a Remote Encoding Center where an operator will be prompted to key the 5-digit ZIP Code on the parcel. Certain APPS sites that have large volumes of destinating mail for firms within their service area have the option of establishing 9-digit holdouts on their APPS sortplans. REC operators will key to the depth of sort required for parcel processing.

Automate Incoming Secondary Parcel Distribution

The Postal Service can examine the feasibility of automating incoming secondary parcel distribution using the ZIP+4, the Delivery Point Sequence POSTNET, Code 128 or other type barcode. The barcode scanning could be performed using equipment similar to that used to scan letter and flat trays when building containers (shown below).

Keypad or similar device worn on either wrist.

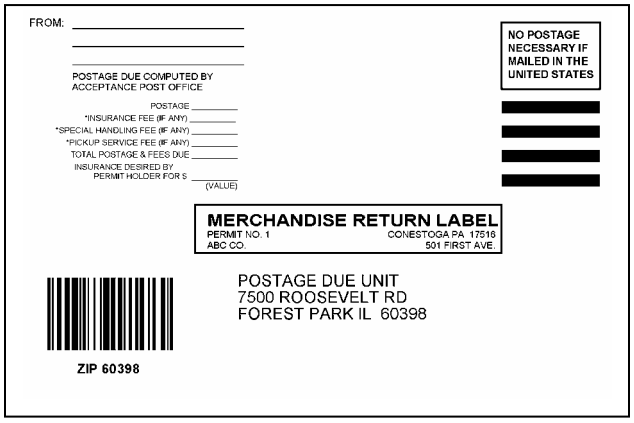
Finger scanner or similar device worn on either hand.

As the parcel's barcode is scanned, information could be displayed on a monitor and provide the carrier route number thereby eliminating the need for incoming secondary scheme knowledge. The scanned data could also be used to build delivery manifests showing the destination for each parcel by carrier route. Special service requests could also be detected and this information uploaded to a computerized system.

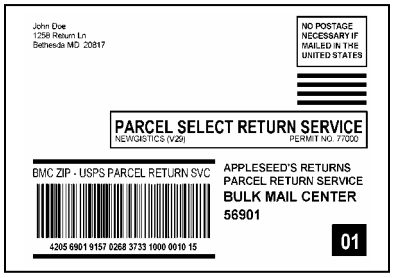
Explore New Parcel Related Opportunities

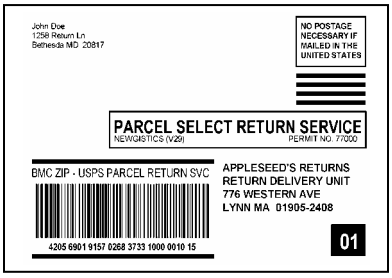
The Postal Service is aware that strategies to increase parcel volume depend on offering customers dependable and consistent service and has developed several innovative products. Three products that satisfy those requirements are Merchandise Return Service, Parcel Return Services and Click-N-Ship. These products offer customers the ability to mail items or return goods purchased to the sender without having to visit a retail unit, thereby increasing their ease of access to the Postal Service. Using preaddressed and barcoded labels enables parcel processing to be completed quickly and efficiently.

Customers appreciate the ease and convenience of receiving a pre-printed, pre-paid Merchandise Return Service (MRS) label as part of their order. Mailers can either include the return label with each customer's order, or send it to them via mail, email or fax. Or, mailers can offer the Postal Service's Electronic Merchandise Return option that permits customers to print return labels directly from a merchants website. All customers have to do is affix the MRS label and mail the returned parcel - it's that easy. Merchants control who gets a label, the level and cost of service, and where the returned parcels are delivered. This service can be used with First-Class Mail, Priority Mail and Package Services Parcels. Postage and fees are charged to a merchant's account and they only pay for packages actually returned. Customers simply affix the label to the package and drop it in a collection box, give it to a letter carrier or bring it to any post office. A sample label showing barcode placement (subject to DMM revisions) is provided below:



The Postal Service can also expand its automated parcel mail base by offering a second service such as Parcel Return Services (PRS). PRS was launched as a two-year pilot to offer merchants a cost-effective way to retrieve items their customers decide to return. The service provides added convenience to customers through a specially designed, prepaid return label that shippers can place on the original packages, mail to customers or make available to their customers to download via the Internet. Merchants, or their parcel consolidators, who have been approved as participants for the Parcel Return Services pilot, can choose to pick up returned merchandise at a Post Office delivery unit or bulk mail center that serves the original customer. As a result, the Postal Service reduces costs for processing and transporting parcels back to the mailer's warehouse. Participants benefit from lower rates that result from these savings to the Postal Service. Customers need only place the preprinted label on the package they wish to return, give it to a letter carrier, drop it in a collection box or bring it to the Post Office. Sample PRS labels (subject to DMM revisions) for either a BMC pickup or one made at a Retail Delivery Unit are provided below:





The Postal Service will use the Click-N-Ship program, a convenient online shipping solution, to increase the amount of barcoded parcels. Customers can print barcoded labels with or without postage by using a computer, printer and an Internet connection to print labels. Click-N-Ship will calculate rates, find ZIP Codes, standardize and save addresses and provide a personal online shipping history – all in one convenient location. And, when coupled with Carrier Pickup enhances convenience. A sample Click-N-Ship label is provided below:

BUNDLE AUTOMATION

In the Domestic Mail Manual, letter and flat bundles are referred to as “packages”. However, the mailing industry, as well as most postal employees, refers to this mail type as “bundles”. To avoid possible confusion, in this section the term bundles will be used to describe groups of “packaged” presorted letters and flats. While most presorted letter and flat mail is entered loose in trays, certain categories of mail (mainly non-machinable and carrier routed), because of mailing requirements, must be bundled. Efficient bundle processing will continue to depend on the success that the Postal Service has in gaining customer cooperation on the use of endorsement lines, barcoded bundle labels and other similar initiatives.

There are substantial differences in how bundles are processed relative to parcels. After entry, most presorted bundles require some type of additional handling prior to distribution. This extra work usually involves removing shrink wrap or bands from bundles and then combining volume from different mailings onto a container that can be sent to a mail sorting area. Carrier route bundles and parcels are not as dependent and in most cases are sent to the carrier station without additional rehandling.

Deploy the Automated Package Processing System

While numerous advances in automating mail processing have led to faster, more efficient methods of sorting individual letters and flats, automating the bundle processing itself has lagged behind. To correct this disparity, the Postal Service will deploy the Automated Package Processing System (APPS) to replace the Small Parcel and Bundle Sorter (SPBS) as the primary bundle processing system. The APPS can extend similar benefits to the automated-processing of small, lightweight parcels and to larger, thicker flat-size magazines and catalogs prepared in bundles (several mailpieces presorted and secured together into a single unit).

The APPS AARS described earlier provides an address recognition function capable of processing bundled mail images. The OCR output is character data that is sent to an image processing computer where the address information is matched to data extracted from the Postal Service’s National Directory Support System database and is used to identify ZIP Code information.

Automate Bundle Processing Using Optional Endorsement Lines

Over time, the Postal Service has relied on customers using pressure-sensitive adhesive labels to make bundle content identification easier and therefore manual sorting more proficient. Applying a pressure-sensitive label to the top mailpiece in a presort bundle of banded mailpieces was one method that mailers used to indicate the sortation level for certain letter-size mail, flat-size mail and small parcels that were required to be bundled before being placed into a tray or sack or placed onto a pallet.

However, the amount of information contained on these labels was limited to a single alpha or numeric character that did not provide any type of Content Identification Number or description. To overcome this limitation, the Postal Service advocates that presort mailers use a specific Optional Endorsement Line (OEL) instead of applying pressure-sensitive labels. The OEL is a more effective method of identifying the sortation level of a bundle of mail and can be used in lieu of facing slips. The OEL contains carrier route information, route number or numeric codes along with the bundle type and any required ZIP Code information. Asterisks or other distinctive nonalphabetic or nonnumeric characters are used to maintain label information orientation.

While the APPS machine cannot distinguish between classes of mail, the APPS can differentiate between bundled letters, bundled flats and parcels. Using the information contained in the OEL, along with each bundle's dimensional "picture" that was taken by the APPS camera bank, will allow the Postal Service to more efficiently process letter and flat bundles. With these features, the APPS can read and interpret information from properly prepared presorted bundles and automatically direct them to the appropriate sorting bins.

Automate Bundle Processing Using Pressure-Sensitive Barcoded Labels

CAP Phase 2 suggests that mailers who do not or cannot use OELs should instead use the pressure-sensitive barcoded labels to identify presort levels. The rectangular barcoded labels are wider than the older scalloped-shaped pressure-sensitive labels that are being replaced. A width-modulated barcode appears on the right side of each label as a unique indicator of the sortation level. Each barcoded label contains a human-readable single alpha or numeric character, corresponding to the sortation level of the bundle. The label design allows the APPS equipment to find and read the necessary information quickly. Since this label will be used for sorting, mailers should exercise care to ensure that it and the address block are not covered by bundle straps or selvage. Additional information on label placement is contained in the Domestic Mail Manual.

TRAY AND SACK AUTOMATION

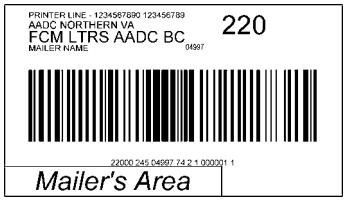
The processing of trays and sacks continues to be an area where the Postal Service can improve. Most of the costs associated with processing this type of mail can be grouped into either tray processing or tray dispatch-related categories. While trays can be processed by either a tray management or similar conveyor belt/roller systems which have automated character readers and/or barcode sorters, processing sacks presents a much more difficult challenge. Orienting the sack label to facilitate scanning remains a labor intensive operation. Eliminating sacks as an option and replacing them with trays seems to present a viable long-term solution. In the interim, however, in order to keep mail preparation and transportation costs under control, the Postal Service must continue to develop new and more innovative methods to efficiently sort an ever increasing number of trays. CAP Phase 2 recognizes the importance of using automation to reduce tray and sack handling and transportation costs. The material contained in this section covers the Postal Service's plans to automate the tray and sack handling processes.

Optimize Tray and Sack Label Information

The Postal Service can use the Unit Load Identification initiative to replace the current tray and sack labels with an Enhanced Distribution Label (EDL). The EDL can uniquely identify each tray or sack and supports the Transportation Visibility Strategy that is described in the Automating Mail Transportation section of this document. The common UCC/EAN Code 128 barcode format can be used to maintain conformity within operations and supports the Postal Service's Intelligent Mail program. An example of an existing tray label format is provided below. The information contained in the barcode is limited because of the format type and while the existing ten-digit tray label does include a destination ZIP Code, a contents identifier number, some service-related information and a mail processing code, this is not sufficient to track the individual tray or what is inside a larger transport container and does not allow for any type of tray or sack tracking software to be used.

Existing Label

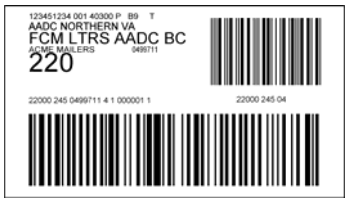
An example of an Enhanced Distribution Label (EDL) is provided below. The most important difference between the existing and the EDL labels is the barcode format. Using the barcode printed on the EDL will provide the ability to track the tray or sack as it leaves an origin point and when it arrives at a destination.



Proposed EDL Label

Information in the EDL that was created for a tray or sack (handling units) can also be used to link individual handling units to specific containers and facilitate container tracking throughout the entire network.

However, the Postal Service realizes that switching from the existing tray label to the EDL label cannot be done overnight. In reality, the projected transition period could be two to five years. One major problem that must be solved is that a large number of the Postal Service's tray processing equipment hardware and software would need to be modified to read the UCC/EAN Code 128 barcode format. Since these modifications cannot be made quickly, an interim tray and sack label could be used to bridge the gap. This label format would be made available to customers through the current label ordering process.



Proposed Interim Label

As of April 2, 2004, there were no plans to incorporate the information contained on the Distribution and Routing (D&R) tag into the EDL format. However, the Postal Service could still examine this and other possibilities to increase tray labeling information.

Automate Tray Processing

The Postal Service has allocated capital funds to support tray processing projects that improve operational efficiency and address service-related issues. A list of prequalified design services companies and fabrication and installation contractors has been established to perform the work under the direction of the Postal Service's engineering department.

Low Cost Tray Sorters that support material handling operations have been deployed to plants, Bulk Mail Centers and Air Mail Facilities. These machines can be used for inbound tray sorting and outbound dispatch operations and allow Operations to reduce the allied labor content of tray distribution.

Requirements for an Automatic Container Unloading Device to remove and process trays can be developed and provided to material handling vendors. The initial requirements would be for a machine that would unload sleeved and strapped trays/tubs from rolling stock. Proof of Concept work with several vendors is in progress as of the CAP Phase 2 publication date.

An opportunity also exists to deploy the Integrated Dispatch and Receipt (IDR) program. The IDR program is an integrated solution incorporating the newly developed Automatic Tray Unsleever, the Automatic Flats Unlidder and the unbander functions with existing dispatch automation equipment. Solutions are being developed that will allow a continuous flow of trays and tubs through the receipt and dispatch functions. This equipment will be integrated with previously installed tray transport and sortation systems for mail processing operations downstream.

Automate Tray Dispatch

The Postal Service has developed several programs to automate the dispatching of trayed letter and flat mail. These include the Automated Airline Assignment system, a manual Scan-Where-You-Band system and an Automatic Tray Sleever. These components are often combined into an Automated Seamless Dispatch (ASD) system. More that 140 of these ASD systems are in operation in postal facilities nationwide.

The Automated Airline Assignment (AAA) can be deployed into larger postal facilities to automatically process letter trays and flats tubs. AAA assigns the mail pieces to airlines using Dispatch & Routing (D&R) labels and air contract transportation tags and to surface routings using D&R and Highway Contract Route (HCR) tags. AAA integrates into a facility's tray transport system and interfaces with other systems that are designed to determine efficient airline and truck dispatch routings.

The Semi-Automated Scan-Where-You-Band (SASWYB) system provides facilities that do not have Automated Airline Assignment equipment with a way to automate most of the air/surface assignments for letter trays, flat tubs, sacks, pouches and parcels. The SASWYB system scans the distribution label, weighs the unit load and prints a D&R label. The label is manually applied by the operator and the SASWYB system passes the mail piece to the output stream.

The process of sleeving letter trays can become more efficient with deployment of the Automatic Tray Sleevers that insert letter trays into sleeves at a rate between 600 and 1020 trays per hour. These machines apply the proper sleeve type to a mixed stream of letter trays. The standard sleever configuration is a double-sided unit, which can apply two different sleeve types at the same time from two pre-loaded sleeve cartridges.

AUTOMATING MAIL TRANSPORTATION

The USPS transportation network continues to evolve in order to provide the maximum amount of operating flexibility at the lowest possible combined cost. Forecasts of population shifts along with changes in mail processing technologies require the Postal Service to examine new and more innovative methods to automate its mail transportation network. CAP Phase 2 supports this effort by insuring that the Postal Service's letter, flat, bundle and package programs do not conflict with this process. In order to meet the many challenges of transporting large volumes of mail across vast distances, in addition to satisfying local logistical requirements, the Postal Service has developed the Transportation Visibility Strategy.

The goal of the Transportation Visibility Strategy is to collect the end-to-end data required to support planning, management, and optimization of our transportation network using scanning technology. Integrating visibility information into the management of operations and network planning, drives business value by having the right information available to make the right decisions at the right time.

The Transportation Visibility Strategy:

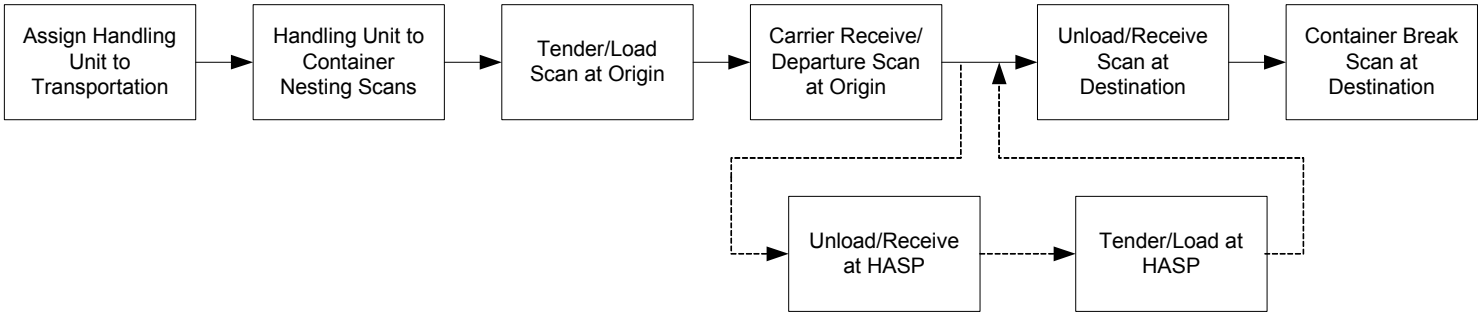
- Provides objective transportation service measurement.
- Enables performance-based payment of transportation suppliers.
- Supports fact-based dispute analysis.
- Enables proactive process control via scanner feedback.
- Identifies performance improvement opportunities via analysis of carrier performance.
- Uses actual volume data for use in network planning and optimization.
- Supports security concerns by validating and confirming loaded vs. assigned mail.
- Enhances vendor communication via electronic data information exchange.

Develop a Data Collection System to Enhance Visibility

The Surface Air Support System (SASS) system will collect and report information on the movement of each sack, tray, container, and trailer within the Postal Service logistical network. Since deployment in 2001, SASS has been able to integrate scan data received from transportation suppliers with existing transportation systems and ensure service performance accountability and accurate payment verification. Using SASS, the Postal Service was able to create a central visibility database to receive assignment data from the Surface Air Management System (SAMS), assignments from major customers from PostalOne!, and scan data from Postal Service facilities and transportation suppliers. In 2002, the Postal Service began to organize this data into the Network Operations Management Data Mart to support its reporting processes. SASS gives the Postal Service better data regarding service performance for transportation suppliers, as well as information regarding mail transported on a specific flight, truck, or train.

Expand Volume Scanning to All Transportation Modes

Mail is assigned to transportation based on mail class, destination, and best value. While transportation modes differ in the types of scans performed, they all follow the general principles shown in the flow diagram below.



Air Transportation

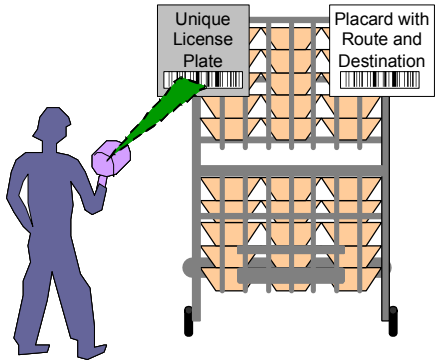
Currently, visibility information is available for the shared air, commercial air, and Amtrak networks through the scanning of the Distribution and Routing (D&R) tag. The Surface Air Management System (SAMS) replaced the Air Contract Data Collection System in 2001 as the mail assignment system. SAMS provides the ability to assign mail to indexed surface and air routes, to allocate capacity by mail classes and to track manifests online. SAMS also provides an individual routing assignment, with unique serial number identification, for each item printed on a self-adhesive D&R tag, which is then applied to the item being dispatched. The scanning processes can vary by air transportation type.

Mail moving on shared air is handed-off to postal contractors and/or postal personnel at mail processing and mail transfer sites. Scans are performed to associate handling unit D&R tags, e.g. trays, sacks, with unit load device D&R tags on mail transport equipment (air containers). The scan data indicating nesting mail into unit load devices is used to measure how efficiently the USPS uses the cubic cargo capacity. Scans provided by the shared air provider, provide insight into service performance of the carriers.

Mail assigned to commercial air and Amtrak is scanned by the carriers/provider and sent via Electronic Data Interchange (EDI). This scan data indicates when the carrier took possession, when the carrier loaded the mail onto the transportation, and when the mail is delivered back to USPS. The CAIR-03 contract requires the commercial air carriers to provide all required scans for payment. The scan data also allows USPS to measure the service performance of the transportation supplier, and use this data as one factor to determine ‘best value’ supplier and thus allocate mail volume accordingly.

Surface Transportation

Visibility to surface mail is accomplished through the scanning of the Enhanced Distribution Label (EDL), described in Optimize Tray and Sack Label Information. Surface visibility pilot tests have been conducted to track a handling unit from the time it reaches the dispatch area through the plant and onto and off of trailers. The surface scanning process involves scanning handling units as they are placed in containers for dispatch. Each container has a "license plate" barcode which is associated with the 24-digit barcode on each Enhanced Distribution Label to capture unit nesting. Handheld and fixed mount scanners are used to collect the data.



Each trailer is also identified with a unique license plate barcode and an employee scans the trailer barcode and the barcode on the containers as they are loaded to nest the container to the trailer. Scan devices are used to alert employees if they attempt to load a handling unit into an incorrect container or container into a wrong trailer. The barcode on the trailer seal is also scanned prior to departure.

When the trailers arrive at their destination, the trailer barcode is scanned and the arrival information is uploaded into a data management system, joined with the departure data, and used as a comparison to determine transportation performance levels. Additionally, a dock management device provides expeditors with near real time data to understand which trucks are about to leave, what mail is already loaded, and what mail is ready for dispatch but has yet to be loaded. The origin data collected for each trip is sent as an electronic manifest to the destinating facility.

Develop Volume Forecasting Tools

The Postal Service can refine its ability to more accurately forecast surface volume moving between specific origins and destinations by mail class. This will enable the Postal Service to purchase only the capacity that is needed. Developing these tools will also enable the Postal Service to better assess workload associated with loading and unloading containers and trailers.

Utilize the Transportation Optimization and Planning Tool

The Postal Service will optimize the process used to forecast transportation requirements with the Transportation Optimization Planning and Scheduling (TOPS) tool. TOPS is currently being developed as a transportation management system that will enable the USPS to actively plan and manage its transportation processes over time. The goal of TOPS is to: reduce the total cost of transportation operations; improve customer service, and centralize the planning process.

AUTOMATING MAIL DELIVERY

The Postal Service has made a significant investment in automation to reduce the costs associated with the distribution of letter and flat mail. Automating mail delivery, however, has remained beyond reach, mainly because of the difficulties associated with developing a prototype system that could process the wide range of flat mail characteristics. As a result, most of automation's benefits have been applied to reducing distribution rather than delivery costs. Using automation to sequence letter mail in delivery-ready order remains the most efficient method of reducing carrier in-office time. Flats distribution, however, reaches only to the carrier route level which means that carriers must spend a majority of their in-office time casing non-sequenced volume in addition to their presorted carrier routed volumes. Most parcel distribution continues to be performed at the delivery unit with carriers having to route their parcels in delivery order prior to leaving their office.

The Postal Service must find new and innovative methods to apply the benefits of a fully-automated mailstream to its delivery operation. The first step is to reduce the amount of letter and flat mail that a carrier must case. The main benefit of reducing carrier cased volume is that more delivery points and territory can be added to each route. This will enable the Postal Service to cover the same number of delivery points with fewer assignments or absorb increases in delivery points without new assignments. A secondary benefit is that when the carrier starts his street duties earlier, it will often result in an earlier return to the office. Mail collected along the route can then be brought back to the office earlier and sent to the processing center advancing cancellation, sortation and dispatch.

Another benefit of reducing carrier cased volume is reduced overtime as it will minimize the number of carriers who leave the office late or return after their normal time. Less carrier cased volume also means that a smaller amount of workroom floor area is needed for each carrier work station for casing activities. The carrier case now in use could be replaced by "Low Volume" cases thereby reducing the amount of equipment in the delivery operation while freeing up valuable office floor space.

The Postal Service must find additional ways to make delivering mail more efficient. CAP Phase 2 supports development of a system that merges automated distribution with delivery methods improvements to minimize in-office time and maximize street operational efficiency. Reducing carrier cased letter and flat volumes, improving the delivery efficiency for flats, increasing parcel delivery efficiency and deploying a fully automated letter and flat casing system can help to make developing this system possible.

Reduce Carrier Cased Letter Volume

Success in generating and processing additional automated letters remains a key activity of CAP Phase 2. Periodic advances in letter mail image processing technology should result in increased sequenced volumes further reducing carrier in-office time. Delivery managers can utilize the Delivery Operations Information System to provide the carrier cased volumes (a reciprocal indicator for DPS volumes). Gradually reducing the amount of letter mail that a carrier must case will enable the Postal Service to increase the time that a carrier spends on the street performing delivery functions.

Reduce Carrier Cased Flat Volume

Unlike letters, the impact that flats automation on delivery has not progressed as rapidly. As a result, the benefits made possible by automation could not be applied toward reducing the time spent casing flats. The Postal Service is, however, committed to achieving breakthrough performance in the handling of flats just as it did for letters. Deploying the Flat Identification Code Sort program should increase automated volumes and expand the opportunity to create additional directs (holdouts) for high flat-volume carrier delivery points. Expanding the Postal Automated Redirection System to process flats should reduce the amount of undeliverable flat volume that a carrier must process.

Improve the Delivery Efficiency for Flats

The Postal Service will continue to work closely with the mailing industry on several initiatives that can increase the delivery efficiency for flats. One of these initiatives focuses on using an 11-digit POSTNET barcode on flat-sized mailings rather than a 9-digit barcode. This can help improve addressing file quality and eliminate the costs associated with maintaining separate databases for letter and flat mailings.

Another joint USPS-Industry effort focuses on encouraging the use of the *Guidelines for Optimizing Readability of Flat-Size Mail*. This document provides information about locating addresses to increase both in-office and street productivity. Proper location of the address is beneficial to both automated flat sorting equipment and to the letter carrier actually delivering the mailpiece. The guidelines also contain information about inverting the delivery address on flats that have a bound edge. In the past, mailers have been asked to modify their addressing processes to increase automated machine readability. Inverting the delivery address presents the industry with an opportunity to directly help carriers reduce their street time. For example, the satchel that a carrier uses holds the sequenced flat mail arranged so that the piece on top is for the next delivery. As the carrier approaches the next delivery, a quick glance into the satchel reveals if there is a flat for that address. In some cases, as when the label is “upside down”, the carrier may have to partially remove the flat from the satchel in order to read the address. However, if the label is inverted, the carrier could have quickly scanned the delivery address without removing the flat from the satchel. Even though partially removing a flat to read the delivery address seems like a small action, this action is repeated many times during the day. Being able to glance at the top flat without removing it should save time and speed delivery.

Increase Parcel Delivery Efficiency

Automating many of the functions associated with parcel delivery could present an opportunity to improve delivery efficiency. Many of the steps that are required to deliver parcels are routine in nature. The actions associated with removing parcels from distribution hampers, routing parcels in delivery order, performing delivery, leaving notice of attempted delivery and shelving left notice parcels, while labor intensive, do not readily lend themselves to an automated solution. An increase in automated letter and flat volumes coupled with a resulting shift of office time to street time may present an opportunity to increase the efficiency of parcel delivery. The Postal Service can begin to study if key parcel delivery activities such as completing a delivery receipt or listing parcel addresses on a manifest can be automated.

AUTOMATING MAIL SCANNING AND TRACKING

Looking back in time, the revolution in automated processing started with a simple barcode that was printed on letter mail. This POSTNET barcode, a series of tall and short bars, was first used to represent a 5-digit ZIP Code, then a 9-digit ZIP+4. The Postal Service used these barcodes to process letter mail very quickly and accurately. This success led to the development of a delivery-point barcode, which is an 11-digit code corresponding to a specific delivery address. Rather quickly, the use of barcodes expanded from letters to flat mail and parcels. The Postal Service now uses barcodes for many things other than sorting mail. For example, each time a window clerk sells a booklet of stamps, the purchase is scanned and the retail unit's stamp inventory is updated.

Mailers can take advantage of barcodes to track service performance for their drop shipments. The Computerized Online Notification for Inbound Reply Mail (Confirm) is one example. Confirm uses barcodes to track mail volumes as they are processed and is one of the first applications where the Postal Service automated performance tracking. Developed in 1995, Confirm was designed to provide early notification about pieces of return mail in transit or pieces nearing delivery. In October 2001, the Postal Service implemented the enhanced Confirm program that provided information to mailers about the date and time their shipment entered into the processing system. Any drop shipment that contained a Confirm mailing was accompanied by a barcoded PS Form 8125, (Plant-Verified Drop Shipment Verification and Clearance) and an electronic data file that had information about their mailing. As the mailing progressed through the system, scans took place at various points. This information was transmitted electronically to the customer, either through the Confirm website or by direct data interchange.

The Signature Capture and Electronic Record Management program provides the Postal Service with the infrastructure to electronically store delivery records and allow easy access to customers and Postal Service employees. All domestically delivered Postal Service delivery records are maintained electronically in a national database, the Product Tracking System (PTS).

The PTS database also stores electronic information for Delivery Confirmation items. Delivery Confirmation service captures information about a mailpiece such as whether delivery was attempted, confirmation that the piece was delivered (if applicable), notification that the mail was forwarded to another address or notification that the mail piece was undeliverable. A postal employee scans or enters the barcode(s) on the accountable mailpiece using a handheld or window service scanner and has the customer sign and print his or her name in the delivery section on the barcoded side of PS Form 3849. After proper clearance procedures, all signed PS Forms 3849 are routed to the Computerized Forwarding System site for optical scanning. The optical scanner creates an electronic image of the recipient's signature, name and address and transmits it to the PTS database. The barcode on PS Form 3849 is used to link the signature to the barcode on the mailpiece label.

Priority Mail drop shipments are used by customers to speed the delivery of sacks containing any class of mail between domestic postal facilities. Delivery Confirmation with Priority Mail drop shipment provides customers with a low cost, easy-to-access delivery information system which indicates the date when sacks arrive at their destination. Following applicable Domestic Mail Manual standards for the specific class of mail, customers must presort the enclosed mailing(s) before insertion into a Priority Mail sack. Priority Mail drop shipments must be presented to an acceptance unit at the origin office for verification, acceptance and postage payment.

In order to fully support future corporate-wide activities, the Postal Service's infrastructure must be capable of reading, decoding, storing and disseminating the information encoded in all barcodes in near real time. As the mail moves from mail preparation at the mailer's facility to delivery to the addressee, existing processing and delivery equipment must be upgraded to permit barcode reading and decoding. CAP Phase 2 supports the Postal Service's goal of enhancing services to customers by developing new products that incorporate barcode usage and related technologies. Click-N-Ship™ is one such service that allows customers to print labels with computerized postage. These labels incorporate a Delivery Confirmation barcode. The Standard Shipping Label includes an integral Retail Package Identification Code and combines automation routing, domestic special service codes and tracking information into a single, universally-defined barcode.

The Postal Service will develop a unified internal plan for Intelligent Mail and Address Quality that would support the service's OneCode™ Vision. This plan focuses on uniquely identifying all mail (including aggregates like trays, bundles and pallets) with a single code for each mail type and developing the infrastructure to support that code. Another important aspect of the OneCode™ Vision is improving address quality – by simplifying procedures and forms, working out alternative name recognition and increasing acceptance of Internet change of address.

AUTOMATION PLAN SUPPORT

The Postal Service has taken steps to insure that the initiatives and strategies described in this document succeed. An automation plan support structure has been created that focuses on the following points:

- Capture projected automation savings as part of the budget process.
- Automate retail access.
- Manage the complement across functional and area boundaries.
- Manage the data to insure comprehensive information is available.
- Standardize automation resource scheduling to insure operational uniformity.
- Manage the supply base to insure an adequate pool of capable suppliers is available to provide required technology solutions.

Capture Automation Savings

Previous editions of the Corporate Automation Plan referenced how the Postal Service planned to reduce workhour usage by extending its letter automation program to flats and parcels. The document also stated that the Postal Service would continue to reap the benefits of the costs avoided because of earlier automation investments. These investments have indeed resulted in total work force reductions and successfully slowed workhour growth to ensure that the benefits of automation are fully realized. One step in the process of realizing automation savings was to develop complement plans in advance of operational changes. Area and performance cluster managers worked as a team to agree on growth projections and work hour planning assumptions to support equipment deployment and the technological impacts.

Since it presented the largest potential benefit in terms of work year savings, letter mail automation was the focus of earlier planning efforts. Deployment of the Flat Sorting Machines (FSM 881 and the FSM 1000) shifted this focus to flats; however, the savings opportunity depended largely on customer barcoding efforts. Savings related to bundle processing were based on non-automated keying on the Small Parcel and Bundle Sorter (SPBS) machine compared to manual sortation. Parcel automation savings were predicated on increased productivity related to barcoded label application using keyed input and mechanized equipment at the Bulk Mail Centers.

Looking toward the future, the Postal Service realizes that capturing additional savings from letter mail automation can depend to a great extent on advances in letter image recognition and processing technology. These technological advances should present an opportunity to further resize the Remote Encoding Center operating environment. Flat mail automation offers a far greater possibility for savings, due in large part to the AFSM 100 deployments, induction and processing system retrofits on the FSM 1000 and development of the Flat Identification Code Sort (FICS) program. Deployment of the Automated Package Processing System (APPS) should increase bundle and parcel processing productivity and present opportunities for savings to reduce the Postal Service's work year requirements.

Capturing these savings can be accomplished using the workhour budget allocation process that projects workhour savings resulting from productivity increases and operational improvements and in effect removes them at the beginning of the budget cycle.

Automating Retail Access

The Postal Service recognizes that automating retail access can increase the value of its products and services. Offering alternatives to full service retail, such as self-service kiosks, can provide customers with access similar to that of an automated teller machine and has become an integral part of the Postal Service's retail strategy. The Automated Postal Centers (APCs) are a further refinement of this strategy and provide quick, easy, and convenient access to a majority of products and services that are available at retail counters. The APCs speed service during peak periods and expand access for customers who find retail window hours inconvenient. Currently, the APCs can accommodate 80 percent of the transaction types normally handled at the retail window, including the following:

- Weigh, rate, and purchase postage for letters, flats, and parcels;
- Dispense postage in any denomination for Express, Priority, First Class and Parcel Post Mail;
- Purchase ATM-style First-Class stamp booklets;
- Purchase postage for international letters;
- Add delivery confirmation services to a mail piece;
- Provide mailing and postal products/services information, including ZIP Code lookup;
- Generate a receipt for payment.

Automated Postal Centers accept debit and credit cards as payment, eliminating the difficulties associated with many types of vending equipment. The APCs use touch screens and numeric keypads that allow customers to select products and services and receive postal information. There are headphone jacks that allow the visually impaired to hear product and service options, and there are EZ Access buttons to facilitate the transactions. Transaction times are about the same as at retail windows, but unlike other kiosks or vending machines that require payment at the conclusion of each transaction, the APC is set up with "shopping cart" technology that allows individuals to pay for everything at one time with a credit card during "checkout".

The APCs allow the Postal Service to leverage its technology by extending customer access to postal products and services when and where customers want them. By expanding access to 24 hours a day, 7 days a week in many locations, the Postal Service is making it easier for customers to do business at their convenience. Deploying the APCs will also free retail associates to focus on assisting customers who have more complex transactions that require face-to-face interaction. Once nationwide deployment is completed, more than 2,500 APCs will be available to serve our retail customers.

The APC is poised to address two key retail elements of the USPS Transformation Plan by creating a new, low-cost alternative access to the postal counter and by moving simple transactions away from the counter.

Manage the Complement

The Postal Service remains firmly committed to the principle that workforce realignment is sometimes necessary to ensure that associated program savings are captured and that the full benefits from each change are applied at the proper time. The process used to manage change and enable managers to build and maintain a flexible workforce is referred to as complement management. Another way to think of complement management is the mechanism that enables the Postal Service to have "the right people in the right place at the right time working the right mail".

Standardizing the complement management process itself presents a challenge given the complexity in terms of employees, number of facilities, types of operations, etc. Process standardization is the first step taken to develop an effective complement plan. Once this process has been completed, steps can then be taken to develop methods to manage the resulting plan as operational changes occur. Standardization can best be accomplished by having processes in place that:

- Provide an effective and efficient organization structure.
- Are responsive and support the core mission.
- Maintain flexibility and the ability to accommodate changes.

The Postal Service can manage the complement planning process by using

- Standardized complement management procedures (SCMP).
- Data-driven assessment tools.
- Cost-effective repositioning of employees.

Each performance cluster has formed complement management committees that will use the SCMP assessment tools to determine the correct number of employee categories needed to run an efficient and flexible organizational unit with the allotted budget. The process requires each committee to count the actual complement and compare the actual to the planned number of employees by operational unit. This counting helps to identify any anomalies within the Human Resources Information System and provides documentation on authorized positions. Once the complement management structure is in place and the complement data validated, the process of making and implementing decisions to equalize the actual and the planned complement begins. This last step can be the most difficult since the outcome can often result in employees being identified as excess to the needs of operations.

The Postal Service has also developed a number of processes and refined tools to assist the field in repositioning the workforce. Functional managers can use the data-driven assessment tools that have evolved out of the BPI and performance achievement initiatives to determine cost-efficient ways to achieve our goals using existing employees. The problem is not developing tools to assist the field in complement planning efforts but implementing the resulting complement plans using the parameters that are developed.

Two views of the planning process are needed to ensure effectiveness. The first is from the "top down" and involves applying macro-level tools such as the Business Management Guide (BMG). The BMG process creates a budget-supported complement by location, craft, hours and dollars and is the first step in complement planning. The BMG is also used throughout the process to monitor current performance, provide a reference tool for trend analysis and make end-of-year projections.

The output from BMG is converted to authorized staffing levels by feeding its operational unit input into the Complement Information System (COINS). The cluster complement committees can use COINS, which tracks on-rolls complement against authorized complement levels, to adjust the complement to meet the plan.

Job Information Monitoring System (JIMS) is a Microsoft Access file, which is used to monitor and determine when to make adjustments to work assignments in plants, post offices and larger associate offices. Web-based JIMS was deployed in February 2003. WebCOINS combines the lanCOINS and the output from the JIMS into a centralized application at the Area and Cluster level.

Performance cluster plans are then moved to the Field Complement Plan (FCP) where they are combined to form Area and National complement plans. Here, field users are able to input local plans that roll up into the five-year Postal Service-wide complement plan.

As a parallel process to the "top down" view, there will be a second or "bottom up" view being performed. This view can incorporate the results of the local efforts to improve operations such as functional reviews, BPI audit results and the Labor Scheduler.

The Labor Scheduler is an optimization system that forecasts the workforce of individual plants based on workload, local conditions and equipment while ensuring sufficient staff is available to meet service commitments. At a functional level, the Labor Scheduler incorporates nationally established administrative policies and negotiated labor contract procedures when modeling bid assignments. While the program does not establish schedules for PTFs or Casuals, it does identify the demand for these types of employees. The program has three main components:

- A Right Week Selector that uses total piece handlings to identify weekly demand;
- A Bid Job Planner that optimizes bid jobs for a core workforce; and
- A Yearly Planner that optimizes the "flexible" workforce to handle the demand peaks of the year.

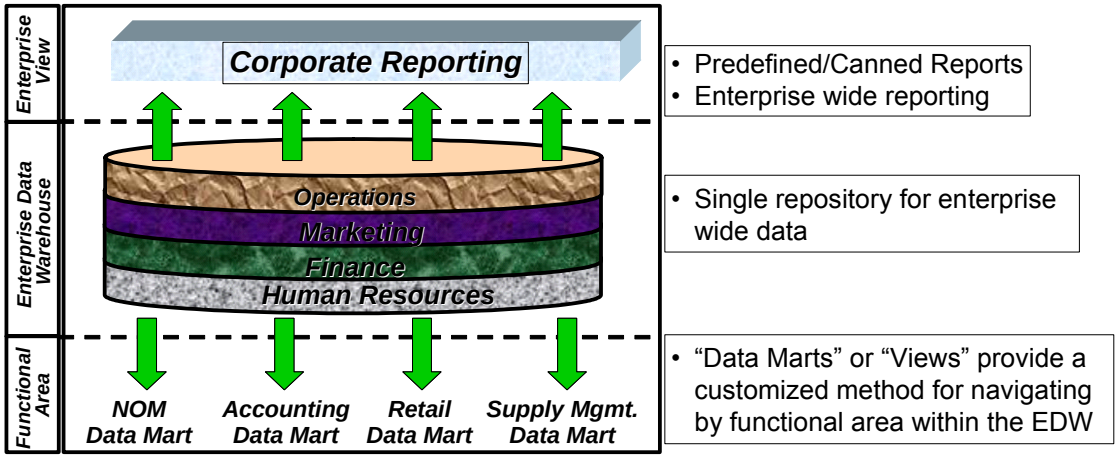
Just having the tools to manage the complement is not enough. Operational managers must carefully evaluate the impact of the various programs and equipment deployments (including retrofits) that are planned for both the near and longer term. After this evaluation has been performed, local management must capture the associated savings from realignment and minimize the impact to the workforce.

Manage the Data

Each day, the Postal Service generates a substantial amount of raw data relating to operating performance and product processing. This data was once stored in older systems (called legacy systems) that were by nature stove-piped, or self-contained, and therefore inaccessible for use with other data or by other business organizations. Because of overlapping needs, various systems often contained the same information, which may or may not have produced exactly the same reporting results from system to system. Not only is this system very inefficient, but it is expensive to maintain requiring extensive resources to support. In order to make the data more accessible, the Postal Service decided to use a data warehousing concept to centralize its data storage and collection.

Beginning in 2003, several organizations within the Postal Service began using the data warehouse for reporting and analysis. In line with its business plan, additional data sources are added one at a time to ensure accurate and consistent data relationships and to prevent entry of duplicate or unnecessary data. Due to the many diverse groups within the Postal Service, it is expected to take several years to add all desired data to the data warehouse. But when completed, the data warehouse can provide a single source of accurate data across organizations to a wide variety of users. The data can be organized in a variety of ways both within and across functions for deeper analysis, which can lead to additional revenue, reduced costs and improved business practices.

The data warehouse is structured to support reporting across the organization.



Many pre-defined reports are and can be available to provide access to the data stored in the data warehouse. The primary reporting tool is web-based, which offers greater functionality than was possible using the original system and reporting tools. Training will be provided to users in order to maintain business continuity. Following completion of this training, users will be able to request data and access accurate, reliable and timely information for reporting and decision-making purposes.

Manage the Supply Base

The Postal Service will focus its activities on insuring that an adequate pool of capable suppliers is available to deliver technology solutions to fulfill CAP Phase 2. Tools such as the Supply Chain Rating System will be used to measure supplier performance and provide valuable information to purchase teams on suppliers' past performance. The Postal Service will further develop partnerships with proven technology providers of our installed base of capital equipment, and seek new suppliers for innovations to improve our operational efficiencies.

LONGER-TERM AUTOMATION PLANS

Deploy the Universal Coding System

The Postal Service has several independent systems that are capable of lifting and processing either letter, flat or parcel mailpiece images. Letter and flat images that are not resolved by each machine's optical character reader are sent to a second offline processing system. Letter images are processed by the Remote Computer Reader and flats images go to a Secondary Address Reader (or multiple readers). Any images not resolved by the offline readers are presented to Data Conversion Operators at a Remote Encoding Center (REC) for manual data entry and final address resolution. At the REC, separate control systems and coding desks process each type of image.

The equipment used for letter image processing is nearing the end of its useful lifespan. The equipment used to process flats images was deployed as part of the AFSM 100 program and therefore has a longer life expectancy. The Postal Service is exploring the possibility of developing a Universal Coding System (UCS) capable of processing all image types. The UCS would merge all of the various image processing systems into a single state-of-the-art image management system. All hardware performing like functions would be modular and interchangeable, but the implementation effort might require modification to existing mail processing equipment and new hardware or application software.

The UCS would allow the REC supervisors to manage all image processing through one system, with automated workload balancing and would provide the REC and processing center personnel with the capability to coordinate and manage all UCS-related operational and maintenance activities. This feature should minimize the need for manual coordination of UCS operations between mail processing Plants and the RECs. All types of image lift platforms, including those scheduled to be modified and those undergoing research and development, would be able to provide image data (unresolved or partially resolved images) using various software interfaces.

Automate Letter and Flat Casing

While the Postal Service has made a significant investment in automation to reduce the costs associated with the distribution of letter and flat mail, reducing costs of delivery—the direct link between the Postal Service and its customers—has remained beyond reach.

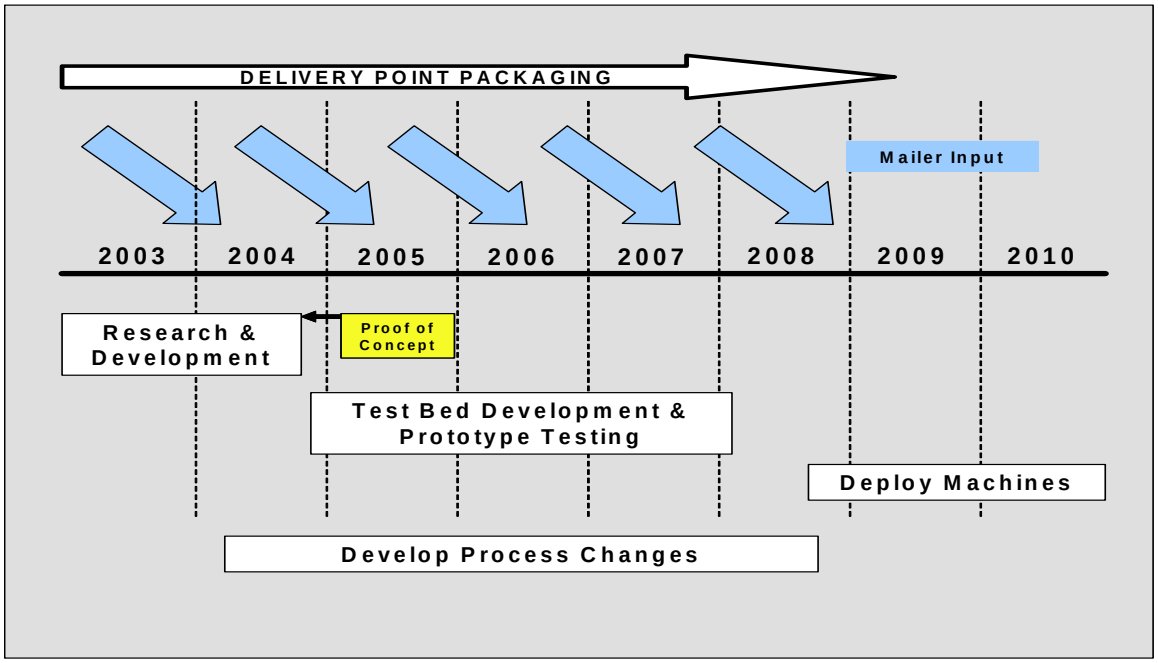
Using automation to sequence letter mail in delivery-ready order remains the most efficient method of reducing the time carriers spend in the office sorting mail before they begin their delivery rounds. Improvements in distribution for other mail—flats, parcels, Periodicals—reaches only to the carrier route level, which means carriers spend their time in the office sorting non-sequenced mail volume in addition to the mail that arrives presorted to their carrier route. Most flats and parcels continue to be sorted by carriers in delivery order prior to leaving the office.

Delivery Point Packaging

The Postal Service's ultimate vision for delivery is a seamless operation that produces one package of mixed letters and flats for each delivery point, commonly referred to as Delivery Point Packaging, or DPP. That vision is based on developing high-speed mail sorting and packaging equipment that would efficiently sort and merge the letter and flat mail streams into delivery sequence for the letter carrier. The equipment would be optimally located so that the operational savings could be maximized. Ideally, all presorted mail that would be appropriately sequenced on this system would have an 11-digit POSTNET barcode so that the equipment output would result in accurate address sequencing that would facilitate efficient delivery. DPP would replace the labor-intensive carrier casing and pull downs inherent in the existing manual system. The new carrier/delivery unit environment would not involve delivery unit casing, pull down or carrier casing equipment. The packaged volume would then be made available at a central carrier point or location, which may or may not be a traditional delivery unit.

DPP technology presents the best opportunity to use innovation to improve operating performance. Eliminating the need to "finger the mail" to find breaks between delivery addresses, reducing loading times, improving mail orientation in the delivery vehicle, and eliminating office time would all decrease delivery costs. The ergonomic impact of DPP on street delivery for letter carriers also provides significant improvements over current delivery methods. In addition to saving work hours within the carrier function, the resulting packaged volume would enable the Postal Service to explore new transportation alternatives for letter carrier delivery.

Delivery Point Packaging Timeline

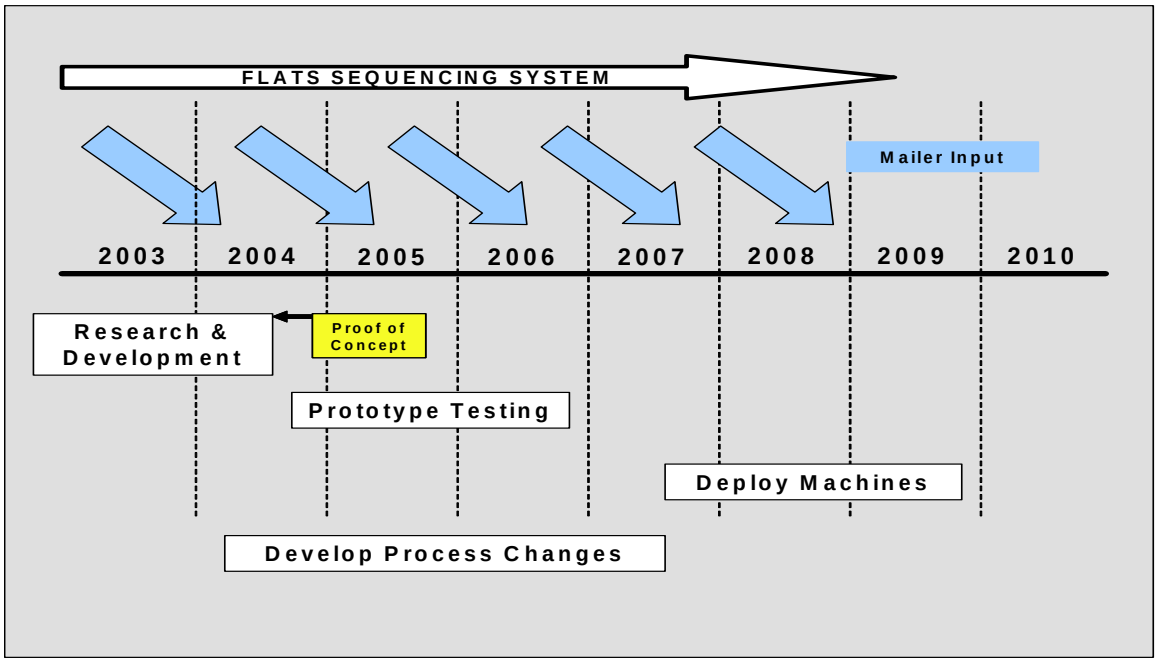


Flats Sequencing System

The Postal Service is also pursuing a parallel research and development process to examine the potential for developing and deploying a Flats Sequencing System (FSS) to prepare flats in delivery-ready condition. While the FSS would contribute toward reducing delivery costs primarily, the Postal Service is investigating both the FSS and DPP approaches with a view toward determining which has the better return-on-investment (ROI). The Postal Service is using a phased approach to development. Phase 1 will focus on evaluating concept designs and simulations. Prototype development and testing would be done in subsequent phases. The decision to go with either DPP or FSS will depend primarily on the ROI.

Prior to implementing DPP or FSS, the Postal Service will review its facilities needs and determine which internal processing and distribution changes must be made.

Flats Sequencing System Timeline



The research and development time frames for each option will be different and therefore the results of the FSS may be available for consideration in advance of the DPP system.

International Mail Processing

The Postal Service has been using POSTNET barcodes to sort international letter mail internally for some time now. This has been accomplished by assigning 5-digit and 9-digit ZIP Codes to countries and certain cities using SCF 001.

The Postal Service is pursuing the opportunity to expand the SCF ZIP Code range to include 001 and 002 which will allow the Postal Service to assign a single 5-digit ZIP Code to almost every country in the world. This depth of coding would allow letter and flat sortation to the country and city level requested by the foreign postal administrations. Software venders would then be able to incorporate this information in their releases so mailers would be able to apply POSTNET Barcodes on their international mailpieces The mailer will not include the assigned international 5-digit ZIP Code in the address block

Additionally, over three quarters of the total international parcels are accepted over the counter at retail outlets, allowing the placement of a barcoded PVI label on the mailpieces to enable automated sortation of the international packages.

These improvements would enable international mail to utilize the vastly changing developments in Postal automation.

SUMMARY

The Postal Service began processing automated mail in the late 1980s using the Corporate Automation Plan (CAP) as a guideline for automating and improving mail processing and delivery improvements. The CAP was a comprehensive detailed plan that guided equipment and system development to transition from a mechanized to an automated operating environment. The original plan described how the Postal Service would automate letter, flat and parcel distribution, but was largely silent on most other issues.

The Postal Service used the CAP to automate letter distribution using first Single-Line then Multi-Line Optical Character Readers and later deployed Remote Bar Code Sorting and Delivery Point Sequencing equipment to increase the amount of barcoded letter mail. The Postal Service's marketing department supported letter and flat mail automation by creating presort discounts rates to encourage prebarcoded volume growth and reduce postal costs.

However, automating flats, parcels and other mail types proved more difficult. This was because the technology was not available to meet processing requirements. As a result, the Postal Service had to maintain multiple flat sorting processes that reduced operating efficiency. Despite these difficulties, by February 2004, the Postal Service had automated more than half of the non-carrier route presort flats to their carrier route destination. This level of performance has been the direct result of deploying the AFSM 100, standardizing many of the flats related processes and moving flat volume "up-the-distribution" ladder from manual and mechanized into automated distribution units. The increased capacity of the AFSM has allowed the Postal Service to process this volume at a much higher productivity.

Automating parcel and bundle sorting presented several challenges. Using the CAP, the Postal Service took the first steps toward automating many of the sorting functions of the Parcel Sorting Machines by applying UPC barcoded labels to reduce secondary handling costs. In the processing centers, however, retrofitting the Small Parcel and Bundle Sorters with OCRs was not cost effective and as a result the search began for a replacement machine later called the Automated Package Processing System.

CAP Phase 2 is a continuation of the automation program and by building on the original plan's foundation extends automation's benefits beyond letters, flats and parcels. The chart below provides a comparison between CAP and CAP Phase 2:

	Original CAP	***CAP Phase 2***
Automate Letter Distribution	YES	YES
Automate Flat Distribution	YES	YES
Automate Parcel Sorting	YES	YES
Automate Bundle Processing		YES
Automate Tray & Container Processing		YES
Longer Term Plans		YES
Delivery Automation		YES
Transportation		YES
Scanning and Tracking		YES

CAP Phase 2 continues support for the distribution activities contained in the original plan and expands automation into allied labor areas such as bundle and tray processing.

CAP Phase 2 incorporates the longer term plans to automate many of the delivery, transportation, scanning and tracking activities into a fully automated system.

CAP Phase 2 supports the Postal Service's long range goal of having ***fully automated operations.*** During the next several years the Postal Service will:

- Continue improving image processing software,
- Deploy the APPS machines,
- Increase the efficiency of the Remote Encoding Centers,
- Extend PARS processing to flats, and
- Continue researching the potential to sequence flats or package mail for delivery.

In order to continue letter mail automation, CAP Phase 2 supports:

- Adding the Video Facing Modification to the AFCS machines to reduce the cost to automate facing cancellation rejects,
- Replacing the aging MLOCR fleet with more efficient systems,
- Improving image processing software to reduce costs and increase Remote Encoding Center efficiency,
- Reducing manual distribution and casing volumes while increasing delivery point sequenced volumes, and
- Committing additional capital to enhance existing assets to improve productivity.

In order to increase flat mail automation, CAP Phase 2 supports:

- Increasing flats processing performance by adding feeder modifications and tray handling systems,
- Deploying advances in technology such as ID tagging to reduce image keying volumes and AFSM 100 Auto Induction to improve productivity, and
- Combining letter and flat mail image processing at centralized locations to further reduce processing costs.

In order to automate parcel processing, CAP Phase 2 supports:

- Deploying the APPS machines to reduce overall processing costs,
- Standardizing parcel barcode formats,
- Working with the mailing industry to increase automated parcel volumes, and
- Enhancing BMC operations by linking the parcel induction process to the Remote Encoding Centers.

In order to make bundle processing more efficient, CAP Phase 2 supports:

- Deploying the APPS machines to reduce overall processing costs,
- Using Optional Endorsement Lines or barcoded labels to speed processing, and
- Reducing sack usage.

CAP Phase 2 also supports:

- Developing an enhanced tray label to identify each tray as it is dispatched or received,
- Automating the receipt and dispatch of trays in order to improve operational performance, and
- Deploying a process to automate tray tracking from distribution through containerized dispatch.

The Postal Service can use the information from the enhanced tray label to automate processing and tracking and collect information to manage material handling. Tracking mail containers and the vehicles that transport mail will enable the Postal Service to more easily meet targeted in-house delivery dates. CAP Phase 2 includes plans to enhance the Delivery Confirmation and CONFIRM programs by developing innovative tracking systems that can incorporate advances made possible by the Intelligent Mail program.

CAP Phase 2 recognizes that the Postal Service has over 7,000 pieces of mail distribution equipment in the plants that read or spray barcodes on each mail piece. Determining what is required to extract the information from these barcodes as they run across the automation will be a formidable task. The goal of the Intelligent Mail program is to develop an information-rich code for each mail type which would enable end-to-end visibility. CAP Phase 2 incorporates Intelligent Mail strategies and will support moving forward to develop a system to uniquely identify individual mail pieces, to deploy enabling infrastructure and to find new methods to enhance address quality.

CAP Phase 2 will rely on MERLIN to ensure the quality and accuracy of presort mailings. MERLIN will be checking a wide variety of items including:

- Walk Sequence Accuracy,
- Barcode Readability,
- Tray Label Accuracy, and
- Address and Barcode Accuracy that is being claimed for a presort rate.

CAP Phase 2 incorporates and supports the PostalOne! system, a program that automates business mail acceptance for both business mailers and acceptance employees by providing the ability to electronically create, submit and store documents.

CAP Phase 2 includes the Postal Service's longer term plans to expand automation into the delivery function. The selection of either Delivery Point Packaging or the Flats Sequencing System will enable the Postal Service to move large volumes from manual carrier casing to automated sort.

The Postal Service must continue to invest in the automation of distribution and delivery operations to reduce operating costs and improve financial performance. Investing in the next generation of automated equipment can allow the Postal Service to reduce costs further while maintaining and/or improving service levels.

The Postal Service has been in the technological forefront for an entire generation; leading the charge to do whatever it takes to sort and deliver mail expeditiously and at the lowest possible systemic cost. CAP Phase 2 incorporates the various programs that the Postal Service is pursuing to take even more costs out of the entire system by automating many of the retail and mail acceptance activities and flat mail and parcel processing.

The Postal Service has committed to keeping the mailing industry informed, involved and sharing ideas and suggestions to reduce costs today and provide stable rates into the future. Over the years, the Postal Service has worked closely with the mailing industry to focus attention on several critical issues. The Postal Service values its industry partners and, as the process goes forward, will continue to work closely with them to:

- ensure the lowest combined processing cost;
- ensure that rates reflect appropriate savings:
- explore innovative processing options for all products;
- develop a game plan to match products to the appropriate piece of automation; and
- establish reasonable lead times to coordinate related changes.

The Postal Service is focused on building a strong supply base of key technology providers to implement CAP Phase 2. To do this, the Postal Service will:

- partner with proven suppliers to take costs out of the supply chain to achieve the lowest total cost of ownership;
- measure supplier performance and provide feedback to suppliers;
- pursue business relationships with strategic suppliers that encourage continued research and development of new technologies to improve USPS operations; and
- develop suppliers through information sharing to achieve maximum value.

The Postal Service will realize the promise that technology brings to appropriately sized distribution and transportation networks. It will be difficult, and it will take time, but it can be done. What remains is the final frontier: Delivery. The Postal Service has started to work with technology providers on the research and development issues that should change the way carriers work. The Postal Service is determined to lead, to innovate and to drive delivery automation progress into the future.

CAP Phase 2 will provide a “roadmap” to implement automation and identify opportunities for realizing automation’s potential. CAP Phase 2 will succeed if together with its industry partners, it can:

- Reduce the costs of producing, processing and delivering mail;
- Leverage technology to keep rates stable;
- Enhance the flow of mail related information;
- Use information to manage the business better;
- Increase the market value of mail by not restricting its size or shape; and
- Continue to explore creative ways to realize our Delivery Vision.

Using CAP Phase 2 will help identify and quantify the possible impacts of a fully automated system on all products. For example, the Postal Service must :

- Consider the potential benefits of having an 11-digit barcode on flats and parcels,
- Quantify if Standardized Address Location for Flats will be necessary,
- Examine how an ID Tag can be applied to non-barcoded flats,
- Determine if 5-digit presort and carrier route will retain their value in the future,
- Look at possible changes to mail make-up and presentation, and
- Determine if entry points for automated zones must be changed.

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AUTOMATION PROGRAM TIMELINE

The timeline below details current Postal Service projections as to how the programs will develop and overlap.

	Category	2004	2005	2006	2007	2008	2009	2010
Advanced Facer Canceller System Upgrade	LETTERS							
Add OCR to AFCS Machines	LETTERS							
Letter Recognition Improvement Program	LETTERS							
OCR Enhancements/DIOSS (MLOCR Replacement)	LETTERS							
Postal Automated Redirection System (PARS)	LETTERS							
AFSM 100 Feeder Enhancement	FLATS							
Automatic Tray Handling System for the AFSM 100 (ATHS 100)	FLATS							
Automatic Tray Handling System for the FSM 1000 (ATHS 1000)	FLATS							
AFSM 100 Auto Induction	FLATS							
Flats Facer Canceler	FLATS							
Flat Identification Code Sort (FICS)	FLATS							
Flat Remote Encoding System (FRES)	FLATS							
Flats Recognition Improvement Program (FRIP)	FLATS							
Flats Sequencing System (FSS) Delivery Point Packaging (DPP)	FLATS							
Flats Forwarding System (FFS) PARS for Flats	FLATS							
UFSM 1000 Semi Automatic Tray Take-Away Mechanism	FLATS							
Automated Package Processing Systems (APPS)	PACKAGES							
Primary PSM OCR/VCS	PACKAGES							
SSIU OCR/VCS	PACKAGES							
Automated Guidance Vehicles	MATERIAL HANDLING							
Field Material Handling	MATERIAL HANDLING							
Integrated Dispatch and Receipt	MATERIAL HANDLING							
Mail Processing Infrastructure (MPI)	INFRA-STRUCTURE							
MERLIN (Phase 2)	INFRA-STRUCTURE							
Surface Air Support System (SASS)	INFRA-STRUCTURE							
Universal Coding System (UCS)	INFRA-STRUCTURE							