

Advanced Optical Character Recognition

**Why Our Technology Simply Outperforms all Other
Single and Multi-Engine MLOCR Systems Combined**

Why is Adaptive Intelligence OCR Technology so Important?



- **Because we read more mail on the 1st pass than any other MLOCR.**
Our Patented Adaptive Intelligence technology learns and iterates over and over until it finds the correct answer the first time!
- Our MLOCR software has built in the ability to automatically tune itself for one or multiple mail streams if unusual or exceptionally difficult mail is being processed.
- Improving your bottom line – You achieve greater profitability on your letter & Flats mail.



What are the Advantages of Adaptive Intelligence OCR Technology?



- Adaptive Intelligence enables the seamless Integration between the MLOCR and Directory
- Incorporates precision tuned algorithms which are optimized to perform at the highest level during image capture, recognition, and delivery point verification
- Outperforms Conventional and Multi-Engine Processing by providing higher read rates with lower errors
- Provides Superior Processing Efficiency which requires only one Off-the-Shelf MLOCR computer
- Lowers Operational Cost



High Performance OCR Integration

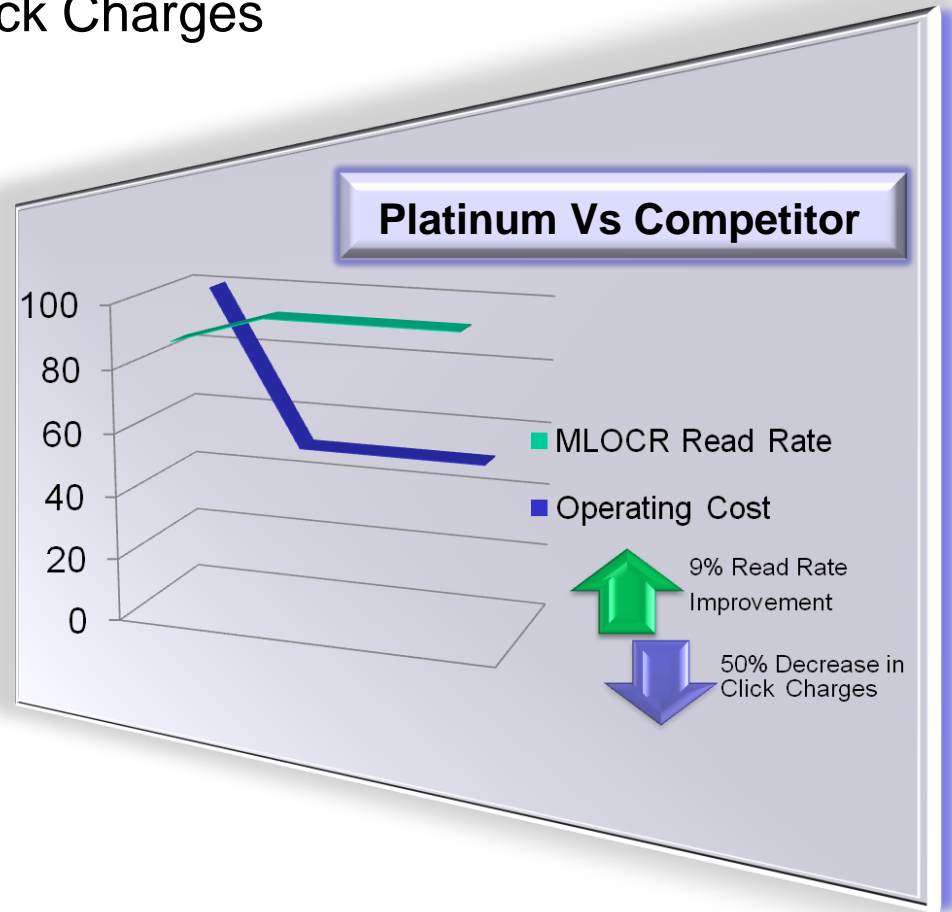
- **Address Block:** Locates and identifies the correct paragraph as the Address Block
- **Segmentation:** Identifies and segments key lines and characters
- **Image enhancement:** Determines and eliminates extraneous noise
- **Character Selection:** Determines most probable characters
- **Address Structure:** Locates and identifies key components of the Address Block
- **Directory:** Is seamlessly integrated to reconcile addresses that are typically too difficult for most MLOCR's



Case Study Benefits Based on Field Test Data

- ✓ Our OCR Read Rates Outperform all others
- ✓ Reduced the Customers Total Click Charges
- ✓ Reads more mail on the 1st pass
- ✓ Rejected Fewer Mail Pieces

Potential Annual Revenue Increase



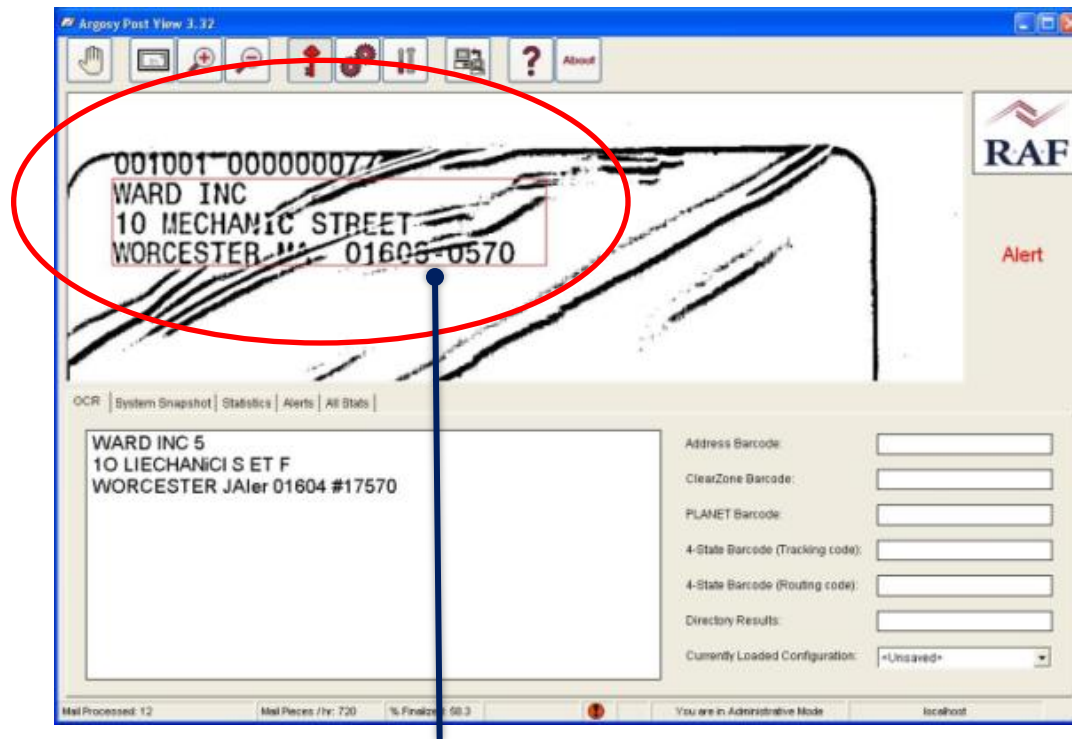
Advanced Optical Character Recognition

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Issues and Solutions our OCR Technology can Address

The Issue

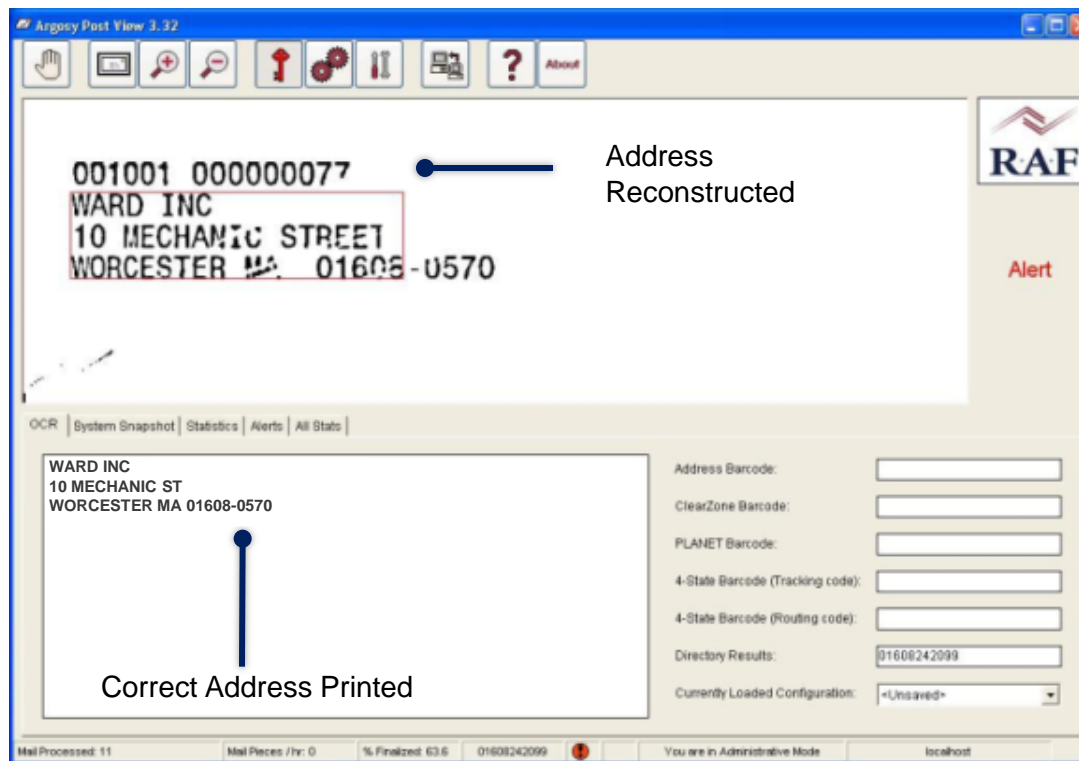
Glare can distort an address block image causing the MLOCR to reject the mail piece for manual sorting



Distorted Image

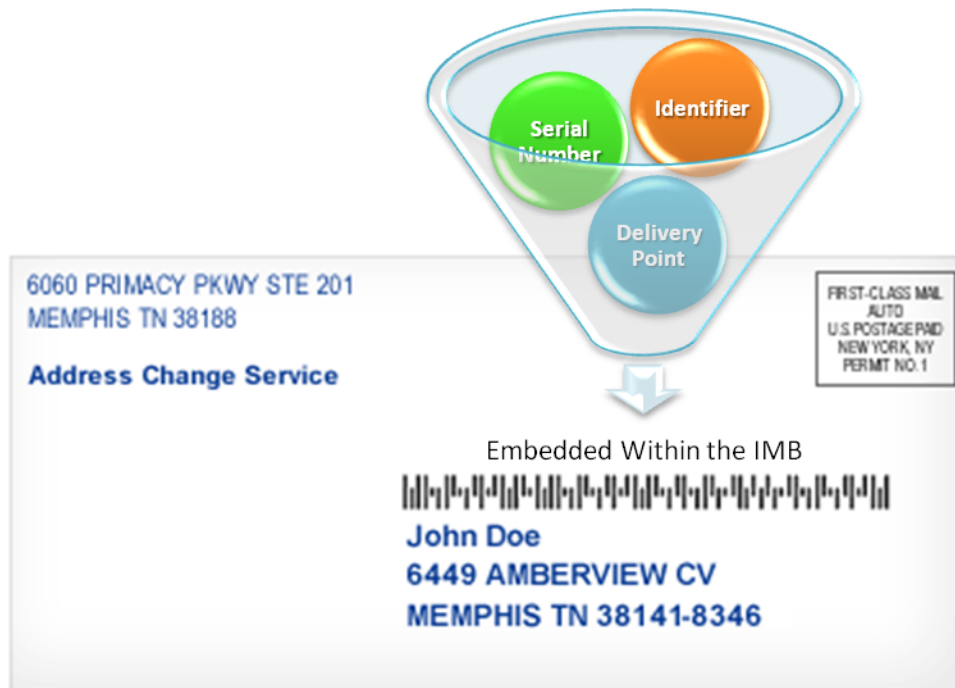
The Solution

Our glare removal feature can automatically compensate for distortions which can occur during the processing of various mail pieces such as glassine window mail or flats using polywrap.



The Issue

The New Intelligent Mail Barcode currently does not carry payload data for weight and postage verification



THE NEW DATA PAYLOAD

In total, the new barcode is expected to carry a data payload of 31 digits comprised of the following elements:

Field Name	Length
Barcode Identifier	2
This field is reserved for future use. It will be a constant ("00"), except for flats where it represents optional endorsement line information.	
Service Type Identifier	3
A value that corresponds to a particular mail class with a particular combination of service(s). For example, "040" is First Class Mail with Destination Confirm.	
Mailer ID (Customer Identifier)	6 or 9*
A number assigned by the USPS that identifies the specific mailer or subscriber.	
Sequence Number	9 or 6*
An ID specific to this mailpiece that must remain unique for each 45-day period.	
Delivery Point ZIP Code	0, 5, 9 or 11
The same data used to generate the POSTNET barcode today.	

* depending on annual mail volumes

The Solution

Our Keyline reader will detect data for weight and record postage rates which allows commercial presorters the opportunity to group multiple weight pieces together for greater discounts

The screenshot displays the Argosy Post View 3.33 software interface. The main window shows a mail piece with the following data:

0821A03524787420013AOUV
AT 032522 02 0471 82 A**3DGT
LANDO ROCK
794 JEFFERSON AVE
BROOKLYN, NY 11221-3503

To the right of the mail piece data, the text "Automated 3-Digit 2 oz rate @ 47.1 cents" is displayed. A red arrow points from this text to the "Keyline Match" field in the bottom right section of the interface, which contains the value "AT 032522 02 0471 82 A 3DGT".

The interface also includes a barcode at the bottom of the mail piece data, a "Directory Results" section with "11221350394", and a "Keyline Match" section with "AT 032522 02 0471 82 A 3DGT". The bottom status bar shows "Mail Processed: 1", "Mail Pieces / hr: 0", "% Finalized: 100.0", and "11221350394".

The Issue

Mail Pieces with Background and/or Foreground noise (dots or chunks of pixels) caused by color, or lightly printed fonts will produce rejects requiring manual sortation

The screenshot shows the Argosy Post View 3.33 software interface. The main window displays a mail piece with a noisy background. The address is: Brain Elm, 9012 170th Ave NE, Redmond WA 98052-3790. The OCR results are shown in a box on the right, with a red circle highlighting the text: NY CH IN, 170th Ave NE, 98052-3790. The interface includes various toolbars and status bars.

Mail Pieces		Finalized		Partial			
MP:	1	MP (RAF):	0	0.00%	MP (RAF):	0	0.00%
HW:	0	MP (other):			MP (other):		
Total:	1	HW:	0	0.00%	HW:	0	0.00%
		Total:	0	0.00%	Total:	0	0.00%

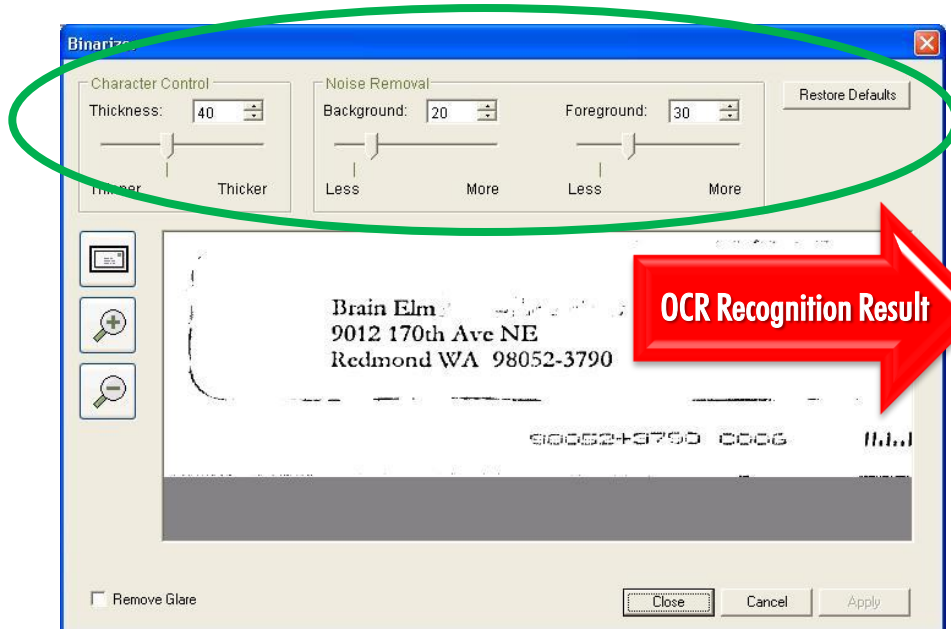
NY CH IN
170th Ave NE
98052-3790

Directory Results: ClearZone Barcode: 98052379012 PLANET Barcode: Address Barcode: 4-State BC (Tracking): 4-State BC (Routing): Keyline Match: Display Raw OCR Results Write Statistics Reset

Mail Processed: 1 Mail Pieces / hr: 0 % Finalized: 0.0 You are in Administrative Mode localhost

The Solution

Our Dynamic Binarizer can adjust for noise and determines Background and Foreground noise or “contrast”. This will result in improved recognition rates and mail finalizations.



Binarizer Enabled

OCR Recognition Result

BRAIN ELM
9012 170TH AVE NE
REDMOND WA 98052-3790-12

Directory Results: 98052379012

ClearZone Barcode:

PLANET Barcode:

Address Barcode: 98052379012

4-State BC (Tracking):

4-State BC (Routing):

Keyline Match:

☐ Display Raw OCR Results

Write Statistics Reset

The Issue

Irregular address block locations or color pieces can confuse most MLOCR readers causing them to falsely read the destination address or region of interest

The screenshot shows the Argosy Post View 3.33 application window. The main area displays a scanned mail piece from GMAC Commercial Mortgage Corporation. The address block is highlighted with a red box and labeled "G-SOUTHWEST PO BOX 803422 DALLAS, TX". A red arrow points from this address block to the OCR results table below. The OCR results table shows the following data:

Mail Pieces		Finalized		Partial	
MP:	1	MP (RAF):	1 100.00%	MP (RAF):	0 0.00%
HW:	0	MP (other):		MP (other):	
Total:	1	HW:	0 0.00%	HW:	0 0.00%
		Total:	1 100.00%	Total:	0 0.00%

The OCR results table also includes a section for "Directory Results" and "Address Barcode" information. The "Directory Results" section shows the following data:

Directory Results:	Clear Zone Barcode:	PLANET Barcode:
19044220450		

The "Address Barcode" section shows the following data:

Address Barcode:	4-State BC (Tracking):	4-State BC (Routing):

The "Keyline Match" section shows the following data:

Keyline Match:

The "Display Raw OCR Results" checkbox is unchecked. The "Write Statistics" and "Reset" buttons are visible. The status bar at the bottom shows "Mail Processed: 1", "Mail Pieces / hr: 0", "% Finalized: 100.0", "19044220450", "You are in Administrative Mode", and "localhost".

The Solution

Our System permits settable non-read areas or “Dead Zones” which allows our customers to define the area on a mail piece where the recognition process can be ignored

Region Ignored

Argosy Post View 3.33

GMAC Commercial Mortgage
550 Decatur Road
Norham, PA 19044
Forwarding Service Requested

Dead Zone

OCR | System Snapshot | Statistics | Alerts | All Stats

Mail Pieces		Finalized		Partial	
MP:	1	MP (RAF):	1 100.00%	MP (RAF):	0 0.00%
HW:	0	MP (other):	0 0.00%	MP (other):	0 0.00%
Total:	1	Total:	1 100.00%	Total:	0 0.00%

Injected

Rate: 0
Excess: 0
License Violation: 0

Timeouts

Master: 0
RM Late: 0
Unassigned Images: 0

Module: 0
Orphaned Images: 0

G-SOUTHWEST
PO BOX 803422
DALLAS TX 75380-3422-22

Directory Results: 75380342222
ClearZone Barcode:
PLANET Barcode:
Address Barcode:
4-State BC (Tracking):
4-State BC (Routing):
Keyline Match:

☐ Display Raw OCR Results

Write Statistics

Reset

Mail Processed: 1 | Mail Pieces / hr: 0 | % Finalized: 100.0 | 75380342222 | You are in Administrative Mode | localhost