

# *Postal Authority Solutions*





# Smart Match

## International Applications

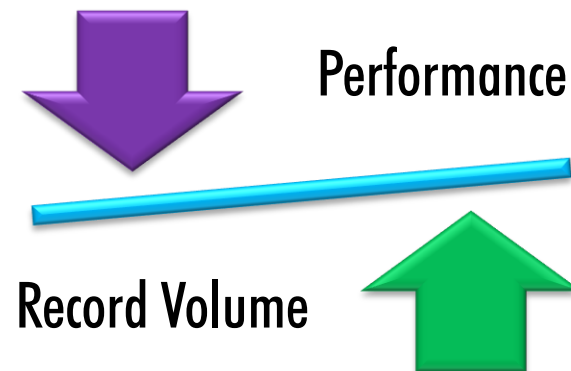
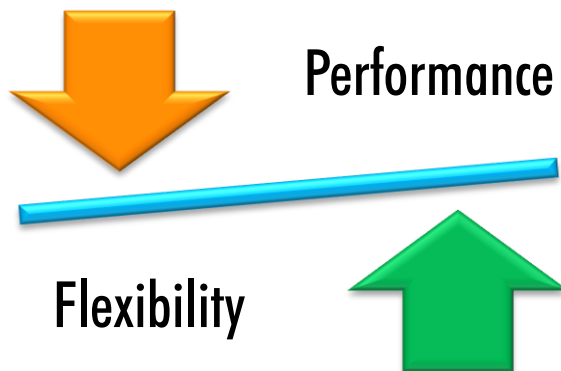
# The Problem



Smart Match

On Average 20% of the overall mail stream is unrecognizable due to misspelling, abbreviated street & city names, and/or improperly addressed/structured.

Current directories require you to tradeoff adaptability & record volume vs. performance by forcing you to incorporate stringent data management policies to achieve high assignment rates

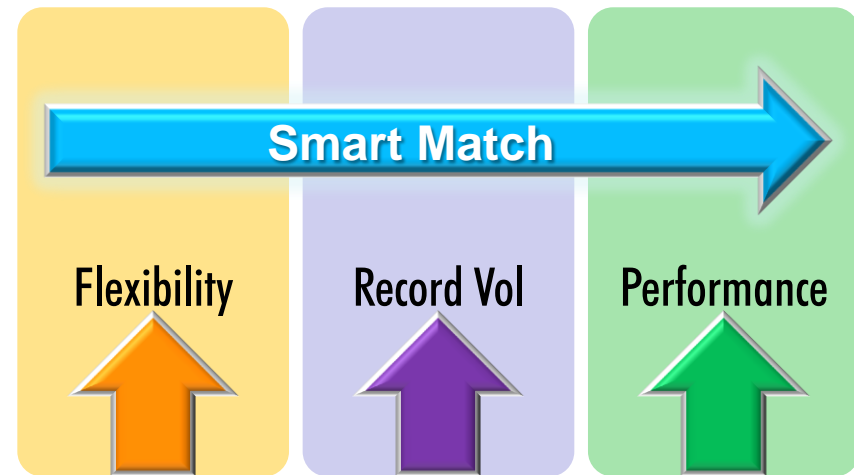


# The Solution



Smart Match was developed to optimize our OCR Engine to finalize more outgoing or incoming mail by accurately adapting and correcting various degrees of address corruption

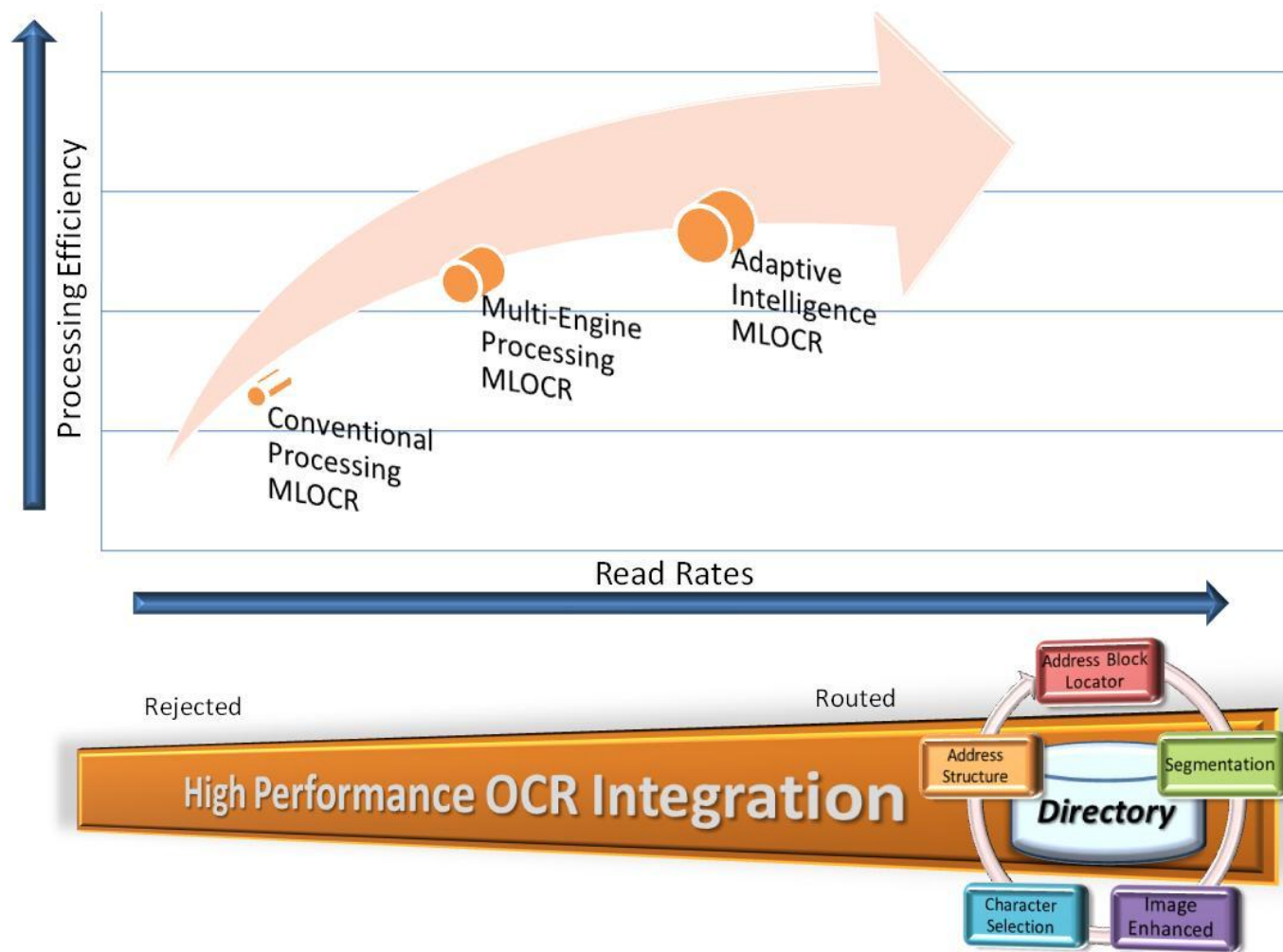
Our technology reduces the level of character noise, extracts all relevant envelope data, and then uses fuzzy logic, sophisticated pattern matching algorithms, and flexible search rules to maximize the number of assignments



# Advantages of OCR Integration



Smart Match



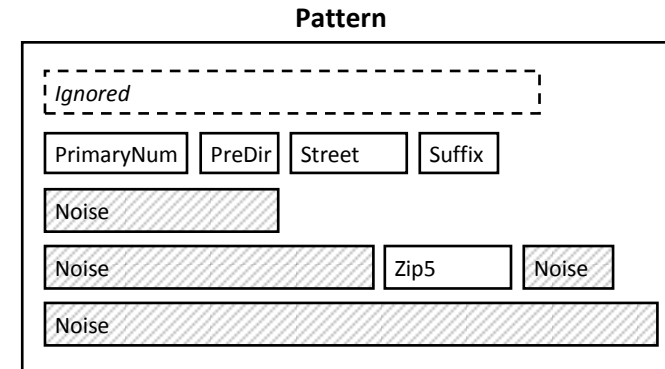
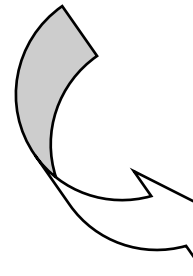
# Key Smart Match Features



- o Eliminates Character Noise with reduces errors
- o Differentiates multiple aliases for a name (e.g. abbreviations or historic names)
- o Flexible search rules that can define multiple address block patterns
- o Provides an address & reverse look-up utility which can debug routing issues
- o Output data can be customized (e.g. Postcode, standard address carrier route, or GPS)
- o Supports outgoing & incoming applications
- o Includes a Std. VES interface
- o Fully integrates all domestic and foreign Postal Authority data

**Address Block**

RAF Technology, Inc.  
15400 NE 90th St  
Suite 300  
Redmond WA 98052-3533  
Attn: Smart Match



# Smart Match Example



Smart Match


## Germany

### Address format

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-----

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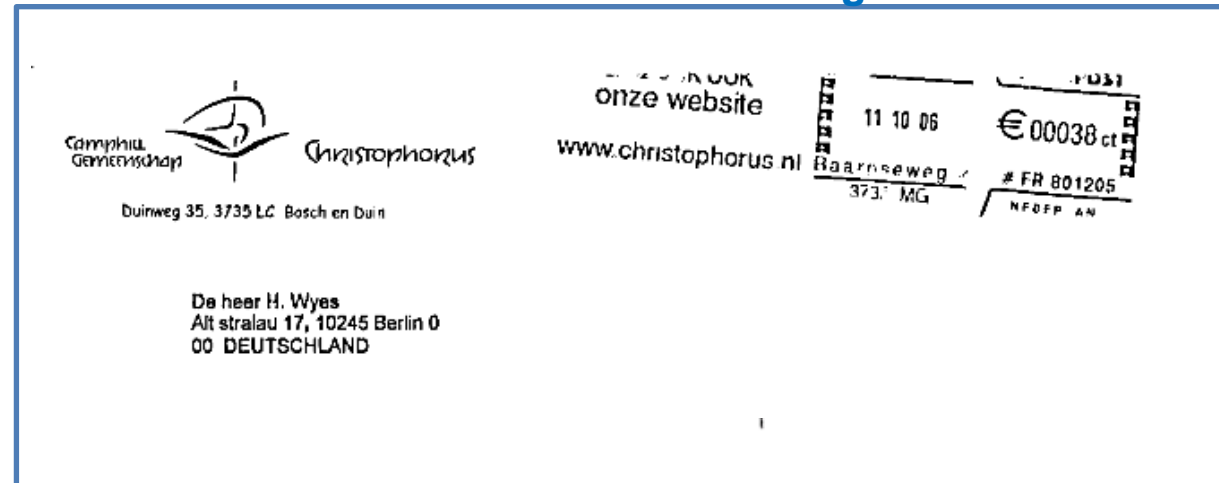
Line 1: RECIPIENT

Line 2: STREET\_NAME HOUSE\_NUMBER

Line 3: POSTAL\_CODE LOCALITY

Line 4: GERMANY

### Actual Mail Piece Image





# Record Analysis



Smart Match

Logo: Christophorus  
Duinweg 35, 3735 LG Bosch en Duin

onze website  
www.christophorus.nl

11 10 06  
Baarnseweg 373 MG

POST  
€ 00038 ct  
# FR 801205  
NEDERLAND

De heer H. W.  
Altstrale 17, 10245 Berlin O  
00 DEUTSCHLAND

Line 1: RECIPIENT  
Line 2: STREET\_NAME HOUSE\_NUMBER  
Line 3: POSTAL\_CODE LOCALITY  
Line 4: GERMANY



# Smart Match Example #2



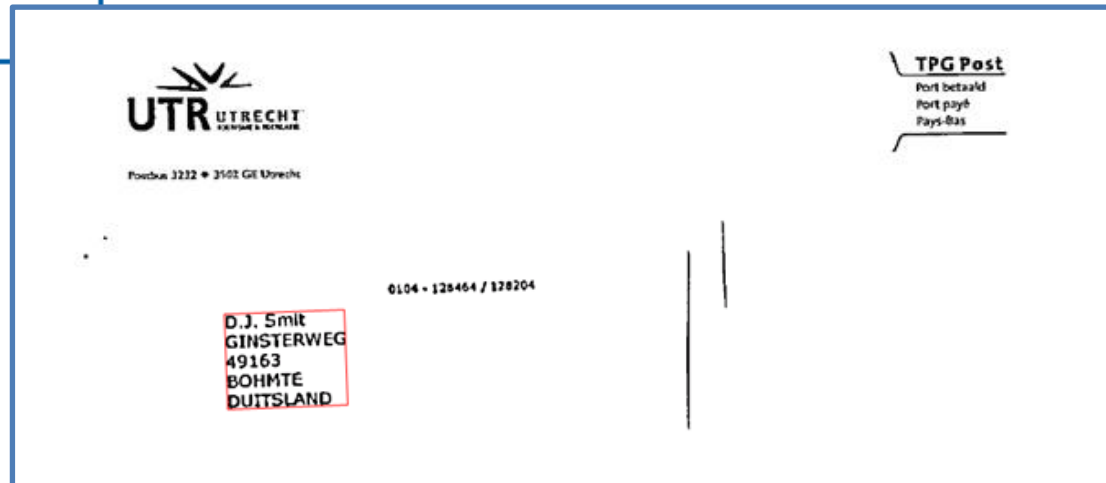
Smart Match

Germany

Address format

Line 1: RECIPIENT  
Line 2: STREET\_NAME HOUSE\_NUMBER  
Line 3: POSTAL\_CODE LOCALITY  
Line 4: GERMANY

Actual Mailpiece Image



# Smart Match Example #2



Smart Match



# Smart Match Mexico Example #3



Argosy Post View 3.40

CEDECOR  
02526 MEXICO, D.F.

**Seguimos regalando casas**

DESTINATARIO

55199 15330  
GERARDO GARCIA BARRIOS  
CALLE 20 DE NOVIEMBRE 32  
RINCON DE BUCIO IN  
54360 CHAPA DE MOTA, MEX CR54241

REGISTRO POSTAL  
CA99-0031  
AUTORIZADO POR  
SEPOMEX

Y a ti, ¿cómo te caería ganar una casa?

OCR | System Snapshot | Statistics | Alerts | All Stats

Mail settings can be accessed by right-clicking on the image

Mail Pieces	Finalized	Partial
MP: 16649	MP (RAF): 16423 98.64%	MP (RAF): 2 0.01%
HW: 0	MP (other):	MP (other):
Total: 16764	HW: 0 0.00%	HW: 0 0.00%
	Total: 16423 97.97%	Total: 2 0.01%

Injected	Timeouts	Module
Rate: 2880	Master: 115	Module: 6
Excess: 0	RM Late: 4	Orphaned Images: 0
License Violation: 0	Unassigned Images: 111	

54360 CHAPA DE MOTA MEXICO

Directory Results: 54360 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: 16649 Mail Pieces / hr: 2880 % Finalized: 98.0 54360 You are in Administrative Mode localhost

# Smart Match UK Example #4



Smart Match

Argosy Post View 3.40

Hand, Mail, Search, Zoom, Key, Gears, Wrench, Computer, Question Mark, About

RAF, United Kingdom Flag

Name and address  
Radcliffe Le Brasseur  
5 Great College Street  
Westminster  
London SW1P 3SJ

OCR | System Snapshot | Statistics | Alerts | All Stats

Mail Pieces	Finalized	Partial
MP: 16726	MP (RAF): 16500 98.65%	MP (RAF): 2 0.01%
HW: 0	MP (other):	MP (other):
Total: 16845	HW: 0 0.00%	HW: 0 0.00%
	Total: 16500 97.95%	Total: 2 0.01%

Injected	Timeouts
Rate: 3600	Master: 118 Module: 6
Excess: 0	RM Late: 4 Orphaned Images: 0
License Violation: 0	Unassigned Images: 114

Directory Results: SW1P 3SJ 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: 16726 Mail Pieces / hr: 3600 % Finalized: 98.0 SW1P 3SJ You are in Administrative Mode localhost

# Smart Match Spain Example #5



Smart Match

Argosy Post View 3.40

Hand, Mail, Zoom, Search, Key, Gears, Wrench, Mailbox, ? About

RAF

Escuela de Administración de Empresas  
Avda. de la Catedral, 8 y 8  
08002 BARCELONA

TELECOM ASESORES  
A/a JORDI MATEO  
C/ PAU CLARIS 161, 3º 2º  
08037 BARCELONA  
BARCELONA

mllo

OCR | System Snapshot | Statistics | Alerts | All Stats

Mail Pieces		Finalized		Partial	
MP:	16881	MP (RAF):	16650 98.63%	MP (RAF):	2 0.01%
HW:	0	MP (other):		MP (other):	
Total	17002	HW:	0 0.00%	HW:	0 0.00%
		Total:	16650 97.93%	Total:	2 0.01%

Injected		Timeouts	
Rate:	3600	Master:	121
Excess:	0	RM Late:	4
License Violation:	0	Unassigned Images:	117

Module:		Orphaned Images:	
Module:	7	Orphaned Images:	0

CALLE DE PAU CLARIS 161  
08037 BARCELONA

Directory Results: 08037 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: 16881 Mail Pieces / hr: 3600 % Finalized: 97.9 08037 You are in Administrative Mode localhost

# Record Finalization



Smart Match

Argosy Post View 3.40

De heer H. Wytes  
Alt stralau 17, 10245 Berlin O  
00 DEUTSCHLAND

SM Parsed the unstructured data using:

- Pattern Matching
- Noise Filtering
- Alias Assignments

OCR | System Snapshot | Statistics | Alerts | All Stats

Mail Pieces		Finalized		Partial	
MP:	2641	MP (RAF):	2677 97.68%	MP (RAF):	0 0.00%
HW:	0	MP (other):		MP (other):	
Total	2641	HW:	0 0.00%	HW:	0 0.00%
		Total	2677 97.68%	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

Directory Results: 10245

ClearZone: , PLANET Barcode: , 4-State BC (Tracking): , 4-State BC (Routing): , Keyline Match: , ☒ Display Raw OCR Results

Write Statistics, Reset

Mail Processed: 2641 | Mail Pieces / hr: 0 | % Finalized: 97.6 | 10245 | You are in Administrative Mode | localhost

# Alias Table



Smart Match

The screenshot shows the Argosy Post View 3.40 application window. The main area displays an address: Vala Björk Svansdóttir, Njarðvíkurbraut 31, 260 Njarðvík. A red oval highlights the address, and a yellow callout box points to it with the text: "The Alias Table was used to identify the correct municipality". Below the address, a Wikipedia snippet for Reykjanesbær is shown. A green arrow points from the callout box to the word "Reykjanesbær" in the snippet. The snippet text reads: "Reykjanesbær is a municipality on the Reykjanes peninsula in Iceland, it is made up of the towns Keflavík, Njarðvík and Hafnir. The municipality was created in 1995 when the inhabitants of the three towns voted to merge them into one." A red oval highlights the word "Njarðvík" in the snippet. The bottom status bar shows "Mail Processed: 45", "Mail Pieces / hr: 0", "% Finalized: 100.0", "260", and "You are in Administrative Mode".

Argosy Post View 3.40

Vala Björk Svansdóttir  
Njarðvíkurbraut 31  
260 Njarðvík

The Alias Table was used to identify the correct municipality

NJARÐVÍKURBRAUT 31  
260 REYKJANESBÆ

Reykjanesbær

From Wikipedia, the free encyclopedia

Reykjanesbær is a municipality on the Reykjanes peninsula in Iceland, it is made up of the towns Keflavík, Njarðvík and Hafnir. The municipality was created in 1995 when the inhabitants of the three towns voted to merge them into one.

Mail Processed: 45 Mail Pieces / hr: 0 % Finalized: 100.0 260 You are in Administrative Mode localhost



# Address Look-up



Smart Match

RAF Smart Match-i Address Lookup Utility

RAF Smart Match-i

Configuration and Directory Data

Configuration Selection: Barcelona with UPU Data - 1.0

Active Directory

Name: Barcelona UPU Version: 2008.2

Data File: BarcelonaUpu.sdf Data: Not Encrypted

Create Date: 2008/09/16 20:16 (UTC) Data Compiler: 99.99.99.9999

Smart Match-i Software

SMI Version: 1.0.0.69

ALU Version: 1.0.0.69

Looked up by  
**RAF**  
RAIDATA MATCHING SYSTEM

Lookup Address

Select DR(s)

Exit

Address Lookup Reverse Lookup

C/Provenza 122  
08029-BARCELONA

>>>> Finalized :: Finalized <6ms> <<<<<  
Pattern Matched 'Street3b' - Level of Sort(1)

Parsed Address:  
C/PROVENZA 122  
08029

Result(s):  
[0] Standardized Address  
PROVENÇA 122  
08029  
[0] Postcode='08029'...

Finalized

# Customizable Outputs

Argosy Post View 3.40


Hand, Mail, Zoom In, Zoom Out, Key, Gears, Wrench, Printer, ? About, POWERED BY RAF TECHNOLOGY, US Flag

RAF  
15400 NE 90th Street • Suite 300  
Redmond • WA 98052

BACK ADDRESS  
15400 NE 90TH STREET  
REDMOND, WA 98052

OCR | System Snapshot | Statistics | Alerts | All Stats

15400 NE 90TH ST  
REDMOND WA 98052

 **GPS Coordinates**

Address Barcode:   
ClearZone Barcode:   
PLANET Barcode:   
4-State Barcode (Tracking code):   
4-State Barcode (Routing code):   
Directory Results:   
Currently Loaded Configuration: US

Mail Processed: 8 | Mail Pieces / hr: 0 | % Finalized: 8.3 | LA:47.68/LO:-122.13 | You are in Administrative Mode | localhost

# Video Encoding Server



Smart Match

