OCR in Royal Mail

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Presentation Overview

- Address Interpretation System

- UK Address Structure and UK Mail

- The OCR Objective

- Address Interpretation Performance

- Other Issues

Royal Mail

Address Interpretation System

- Royal Mail has converted four different OCR systems to a single Address Interpretation (AI) system.

- This AI system became fully operational at the end of 2003.

- The system supports all address recognition for Letters, Flats and Packets.

- Each Mail Centre has a unit which provides automated recognition. For images which cannot be resolved fully automatically there is an interactive recognition process with manual operators at centralised data entry centres.

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Typical UK Address Structure

Mr D Evans

18 Okebourne Park

Liden

SWINDON

SN3 6AH

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Example of the address as written and the address in the Postal Address File

- Address as written:

  161 Lightwood Road

  Bearwood

  Birmingham

  West Midlands

- Address in Postal Address File

  161 Lightwoods Road

  Smethwick

  Warley

  West Midlands

  B67 5AZ

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The OCR objective

- Current Task

  To resolve all items to postcode level

- Future Task

  To resolve all items to delivery point level

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Current typical performance
(Recognition rates)

- Daily Volume (22nd September 2004)

  41 million items

- Mail Mix

  Machine printed items 84%. Hand written items 16%

- Automatic Recognition Rate

  Machine print 96%. Hand written 66%

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Current typical performance

	Outward	Outward + Inward	Outward + Inward + Delivery point
Machine print	4%	95%	0.5%
Hand written	32%	63%	0%

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Current Errors

- Outward   1%

- Inward   1.5%

- Delivery Point   Not evaluated

Other Issues

- Region of interest location

- Return Address blocks

- Partial loss of address in window envelopes

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Royal Mail's future requirements

- Higher recognition rates - handwritten > 90%

- Lower error rates - < 1%

- Resolution to delivery point > 90%

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