PARASCRIPT®

Parascript® *Address*Script

Parascript® *Address*Script reads addresses on letters, flats and parcels, processing over 50 billion addresses annually. *Address*Script provides a universal address recognition solution that makes further automation of mail sorting feasible and cost effective. It takes automatic sorting to new levels using artificial intelligence—in such areas as pattern recognition, neural networks, and fuzzy logic—to solve some of the most critical challenges faced by the mail and postal industry.

Parascript *Address*Script processes over 50 billion addresses annually with the highest reliability in the industry.

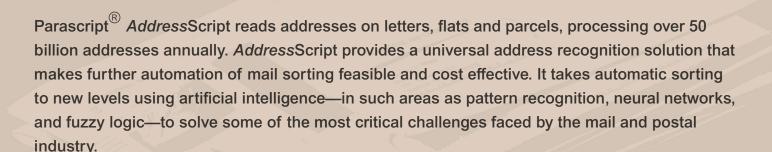## Advanced Mail Automation

With the variations in the style of writing addresses, mail handling has always been a labor-intensive and time-consuming process. For many years, image analysis and address recognition technologies were used to speed up mail sorting and to reduce manual data entry costs, which averaged 85 percent more per year than automated mail processing. The rate at which optical readers read handwritten and poorly machine-printed letters has increased significantly.

Today, the only way to deliver competitive services required by evolving postal markets, is to lead an aggressive cost-cutting policy through intensive use of technological innovations. Post offices all over the world are looking for more efficient, accurate and scalable solutions that provide manual labor savings in high and low mail volume environments.

Parascript *Address*Script has taken automatic sorting to new levels using artificial intelligence—in such areas as pattern recognition, neural networks, and fuzzy logic—to solve some of the most critical challenges faced by the mail and postal industry. *Address*Script reads addresses on letters, flats and parcels, processing over 50 billion addresses each year. *Address*Script has proven to be the answer to some of the most important challenges that the mail industry faces, such as the need to deploy a universal address recognition solution that makes further automation of mail sorting feasible and cost effective.

Universal Address Recognition Solution

*Address*Script reads machine-printed and handwritten addresses, providing unprecedented read performance for difficult, poor-quality and hard-to-read content typically rejected by conventional OCR systems. *Address*Script incorporates the latest achievements in artificial intelligence in such areas as pattern recognition, neural networks, fuzzy logic, hidden Markov models, the combination of multiple independent engines, and the use of context information.
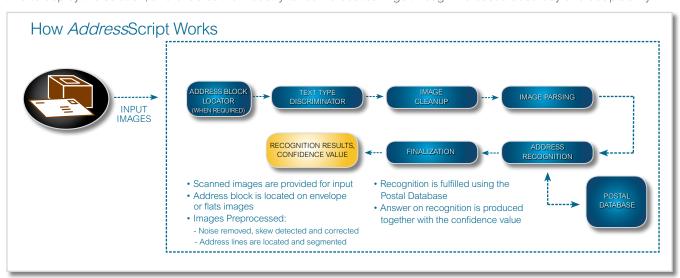
*Address*Script Key Benefits Summary

- **Recognize addresses in the entire mail stream**
  *Address*Script provides an integrated solution for mail-forwarding and sorting applications pertaining to parcels, bundles, flats and letters. It not only locates an address block on envelope and flats images, but also works with address block images or external address block information received from external sources.

- **Reduces time, cost and labor associated with mail processing**
  *Address*Script Ensure the industry's highest read rates and accuracy employs advanced methods and algorithms to achieve the most accurate recognition results. In particular it uses "whole word" recognition as well as character recognition approach; extracts relevant information and makes use of context during the recognition process, and cross-validates mailing addresses against the postal database to ensure superior accuracy and deliverability.

- **Adapts to country-specific address recognition and interpretation requirements**
  *Address*Script is a universal OCR consisting of independent modules including address block location, address structure parsing, word recognition, cross-validation, coding rules interpretation, and postal database. These modules learn automatically using relevant training data so that they can meet application and country-specific requirements. This greatly reduces the resources and timeframe required to customize the system. *Address*Script dramatically increases the effectiveness of automated mail sorting solutions, broadens the range of postal applications that may benefit from automation, reduces the implementation time to deploy the solution, and enables the industry to realize cost savings through increased accuracy and adaptability.

How *Address*Script Works

INPUT IMAGES

ADDRESS BLOCK LOCATOR (WHEN REQUIRED) → TEXT TYPE DISCRIMINATOR → IMAGE CLEANUP → IMAGE PARSING

RECOGNITION RESULTS, CONFIDENCE VALUE ← FINALIZATION ← ADDRESS RECOGNITION

POSTAL DATABASE

- Scanned images are provided for input
- Address block is located on envelope or flats images
- Images Preprocessed:
  - Noise removed, skew detected and corrected
  - Address lines are located and segmented

- Recognition is fulfilled using the Postal Database
- Answer on recognition is produced together with the confidence value

Technical Product Specifications

Requirements

- **Platforms:** Windows® 7 Professional, Windows® 7, 8 & 10, Windows Server 2012.
- **CPU:** Pentium III, 500 MHz minimum required.
- **RAM:** 256 MB minimum required.
- **Storage:** Complete installation requires minimum of 130 MB free disk space.

Input

- **Image Format:** Black-and-white TIFF, bitmap (BMP), and JPEG industry-standard images from a file, as well as images from DIB or from memory.
- **Image Resolution:** 200-300 dpi, 100 DPI-grayscale.

Output

- Finalization, accept/reject

Availability

- *Address*Script is one of many solutions within Parascript's classification, data location, extraction and validation product suite.

  For more information visit our website at **www.parascript.com**.