CUSTOMS VISION

**PRIME VISION
CROSS-BORDER SOLUTION**

prime**vision**

INTRODUCTION
CHANGING CROSS-BORDER E-COMMERCE REGULATIONS: ARE YOU COMPLIANT?

STOP ACT

IC52 One Stop Shop (OSS) Low Value Items VAT Exemption

UK Import VAT Changes

Terminal Dues Revamp

VAT Changes

NZ Prohibited Goods

New regulations and laws are changing cross-border trade, presenting huge challenges to anyone involved in cross-border shipments and e-commerce. Postal and parcel companies, carriers as well as e-commerce retailers need to adapt their processes to remain compliant and capture the opportunity of fast growing cross-border trade. As a result of this fast-changing landscape Prime Vision developed hardware and software solutions to automate the processing of international packets and parcels containing the CN22 and CN23 labels. Our solution provides (semi-)automated data entry of all required customs data for postal items that were not pre-announced digitally.

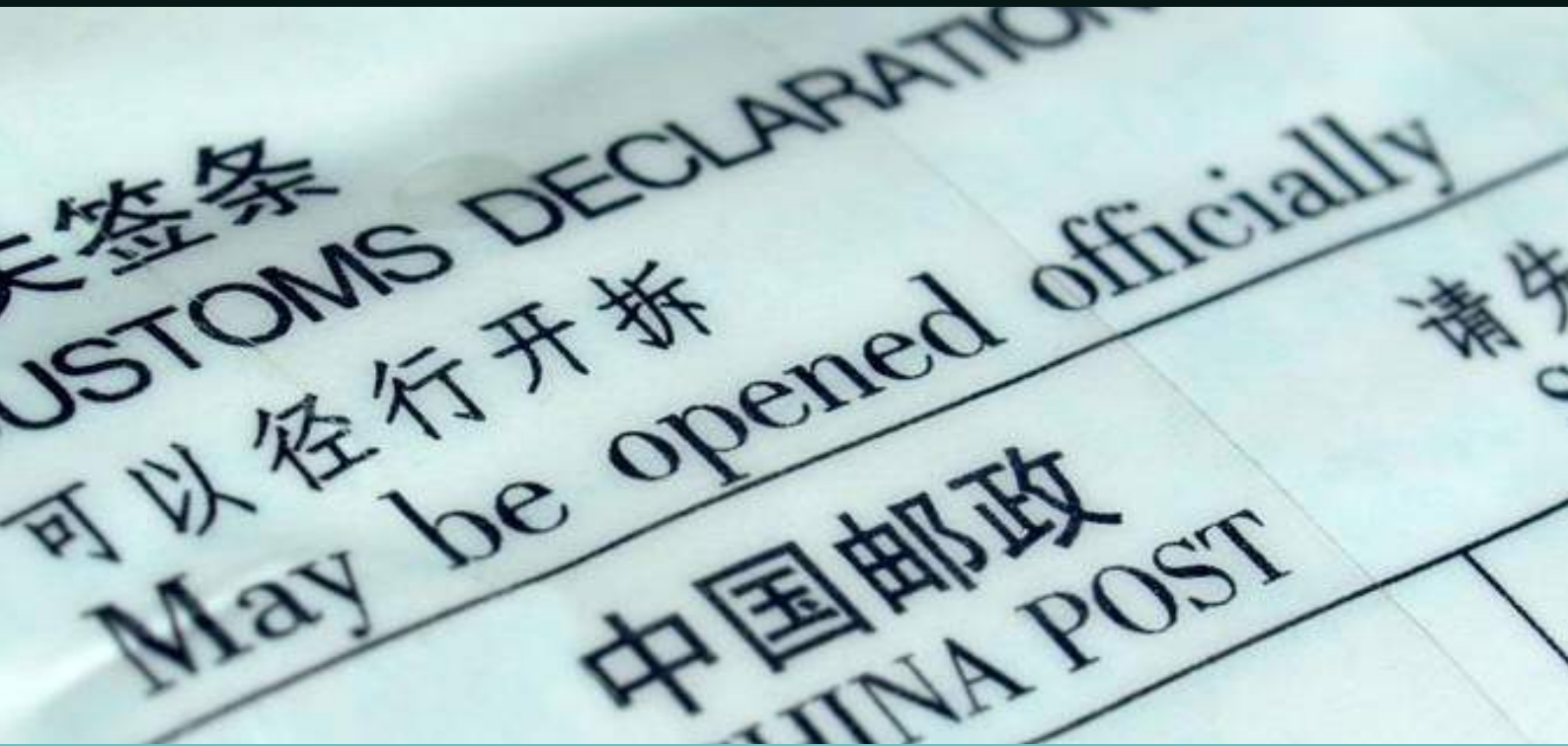# OUR SOLUTION FOR INTERNATIONAL PARCELS ENSURES COMPLIANCY AND EFFICIENCY

Prime Vision developed a Cross Border Solution by leveraging state-of-the-art neural networks based on AI and Deep Learning techniques. By presenting thousands of previously unfathomable addresses of individual countries to the neural network, the solution can learn the formats, regularities and connections within address formats.
Our Cross Border Solution manages the semi-automated coding process, that is required to obtain all data needed to clear a postal item through customs. The automated part of the product consists of the following components:

1. Central Workflow System (Smart Integration Management) for identification.

2. Sender, receiver and custom fields OCR (Optical Character Recognition) for clearance purposes.

3. Web-based data entry video coding platform.

4. Smart Station for image acquisition and barcode reading.

BENEFITS:

- **Increased automation rate in automatic sorting**
- **Less manual sorting needed and reduction of video coding costs**
- **More efficient and effective sorting and registration of customs data**
- **Cost efficient investment with quick ROI**
- **Usable as stand-alone solution or integrated with your existing OCR systems**
- **Automated collection of CN 22/23 label information saves time in customs declarations**

NETWORK ARCHITECTURE FOR WORKFLOW (SIM)
THE CENTRAL PLATFORM TO COLLECT AND ORGANIZE THE DATA

The Smart Integration Management workflow system acts as a central platform to collect and organize the data going through the system. It executes the business logic and supports the interfaces with the Smart Station, the Customs Vision OCR engine, video coding platform and the back-office or custom systems of the customer.

Smart Integration Management enables customers to automate the sortation of letters, packets and/or parcels using any sorter equipment. The system can sort mail, packets, parcels or any other item, as long as it can be identified.

Smart Integration Management excels in its flexibility, configurability, and open interfaces, which allows to configure Smart Integration Management as required for operations. Our system is future proof in the way that it can easily be extended to meet the needs for future requirements, hardware, or process changes. Smart Integration Management will run on Windows based COTS (commercial-of-the-shelve) server hardware. The software is protected by Antivirus software which is periodically updated.

prime**vision**

Process Monitor

For all our products, we deliver the web-based Process Monitor that monitors the health of all components (including cameras and interface connections) and provides live metrics.

OCR (CUSTOMS VISION)
CAPTURING THE RIGHT DATA

(Automatic) data entry of the information that is present on the parcel/packet is not an easy job due to:

- Parcels often have quite erratic sizes, shapes and weight.

- The printing quality of the labels is often poor using small print of difficult to read fonts.

- There are numerous different CN-forms in circulation with different label syntaxes.

- Address formatting differs per country and within the country.

Our Customs Vision solution for import labels (CN22/CN23) is optimized for the ill-formed address structures as found on items coming from Asia, given that this stream counts for the largest proportion of the volume. Customs Vision is used for reading sender details, receiver details and customs details (HSS code, value, currency etc.). As the number of handwritten forms is too low for a costly handwritten OCR or so called ICR (Intelligent Character Recognition), it will only read machine printed labels. The items with handwritten forms are sent to video coding instead.

WEB-BASED DATA ENTRY (SMART CODING)

CODING THE MISSING FIELDS

Fields that cannot be read by Customs Vision (e.g. due to poor printing or wrinkled packaging) are sent to our Smart Coding system, where operators receive the image of the CN22/CN23 labels and code the missing fields. The data retrieved by OCR and the video coding system are sent back to the postal IT system, which forwards the required information to customs.

For import labels, we designed three coding tasks, that – combined – delivers all information needed for customs. These are:

- Sender address coding;

- Receiver address coding;

- Content item(s) information coding (including fields appearing only on the CN23 form).

SMART STATION
CREATES HIGH QUALITY IMAGES

The Smart Station is designed to create the best quality images to optimize the Customs Vision and Smart Coding process. High quality images lead to a higher OCR performance and maximizes the number of items that can be coded by video coding operators.

This especially is relevant as the import stream contains a lot of a small items, that are possibly wrinkled, wrapped in plastics, or poorly printed, for which a robust image capture set-up is needed.

- **High Resolution Image Acquisition**
- **Barcode reader integrated**
- **Bottom camera for constant resolution and focal length**
- **Interactive screen**

primevision

smart vision, smart flow