

# TECHNICAL OFFER

## For Passport and Card Reading Solution

Dear Sir and Madams,

We start our “Passport Reading System-Prim41”™ seven years before and become one of the leading specialized company in Automatic Reading Passports/ID personal documents. The system is compatible and work to All kind of PMS

The first system works without problems since 2006.

The System proofs its functionality and reliability in the Many Installations like Airports (Varna, Burgas), EU border (Turkish-Bulgarian border); many 4&5 stars Hotel Complexes, Tourist Resorts, Hospitals, and Companies .

For more : [www.passport-idcard-reading.com](http://www.passport-idcard-reading.com)



Permit me please to introduce our “Passport Reading System-Prim41”™ . Project for false/forged documents detectors and accompanying identification software :

### I. General information

Document Inspection & Authentication at Border Control Points

Passport readers are installed at immigration check-points of almost all countries in the world. They are used to read standard ICAO (International Civil Aviation Organization) travel documents as well as non-standard documents designed for different purposes. Readers have evolved from the capability to only read the machine readable zone, to full page image capturing, and lately to the ePassport chip reading capability. The device helps control-point officers to automate the input of passenger information and now has become an integral part of an overall passenger identity verification scheme.

New requirements will mainly come from further border control point automation. With this in mind, travel document authentication is the first issue to be considered. Prim 41 has provided customized document authentication solutions to immigration users and implemented them at their control points. New passport readers can capture high-resolution images (i.e. min. 500dpi or higher), using different light sources (i.e. Infrared, Visible, Ultraviolet, Coaxial) and other lighting arrangements based on hardware designs by different vendors. Various security features such as UV patterns and MLI (Multi-Laser Image) then form the basis for performing travel document authentication. When the front line officer finds a travel document that is in doubt, a second tier inspection can be performed..



A reader with authentication functions can be integrated with automated clearance gates installed at the borders.

With more and more countries issue ICAO compliant ePassports, a passport reader can perform basic authentication at the front line (i.e. Basic Access Control, Passive and Active Authentication). The reader software usually includes a set of ePassport functions that help the backend system to implement the public key certificate verification and chip authentication. By working closely with various immigration users, Prim41 not only provides the MRZ data reading and related ePassport functions but integrates them into user’s control point systems.

With more and more governments implementing auto-gates at borders, passport readers have almost become a default hardware component inside auto-gates and other kiosk types of applications. A user-friendly designed reader helps to minimize passenger caused errors. Passport readers will continue to expand in scope in order to cope with different countries’ new requirements for implementing a secure and efficient border control system.



## I. Technical information

- Important note: The “Passport Reading-Prim41” System work on a Windows (NT, XP, Vista, Win. 7) base !!!!!
- The installation of the system can be done by temporally Internet connection!

The “Passport Reading-Prim41” consists of:

- ❖ Passport Reading unit - - **Professional ID / Passport Full page Scanners**
- ❖ Document authentication software - USA
- ❖ Document Database - Optional
- ❖ Software for Automatic reading (scanning) and manage the information from Passport / ID cards published according ICAO 9303 and ISO/IEC 7501-1;2;3 and Non ICAO Documents.

Passport Reading unit Prim41Smart Full page Scanner

## I. Introduction:

**1. Full page Passport Readers** are the most efficient document readers *with OCR+BCR Document Reading*. Fast and easy-to-use the Passport Readers use revolutionary quad-optics technology and small design is the self-service application – today and in the future.

The Passport Reader can scan documents that are conform to the ICAO 9303 and ISO 7501 Specification for reading MRZ ( Machine Readable Zone) information and Non ICAO conformable (DL; ID; some passports).

The integrated :

- RFID – E passport/ID reading
- Full page Passport/ID Scanners with Automatic scanning with IR + UV + Coaxial lights (optional).

## **2. Document authentication software**

This software makes the world’s most advanced ID authentication system for identity documents such as passports, visas, driver’s licenses, military IDs, social security cards, alien

registration cards, and other Federal, state, and local government IDs including driver’s licenses and identification cards from all over the world.

Insert an ID into the supported document reader. Within seconds, software will identify the issuer and type of document, capture all of the biographic and document information, and analyze the features of the document under multiple light spectrums to determine whether the document is consistent with the known features of the particular document type. Based on the results of this analysis, will provide a risk assessment that indicates the likelihood that the document is authentic or fraudulent. That is the essence of the solution.

A forgery is an alteration or misrepresentation of an original document whereas a counterfeit is a complete imitation. Most laypeople, including bank tellers, casino cage workers, and store clerks, who are often put in the position of ensuring that a customer has a valid ID, are not qualified to determine the authenticity of ID documents. Even border and forensic document inspectors, who undergo substantial training in the Questioned Document Examination (QDE) process, often do not have enough time to truly authenticate each and every document that passes through their station, although they might be able to pick obvious fakes out quickly due to experience. In a 2006 audit conducted by the U.S. Government Accountability Office, authorities were able to use fake IDs in 18 out of 18 cases to enter the country — despite qualified forensic document inspection. Incidentally, when those same IDs were run through our system, they were caught.

This patented technology is the best ID authentication money can buy. By automatically identifying any of over 2,500 types of IDs — whether they conform to ICAO (International Civil Aviation Organization) standards or not — and then automatically applying the right document-specific tests, eliminates the manual selection required by most other authentication solutions and speeds up the document inspection process. With the document type identified, runs a theoretically unlimited number of tests on the document to determine authenticity; this capability, encoded into proprietary *Document Authentication Library*, is simply unmatched in the industry, and allows to provide a high degree of discrimination that would be hard to beat even by trained human inspectors.

Technology is deployed worldwide, in airports and seaports, border control stations, immigration counters, driver’s license issuance stations, casinos, car rental agencies, and other high security environments.

The **run-time authentication engine** that can automatically identify an ID of any size or from any issuer and determine its authenticity by performing a variety of forensic-quality tests, specific to the type of document. ID Document Authentication Library provide the details on how to recognize and authenticate over 2,800 different types of IDs, including passports, visas, national identity cards, drivers licenses, and many other forms of ID.

The document library are updated quarterly to ensure that customers always have access to the most up-to-date documents in a world where new forms of ID are released every day.

For more details please ask.

### **3. Software for Automatic reading information from Passport / ID cards - The “Passpopt Reading-Prim41”™**

- The software part of the system is developing on a base of USB Document Readers (Scanner). The software works like a *Driver* and automatically starts after Windows start up.
- **The software works to all kind of program Applications** - Border Control; Bank; Hotel, Insurance; Access Control; Police and all others PMS.

## General Description

How does the “Passport Reading System-Prim41”™ works for example in the Border control?

**Step 1:** The government official staff have to start up the computer with MS Windows (NT, XP, Vista; Win. 7).

**Step 2:** Then should to open Windows Application Screen, on which before using our solution the officer is **MANUALLY** typing all the Passport/ID data

**Notes:** The Application screen (form) can be not just one but two and more (very important note!)

**Step 3:** Now he/she has to put the Passport/ID on the Passport Scanner:

3.1. Scanning procedure start Automatically with Normal, IR, UV; Coaxial lights scanning

3.2. Automatically start Document Authentication Procedure:

- Photo Substitution Test: This is testing for features securing the original integration of the photo in a security document. We are able to authenticate traditionally laminated photos as well as modern digital integration techniques to account for this very frequent type of forgery.
- Micro-text Test: If the proper resolution is available, micro-printing can be authenticated in all available light sources.
- • Color Check: This test is looking for the correct color response of crucial areas in all available light sources.
- B900 Ink Check: A security document can be very reliably authenticated under near infrared lighting which is often referred to as the B900 area of the spectrum. This test looks for the correct response under near infrared light and for example checks for differing personalization or printing techniques.
- Security Paper Check: It looks for presence of UV dull paper which is a property of the sub strate used in most security documents around the world.
- Thread Detect: This authentication checks for the presence of UV fluorescent threads in the substrate.
- OVI Detect: Optically variable inks (OVI) are commonly used and are hard to get and forge. Certain characteristics can be authenticated by this check.
- Pattern Match: The pattern match can check, under all available light sources, for many characteristics of a security document that other authentications might miss.
- OVD Detect: Test for the presence of optically variable devices (OVD) which include, for instance, holograms or kinegrams.
- Geometry Test: This test is looking for defined geometric relationships between various features in a secure document.
- Field Crosscheck: In the case of duplicated fields in a document, this will cross check between comparable fields. If there are multiple data sources on a document for an expiration or a birth date for example in a RFID chip and the machine readable zone (MRZ) or 2-D barcode and magnetic stripe, we will detect and report differences between them. The cross check is able to ignore slight variations based upon extraction errors, for instance
- Common field crosschecks include:
  - ✓ Comparison of the data in the MRZ to the Visual Inspection Zone (VIZ) area of a passport.
  - ✓ Comparison of the data on the front of a document to the data encoded in a 1-D or 2-D barcode.
  - ✓ Comparison of the data on the front of a document to the data encoded in a

## ”Prim41”

magnetic stripe.

- ✓ Comparison of the data in the MRZ to the data encoded in a contactless chip.
- Check Digit Test: The machine readable zone (MRZ) is secured against forgery by check digits which this test will investigate.
- •Date Validity Test: This test checks for the validity of birth dates, issue dates etc. It can check whether the document is still valid and whether the expiration date actually comes after the issue date.
- Barcode Check: We are able to test for the presence of an expected barcode. This includes many 2-D and 1-D formats.
- Magstripe Check: We are able to test for the presence of a magnetic stripe if there is supposed to be one present . (Available only if the device has a magnetic stripe reader).
- Retro-reflective Check: If coaxial illumination is available (an option in a number of readers), this validates the presence and integrity of 3M Confirm™ laminate overlay.
- Chip Authentication Tests: For ICAO 9303 compliant electronic documents (RFID), additional authentication tests are performed, including:
  - ✓ Active authentication
  - ✓ Passive authentication
  - ✓ Field crosschecks to compare the data encoded in the chip with the data present on the physical document

3.3. **If the Authentication procedure is OK**, the **Passport Reading-Prim41”** Software fill all Document data into Application form for the Seconds, absolutely correct. After confirmation from **officer** – data goes to the Server data base.

- |   |                      |   |                                  |
|---|----------------------|---|----------------------------------|
| • | <b>First name</b>    | • | <b>Personal number (PIN) ***</b> |
| • | <b>Second name</b>   | • | <b>Nationality</b>               |
| • | <b>Family</b>        | • | <b>Pass Number</b>               |
| • | <b>Data of birth</b> | • | <b>Type of document Pass/ID</b>  |
| • | <b>Sex</b>           | • | <b>Country</b>                   |
|   |                      | • | <b>Data of expire (Valid to)</b> |

\*\*\* In some Passports and IDs there is no PIN

Example for Automatically filled Application form to “Opera” PMS:

**Note :** The order of the fields and Application Screen is no necessary to be like the above. It can be various !

3.4. If the Authentication procedure is **NOT OK** – the “Passpoprt Reading-Prim41” bring up the warning message with the marked Problem. Ask the government official staff for the next actions:

3.4.1. Skip the control in case of non-recognition of the document to be examined from the system user, with the demand of the system for obligatory registration of the operator who consented to this operation.

3.4.2. Goes to the Keesing Document Data base for Respective expert control - the authenticity of the details from the visual control of the document, its mechanical control and the bar codes and RFID chips, should they be present in the document and crosschecks the data above.

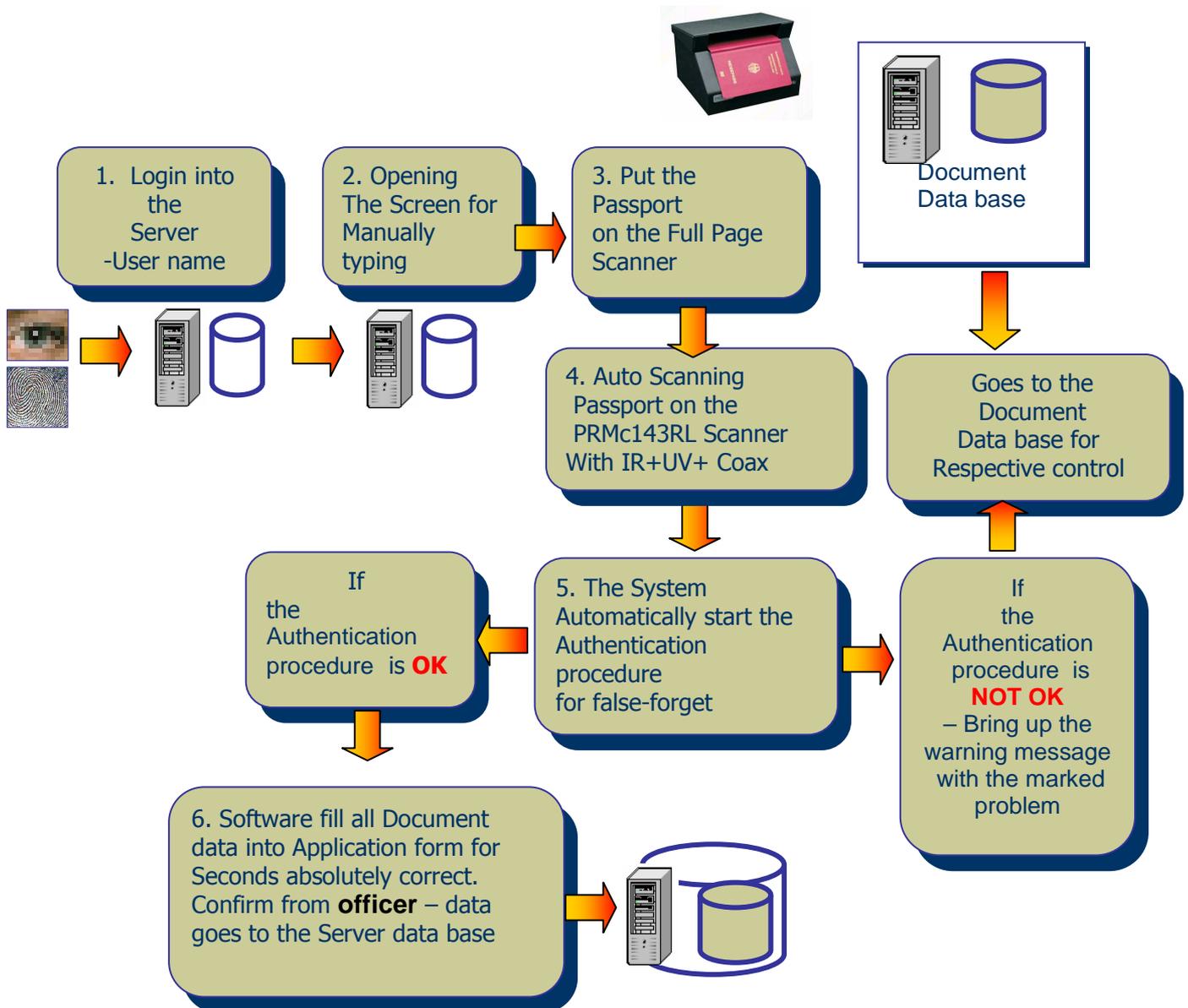
3.4.3 To take desire actions according the project needs!

### **Additional possibilities of “Passport Reading System-Prim41”™ :**

You can predefine in “Passport Reading System-Prim41”™ for Automatically:

- ✓ **Automatically Secure check of document**
- ✓ **Filling the data on the form if Secure check is OK**
- ✓ **Save the data in some directory on the local Disk or on the Server in txt; Excel; notepad data format.**
- ✓ **Save the jpg picture of Document in some directory on the local Disk or on the Server**
- ✓ **Save full “Log” file for all actions and events.**
- ✓ **Define the “Short cut” buttons for filling the information.**
- ✓ **Define the Windows name of the Application form for filling the information on different designate Application screens.**
- ✓ **And more according the project needs.**

## **Full diagram:**



**Note : All this procedures has done automatically!  
The task can be change according the project needs !**

**PRIM 41**

**CEO:** /Dipl. Eng..Peter Dimitrov/