



OVERVIEW OF ICAO MRTD STANDARDS DEVELOPMENT

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**The Third Symposium and Exhibition on ICAO MRTDs,
Biometrics and Security Standards**

WHERE WE ARE TODAY

- ePassport specifications published (Doc 9303, Part 1, 6th Ed).
- 35 countries issuing ePassport.
- Public Key Directory established.
- "non-MRP" countries to meet MRP Standard by April 2010.



HOW WE GOT HERE

- ICAO's mandate for standards development:
The Convention on International Civil Aviation

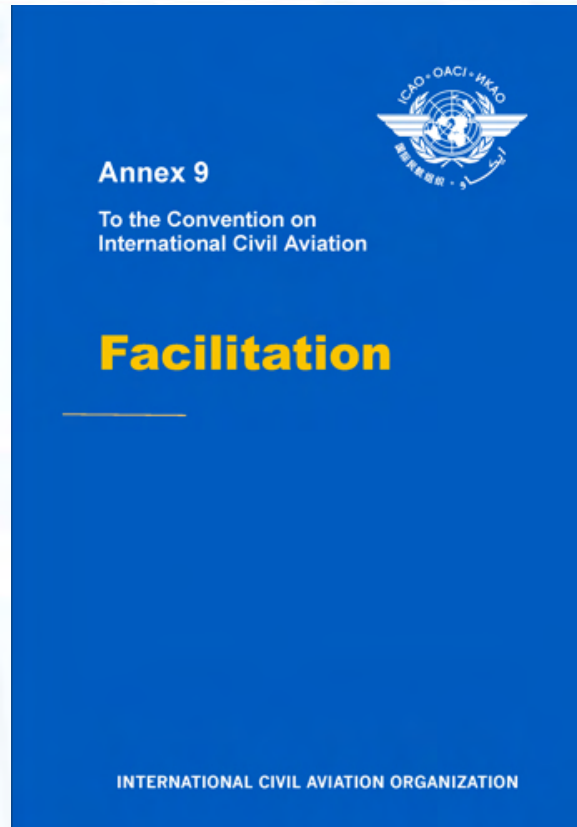


“Chicago Convention”, 1944 Created ICAO

- To “meet the needs of the peoples of the world for safe, regular, efficient and economical air transport”.
- Mandates compliance with border control laws, facilitation of formalities, and global interoperability.



Annex 9 to the Convention

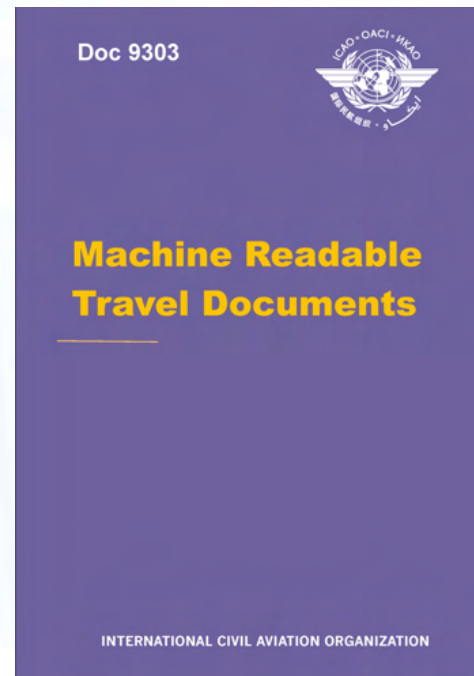


Passenger inspection at
border control points



Doc 9303 – MRTDs specifications

➤ First edition 1980; now in 3 Parts



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Standards – ICAO TAG/MRTD



A US passport for a male traveler from New Jersey, USA. The document includes fields for name, date of birth, sex, nationality, and place of birth.

Doc 9303



A Mexican visa issued by the United States of America. It includes fields for name, date of birth, sex, nationality, and date of issue.

Part 1 - Passport



A Swedish national identity card (Svensk/SWE). It includes fields for name, date of birth, sex, and date of issue.

Part 2 - Visa



An official travel document (Official Travel Document) issued by the Swedish Police Authority (Polismyndigheten). It includes fields for name, date of birth, sex, and date of issue.

Part 3 - Official Travel Document

ISO : SC17 WG3

ISO/IEC 7501

Standards – ICAO TAG/MRTD



A US passport for a male traveler, issued in New Jersey, USA, on 16 Sep 1996. The passport number is 150000003. The machine-readable zone (MRZ) is visible at the bottom.

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Part 1 - Passport



A Swedish national identity card (Svensk/SWE) for a male individual, issued in Stockholm, LÅN, on 25 JUL/JUL 07. The card number is 45123456. The machine-readable zone (MRZ) is visible at the bottom.

Part 3 - Official Travel Document



A US visa for a male individual, issued in Mexico City, on 17 MAY 1972. The visa number is 02870587. The machine-readable zone (MRZ) is visible at the bottom.

Part 2 - Visa

ISO : SC17 WG3

ISO/IEC 7501



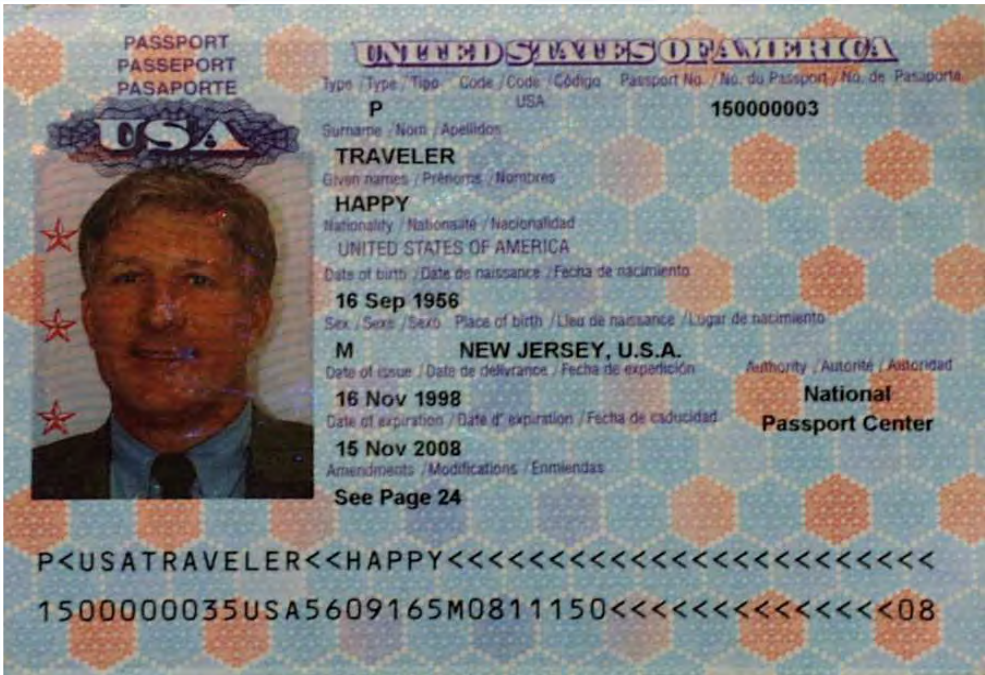
Assembly Resolution 32-18

- 1998: Called for “International cooperation in protecting the **security** and integrity of passports”
- Updated in 2001; continued in 2004 and 2007





Security: Machine Readable Zone



Security: Identity confirmation

Authenticity



Identity

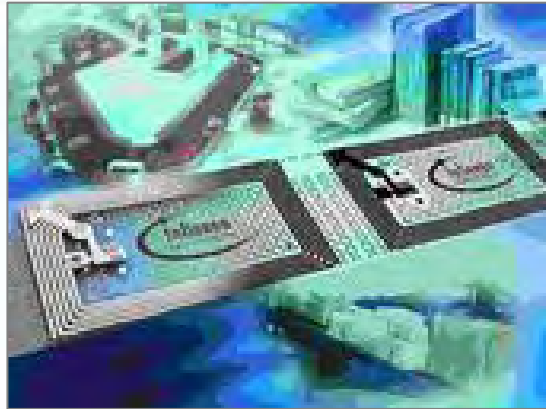


Facilitation and Security

Biometrics for identity confirmation



Contact-less IC



Logical Data Structure

The diagram illustrates the Logical Data Structure of an e-Passport, organized into three main sections: Mandatory Issuing State or Organization Data, Optional Issuing State or Organization Data, and a Future Version of LDS.

MANDATORY ISSUING STATE OR ORGANIZATION DATA

DATA ELEMENTS	
Document Type	
Issuing State or organization	
Name (of Holder)	
Document Number	
Check Digit - Doc Number	
Nationality	
Date of Birth	
Check Digit - DOB	
Sex	
Date of Expiry or Valid Until Date	
Check Digit - DOE/VUD	
Optional Data	
Check Digit - Optional Data Field	
Composite Check Digit	

ADDITIONAL PERSONAL DETAIL(S)

Name of Holder
Other Name(s)
Personal Number
Place of Birth
Address
Telephone Number(s)
Profession
Title
Personal Summary
Proof of Citizenship
Other Valid Travel Document(s)
Custody Information

OPTIONAL ISSUING STATE OR ORGANIZATION DATA

DATA ELEMENTS	
Encoded Identification Feature(s)	Encoded Face
Additional Feature(s)	Encoded Finger(s)
Encoded Eye(s)	Encoded Eye(s)
Displayed Portrait	
Reserved for Future Use	
Displayed Signature or Usual Mark	
Data Feature(s)	
Structure Feature(s)	
Substance Feature(s)	
Additional Personal Detail(s)	
Additional Document Detail(s)	
Optional Detail(s)	
Reserved for Future Use	
Active Authentication Public Key Info	
Person(s) to Notify	

ADDITIONAL DOCUMENT DETAIL(S)

Issuing Authority
Date of Issue
Other Person(s) Included on MRTD
Endorsements/Observations
Tax/Exit Requirements
Image of Front of MRTD
Image of Rear of MRTD

OPTIONAL DETAIL(S)

Optional Detail(s)

PERSON(S) TO NOTIFY

Names of Person(s) to Notify
Contact Details of Person(s) to Notify

FUTURE VERSION OF LDS

DATA ELEMENTS	
Automated Border Clearance	
Electronic Visa(s)	
Travel Record(s)	

AUTOMATED BORDER CLEARANCE

Automated Border Clearance Detail(s)

ELECTRONIC VISA(S)

Electronic Visa Detail(s)



Public Key Directory (PKD)

- A mechanism to exchange the tools that are necessary to exchange the information that is stored in the chip in the passport.



Now: 6th Edition, Doc 9303, Part 1

Machine Readable Passports

- Volume I specifications mandatory for *all* States issuing MRP.
- Volume II ("e-passports") specifications mandatory for States electing the option to enhance their MRP with biometric identification.



Content of Volume I: everything that makes a passport machine readable

The image shows a sample US Passport Information Card (Form DS-16). It includes a color photograph of a man on the left. To the right of the photo are fields for personal information: Type (P), Code (USA), Passport No. (150000003), Surname (HAPPY), Given names (HAPPY), Nationality (UNITED STATES OF AMERICA), Date of birth (16 Sep 1956), Sex (M), Place of birth (NEW JERSEY, U.S.A.), Date of issue (16 Nov 1998), Date of expiration (15 Nov 2008), and Authority (National Passport Center). At the bottom, there are two machine-readable zones: the Visual Inspection Zone (VIZ) and the Machine Readable Zone (MRZ).

**Visual
Inspection
Zone (VIZ)**

**Machine
Readable
Zone (MRZ)**

**Machine
Readable
Zone (MRZ)**



Content of Volume II: everything that makes an MRP an e-passport

- Specifications for face biometric
- Specifications for ISO/IEC 14443 "proximity" chip application
- Specifications for logical data structure
- Specifications for public key infrastructure including BAC



WHERE WE ARE GOING

- International cooperation to advance implementation of the Standards



By whom?

- Members of the TAG/MRTD
- Observers of the TAG/MRTD
- ISO - the vendor community
- ICAO HQ
- Individuals



NEXT STEPS

- Reading systems to be upgraded to read the ePassport chip as well as the MRZ.
 - Airline check-in
 - Aviation security
 - Entry/exit processing



IMPLEMENTATION, cont'd

- ePassport-issuing States to join the PKD as Participants.
- Users to connect to the PKD.
- "Worldwide trust" in the authenticity of ePassport data.



IMPLEMENTATION PROJECTS

- To improve and secure the passport issuance process.
- To establish robust identity management systems.



WINNERS: States

- Better systems for securing borders against illegal migration, transborder crime and terrorism.
- Better systems for securing states against fraud.



Big winners: travelers

- Worldwide travel – confidence in authentic identity documents.
- Protection from identity theft.
- Use of machine-assisted systems.
- Shorter lines.



Big winners: personal reflection

- Sweden is famous for:
- Celsius
- The Nobel price
- IKEA
- ABBA Knowing me knowing you



Thank you

Visit: www.icao.int/mrtd

