Introduction of the Seventh Edition of Doc 9303

Sjef Broekhaar
Advisor

ICAO TRIP IRAN SEMINAR – Kish Island
July 2015: ICAO publishes the 7th edition of Doc 9303
The 7th edition of ICAO Doc 9303

The 7th edition of ICAO Doc 9303


  – Volume 1 – Passports with Machine Readable Data stored in OCR format
  – Volume 2 – Electronically enabled Passports with Biometric Identification Capability


  – Volume 1 – MRtds with Machine Readable Data stored in OCR format
  – Volume 2 – Electronically enabled MRtds with Biometric Identification Capability

• Supplement to Doc 9303, release 14 – 2014
  – 176 pages – 253 issues

• 8 Technical reports
The 7th edition of ICAO Doc 9303

September 2011: Doc 9303 revision

- Re-structuring
  - From 3 to 12 parts
- Supplement incorporation
  - From 253 to 0 issues
- Technical Reports incorporation
  - From 8 to 0 Technical Reports
Doc 9303: Seventh Edition

1. Introduction
2. Specifications for the Security of Design, Manufacture and Issuance of MRTDs
3. Specifications common to all Machine Readable Travel Documents
4. Specifications specific to TD3 size MRTDs, Machine Readable Passports
5. Specifications specific to TD1 size MRTDs, Machine Readable Official Travel Documents
6. Specifications specific to TD2 size MRTDs, Machine Readable Official Travel Documents
7. Machine Readable Visas
8. Reserved for future use (Emergency Travel Documents)
9. The Deployment of Biometric Identification and Electronic Storage of Data in MRTDs
10. Logical Data Structure
11. Security Protocols
12. Public Key Infrastructure for Machine Readable Travel Documents
Part 1: Introduction

1. Foreword
2. Scope
3. General considerations
4. Definitions and Abbreviations
5. Guidance on the use of Doc 9303
6. References
Part 2: Specifications for the Security of Design, Manufacture and Issuance of MRTDs

1. Scope
2. Security of the MRTD and its Issuance
4. Security of MRTD Production and Issuance Facilities
5. Provision of Information on Newly Issued MRTDs
6. Provision of Information on Lost and Stolen MRTDs

Appendix A – Security Standards for MRTDs
Appendix B – Machine Assisted Document Security Verification
Appendix C – The Prevention of Fraud Associated with the Issuance Process
Appendix D – ASF/SLTD Key Considerations
Part 3: Specifications Common to all Machine Readable Travel Documents

1. Scope
2. Physical Characteristics of MRTDs
3. Visual Inspection Zone (VIZ)
4. Machine Readable Zone (MRZ)
5. Codes for Nationality, Place of Birth, Location of Issuing State/Authority and other Purposes
6. Transliterations Recommended for Use by States
7. Deviations
8. References

Appendix A – Examples of Check Digit Calculation
Appendix B – Arabic Transliteration, Details and Examples
Part 4: Specifications for Machine Readable Passports (MRPs) & other TD3 size MRTDs

1. Scope
2. Construction and Dimensions of the MRP and MRP Data Page
3. General Layout of the MRP Data Page
4. Contents of the MRP Data Page
5. References

Appendix A – Examples of a Personalized MRP Data Page
Appendix B – Construction of the Machine Readable Zone of the Passport Data Page
Part 5: Specifications for TD1 size Machine Readable Official Travel Documents (MROTDs)

1. Scope
2. Dimensions of the TD1 size MROTD
3. General Layout of the TD1 size MROTD
4. Contents of a TD1 size MROTD
5. References

Appendix A – Examples of a Personalized TD1 size MROTD
Appendix B – Construction of the Machine Readable Zone of a TD1 size MROTD
Appendix C – Technical Specifications for a Machine Readable Crew Member Certificate (CMC)
Part 6: Specifications for TD2 size Machine Readable Official Travel Documents (MROTDs)

1. Scope
2. Dimensions of the TD2 size MROTD
3. General Layout of the TD2 size MROTD
4. Contents of a TD2 size MROTD
5. References

Appendix A – Examples of a Personalized TD2 size MROTD
Appendix B – Construction of the Machine Readable Zone of a TD2 size MROTD
Part 7: Machine Readable Visas

1. **Scope**
2. Technical Specifications for Format-A Machine Readable Visas (MRV-A)
3. General Layout of the MRV-A
4. Detailed Layout of the MRV-A
5. Technical Specifications for Format-B Machine Readable Visas (MRV-B)
6. General Layout of the MRV-B
7. Detailed Layout of the MRV-B
8. Use of Optional barcodes on Machine Readable Visas
9. References

Appendix A – Examples of a Personalized MRVs
Appendix B – Construction of the MRZ
Appendix C – Positioning in Passport
Appendix D – Materials and Production Methods
Part 8: Reserved for future use

- Emergency Travel Documents
Part 9: Deployment of Biometric Identification and Electronic Storage of Data in eMRTDs

1. Scope
2. eMRTD
3. Biometric Identification
4. The Selection of Biometrics Applicable to eMRTDs
5. Storage of the Biometric and other Data in a Logical Format in a Contactless IC
6. Test Methodologies for (e)MRTDs
7. References

Appendix A – Placement of the Contactless IC in an eMRP
Appendix B – Process for Reading eMRTDs
Part 10: Logical Data Structure (LDS) for Storage of Biometrics and other Data in the Contactless IC

1. Scope
2. Requirements of the Logical Data Structure
3. Application Profile for the Contactless IC
4. File Structure Specifications
5. Elementary Files
6. Data Elements Forming Data Groups 1 through 16
7. References

Appendix A – Logical Data Structure Mapping Examples
Part 11: Security Mechanisms for eMRTDs

1. Scope
2. Assumptions and Notations
3. Securing Electronic Data
4. Access to the Contactless IC
5. Authentication of Data
6. Authentication of the Contactless IC
7. Additional Access Control Mechanisms
8. Inspection System
9. Common Specifications
10. References
Part 11: Security Mechanisms for MRTDs (continuation)

Appendix A – Entropy of the MRZ-Derived Access Keys
Appendix B – Point Encoding for the ECDH-Integrated Mapping
Appendix C – Challenge Semantics
Appendix D – Worked Example: Basic Access Control
Appendix E – Worked Example: Passive Authentication
Appendix F – Worked Example: Active Authentication
Appendix G – Worked Example: PACE – Generic Mapping
Appendix H – Worked Example: PACE – Integrated Mapping
Part 12: Public Key Infrastructure for MRTDs

1. Scope
2. Overview of the Public Key Infrastructure
3. Roles and Responsibilities
4. Key Management
5. Distribution Mechanisms
6. PKI Trust and Validation
7. Certificate and CRL Profiles
8. CSCA Master List Structure
9. References
10. Appendix A – Lifetimes
11. Appendix B – Certificate and CRL Profile Reference Text
13. Appendix D – RFC 5280 Validation Compatibility
The 7th edition of ICAO Doc 9303

Using the seventh edition

ePassport book
The 7\textsuperscript{th} edition of ICAO Doc 9303

Using the seventh edition

Chipless TD1 size card
Characteristics of the Seventh Edition

- No more ‘Duplicates’
- Normative Specifications in Main Body, Informative Appendices
- Consistent Terminology
  - Form Factor
  - MRTD, eMRTD
  - MRP, eMRP
  - MROT, eMROT
- Consistent Formatting
  - Titles, Text, Notes
  - Figures, Tables
The 7th edition of ICAO Doc 9303

1075 Pages !!!!
The 7th edition of ICAO Doc 9303

565 Pages?
Iran ICAO TRIP Seminar (9 to 11 May 2016)

Contact Details

Name: Sjef Broekhaar

Email: sbroekhaar@icao.int

With expression of gratitude to:
Mr. Tom Kinneging
Convenor WG3
ISO