



International Civil Aviation Organization

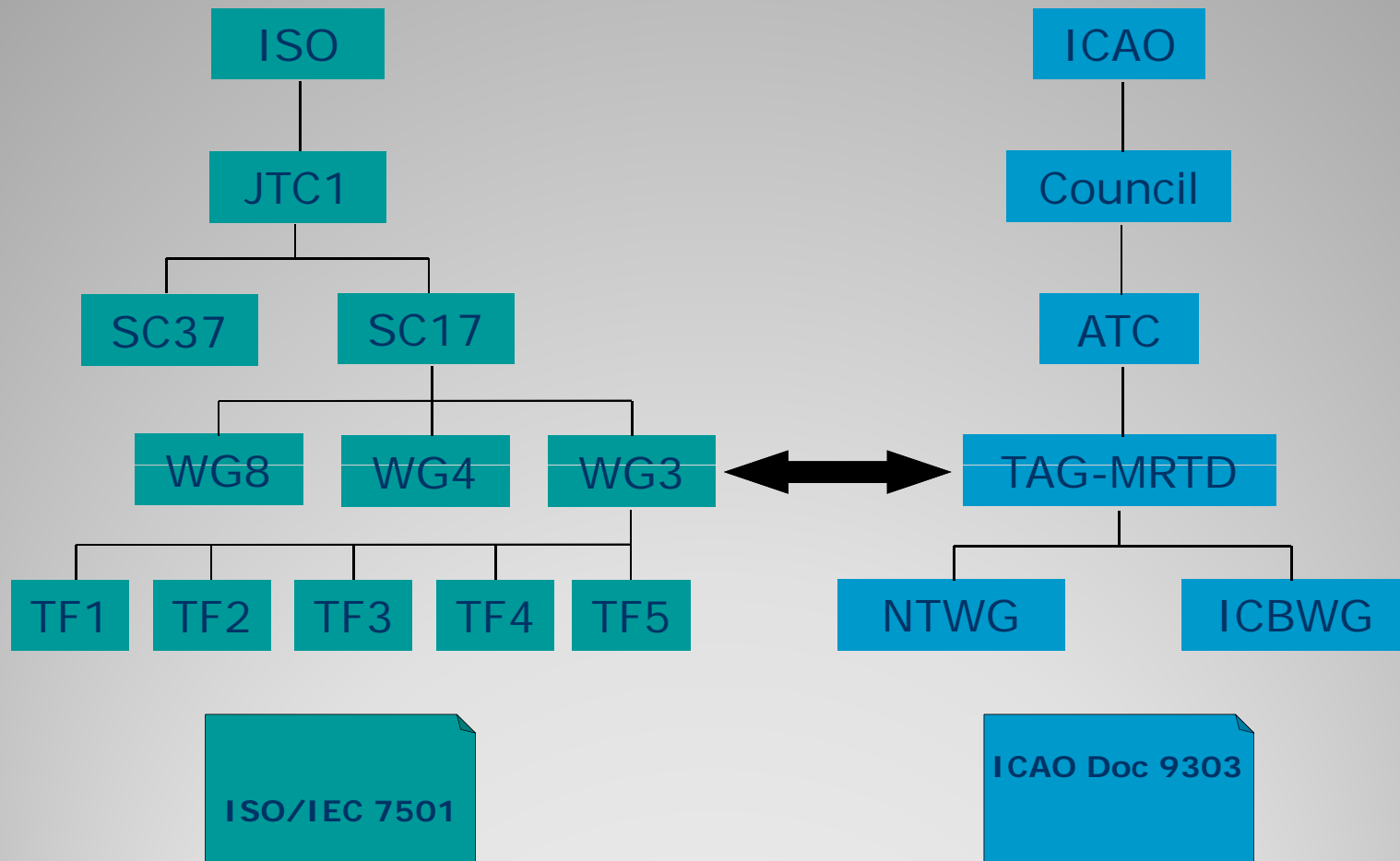
Seventh Symposium and Exhibition
on ICAO MRTDs, Biometrics
and Security Standards

ICAO Headquarters, Montréal, Canada
12 - 15 September 2011



Current Doc 9303 developments and latest Technical Reports

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ICAO-ISO collaboration

Seventh Symposium and Exhibition on ICAO MRTDs,
Biometrics and Security Standards, 12 to 15 September 2011, Montréal

- Part 1 - Machine Readable Passports, Sixth edition - 2006
 - Volume 1 - Passports with Machine Readable data stored in OCR format
 - Volume 2 - Electronically enabled Passports with Biometric Identification Capability
- Part 2 - Machine Readable Visas, Third edition - 2005
- Part 3 - Machine Readable Official Travel Documents, Third edition - 2008
 - 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 10 - 2011
- Technical Reports

The 9303 standard

Seventh Symposium and Exhibition on ICAO MRTDs,
Biometrics and Security Standards, 12 to 15 September 2011, Montréal

- Three activities
 - Clean up Supplement
 - Incorporate Technical Reports
 - Re-structure Doc 9303

Doc 9303 revision

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- Supplement Release 10 - 2011
- 134 issues
 - Clarifications
 - Interpretations
 - Fixes
- Doc 9303 readability
- Incorporate Supplement issues into Doc 9303

Clean up Supplement

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- TR - CSCA Countersigning and Master List issuance
- TR - Supplemental Access Control for MRTDs
- TR - LDS and PKI Maintenance
- TR - Machine Assisted Document Security Verification
- TR - Machine reading options for td1 size MRTDs

Incorporate Technical Reports

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- TR - CSCA Countersigning and Master List issuance
 - Version 1.0 - June 23, 2009
- Bilateral exchange of CSCA certificates
 - Lack of specified mechanisms
 - Inefficiency
- CSCA certificate distribution/publication mechanism
 - Electronically
 - Publication of signed list of received & validated certificates
 - PKD

Incorporate Technical Reports

- TR - Supplemental Access Control for MRTDs
 - Version 1.01 - November 11, 2010
- Basic Access Control recommended feature
 - Anti skimming (access control)
 - Anti eavesdropping (session encryption)
 - Strength limited by design
 - 5 & 10 years passport validity periods
- Supplemental to Basic Access Control
 - PACE V2 (Password Authenticated Connection Establishment)
 - Strength of session keys independent of password
 - Password: Document Number, Date-of-Birth, Date-of-Expiry
 - Password: Card Access Number

Incorporate Technical Reports

- TR - LDS and PKI Maintenance
 - To be published soon
- Evaluation of the standard
 - Accuracy
 - Security
 - Especially cryptographic security features and PKI
- Updated specifications
 - LDS version number electronically signed
 - Updated certificate profiles
 - Access Control
 - Active Authentication with Elliptic Curve Cryptography

Incorporate Technical Reports

- **TR - Machine Assisted Document Security Verification**
 - To be published soon
- Updates/Replaces Doc 9303 Informative Appendix
 - Machine-assisted document security verification
- Machine authentication of document security features
 - Materials
 - Security printing
 - Copy protection techniques
- Advice on reader technologies

Incorporate Technical Reports

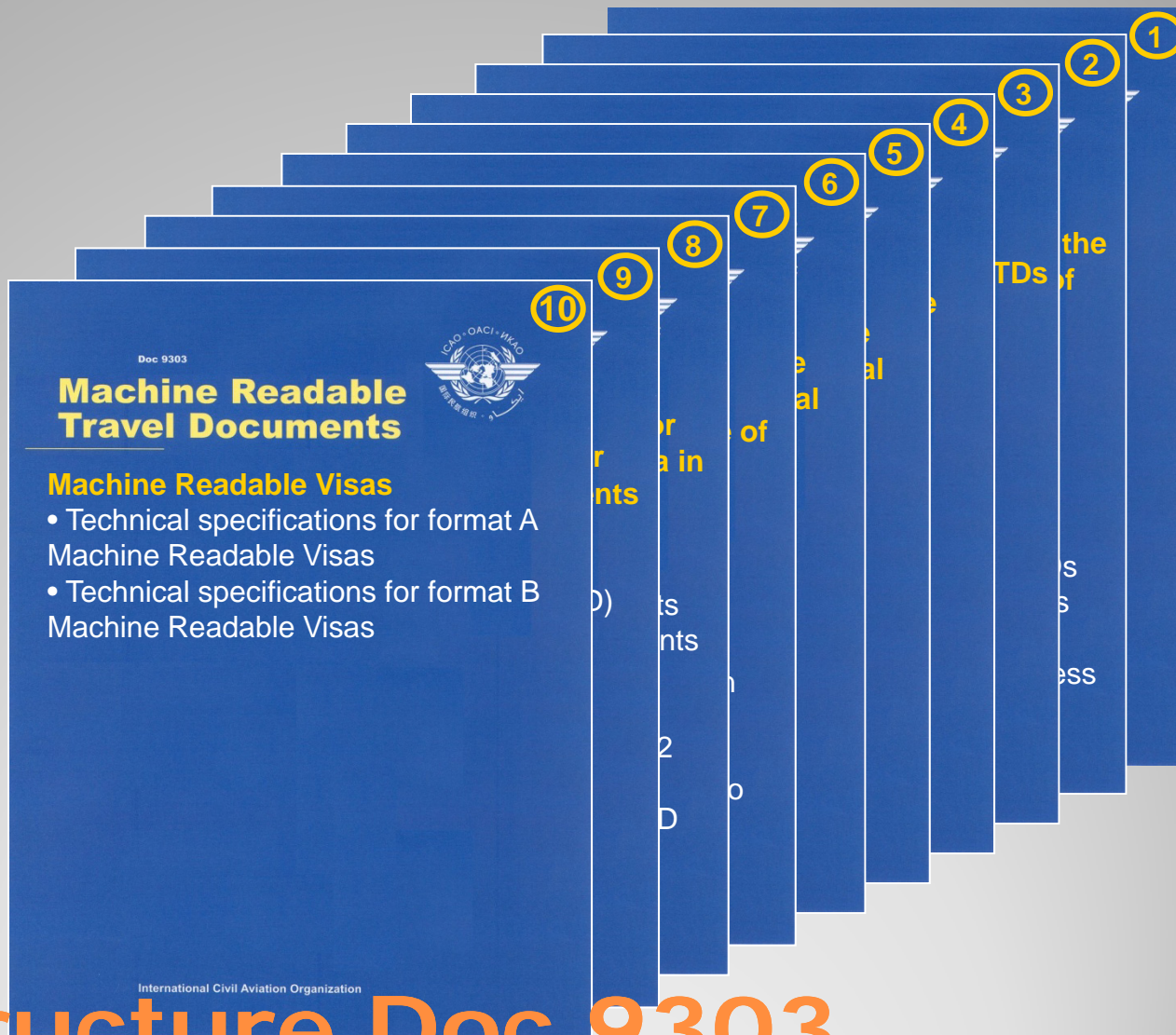
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- TR - Machine reading options for td1 size MRTDs
 - To be published soon
- Machine reading issue
 - MRZ on rear side
 - Biographical profile (including photograph) on front side
 - Document related features on front side
 - Card turning
- Study on options for one-side reading
- Non-chip enabled
 - One-line MRZ
 - (2D) barcode
 - Further study
- Chip enabled
 - Chip access
 - CAN position specified

Incorporate Technical Reports

- Different publication dates for different parts
- Until 2009 paper based
 - Separate (complete) standards for part 1, 2 and 3
 - Duplicate, mainly general, information
 - Volumes 2 of part 1 and 3 almost identical
- Since 2009 electronic (pdf) format
 - Maintenance
 - Readability
 - Efficiency
- Restructuring
 - Specifications appear only once
 - Grouping of general as well as form factor specific specifications
 - Set of (pdf) files
 - User composes relevant subset

Re-structure Doc 9303



Re-structure Doc 9303

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- ePassport book

The collage displays the following document covers:

- 1. Machine Readable Travel Documents**: Introduction
 - Amendments
 - Foreword
- 2. Machine Readable Travel Documents**: Specifications for the security of the design, manufacture & issuance of MRTDs
 - Security of the personalization
 - Machine assisted verification
 - Security of production facilities
 - Information on
 - Information on
 - Security standards
 - Prevention of fraud
- 3. Machine Readable Travel Documents**: Specifications common to all MRTDs
 - Illustrative guidelines for portraits
 - Three letter codes
- 4. Machine Readable Travel Documents**: Specifications specific to ID3 size MRTDs - Machine Readable Passports
 - Construction & dimensions
 - Layout of the MRP data page
 - General layout
 - Content & use of zones
 - Visual Inspection Zone
 - Machine Readable Zone
 - Sequence of data elements
 - Schematic diagrams
 - Examples
- 5. Machine Readable Travel Documents**: A Logical Data Structure (LDS) for storage of biometrics & other data in the contactless IC
 - Process for reading
 - Requirements of the
 - Mandatory & optional
 - Ordering & grouping
 - Data Group specifications
 - Access control
 - Basic Access Control
 - Data authenticity and
 - Passive Authentication
 - Data cloning protection
 - Active Authentication
- 6. Machine Readable Travel Documents**: Public Key Infrastructure (PKI) for Machine Readable Travel Documents
 - Overview of the Public Key Infrastructure
 - Document Security Object (SOD)
 - Document Signer (DS)
 - Country Signing CA (CSCA)
 - Algorithms
 - Key management
 - CSCA Master List
 - Certificate Revocation Lists
 - Public Key Directory
 - Non conforming certificates
- 7. Machine Readable Travel Documents**: The deployment of biometric identification & electronic storage of data in MRTDs
- 8. Machine Readable Travel Documents**: Present specifications characteristics layout fonts & fonts section Zone readable Zone OCRB characters
- 9. Machine Readable Travel Documents**: Biometrics biometric solution solutions applicable to

Re-structure Doc 9303

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- Non-chip td1 card

The collage consists of nine overlapping document covers, each titled 'Machine Readable Travel Documents' and 'Doc 9303'. The covers are numbered 1 through 9 in yellow circles:

- 1**: Introduction
 - Amendments
 - Foreword
- 2**: Specifications for the security of the design, manufacture & issuance of MRTDs
 - Security of the personalization
 - Machine assisted verification
 - Security of production facilities
 - Information on
 - Information on
 - Security standards
 - Prevention of fraud
- 3**: Specifications common to all MRTDs
 - Illustrative guidelines for portraits
 - Three letter codes
- 4**: Specifications for the design, manufacture & issuance of MRTDs
 - Content specifications
 - Characteristics
 - Layout
 - Characters, symbols & fonts
 - Machine Readable Zone
 - OCRB characters
- 5**: Specifications specific to td1 size MRTDs - Machine Readable Official Travel Documents
 - Dimensions of the td1 size MRTD
 - General layout
 - Content & use of zones
 - Visual Inspection Zone
 - Machine Readable Zone
 - Passport card
 - Sequence of data elements
 - Schematic diagrams
 - Examples
 - Crew Member Certificates (CMC)
- 6**: Specifications for the design, manufacture & issuance of MRTDs
 - Security of the personalization
 - Machine assisted verification
 - Security of production facilities
 - Information on
 - Information on
 - Security standards
 - Prevention of fraud
- 7**: The deployment of biometric identification & electronic storage of data in MRTDs
- 8**: A Logical Data Structure (LDS) for storage of biometrics & other data in the contactless IC
 - Process for reading
 - Requirements of the
 - Mandatory & optional
 - Ordering & grouping
 - Data Group specification
 - Access control
 - Basic Access Control
 - Data authenticity and integrity
 - Passive Authentication
 - Data cloning protection
 - Active Authentication
- 9**: Public Key Infrastructure (PKI) for Machine Readable Travel Documents
 - Overview of the Public Key Infrastructure
 - Document Security Object (SOD)
 - Document Signer (DS)
 - Country Signing CA (CSCA)
 - Algorithms
 - Key management
 - CSCA Master List
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Re-structure Doc 9303

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- Three activities - Three phases
 - Phase 1 - Re-structuring
 - Phase 2 - Supplement incorporation
 - Phase 3 - Technical Reports incorporation
- Timeline
 - New structure design - Q4 2011
 - Re-structuring finalized - Q3 2012
 - Supplement issues incorporated - Q4 2012
 - Technical reports incorporated - Q2 2013
 - Publication - Q3 2013

Doc 9303 revision project

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Thank you for your attention

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