



International Civil Aviation Organization

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

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Current Issues Implementing MRPs and eMRPs

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Introduction

- ICBWG is monitoring passport readability & interoperability issues
- 9 national passports initially identified with issues
- including both MRPs and ePassports
- ICBWG has started to contacting states to seek clarification, offer guidance if requested



Overview

Focus of this presentation:

- 1) Highlight the most common issues through illustrations and examples
- 2) Explore the potential impact of non-compliance with Document 9303 standards
- 3) Guidance on possible solutions



Overview

Four main categories of issues:

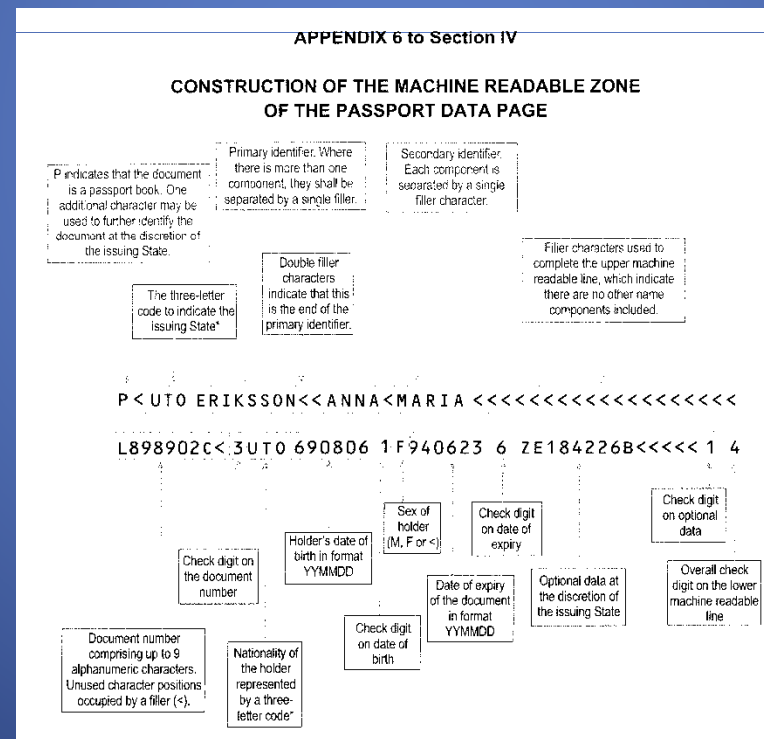
- 1) Incorrect MRZ formatting
- 2) MRZ personalization issues
- 3) Passport materials
- 4) ePassport and PKI concerns



Category 1: MRZ formatting



MRZ follows a specific format to ensure interoperability



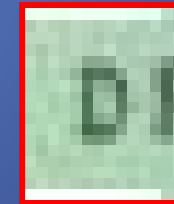
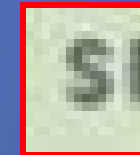
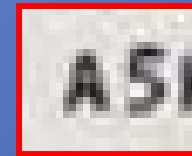
Category 1: MRZ formatting

- Common issues:
 - ✗ Incorrect document type
 - ✗ ISO Country identifier
 - ✗ Incorrect check digit calculation



Category 1: MRZ formatting

- Issue: Incorrect document identifier
- Impact: a) Manual intervention
b) Incorrect type identified

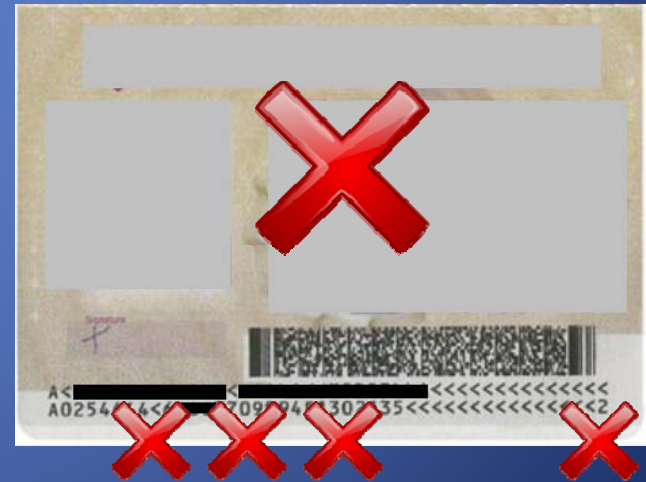


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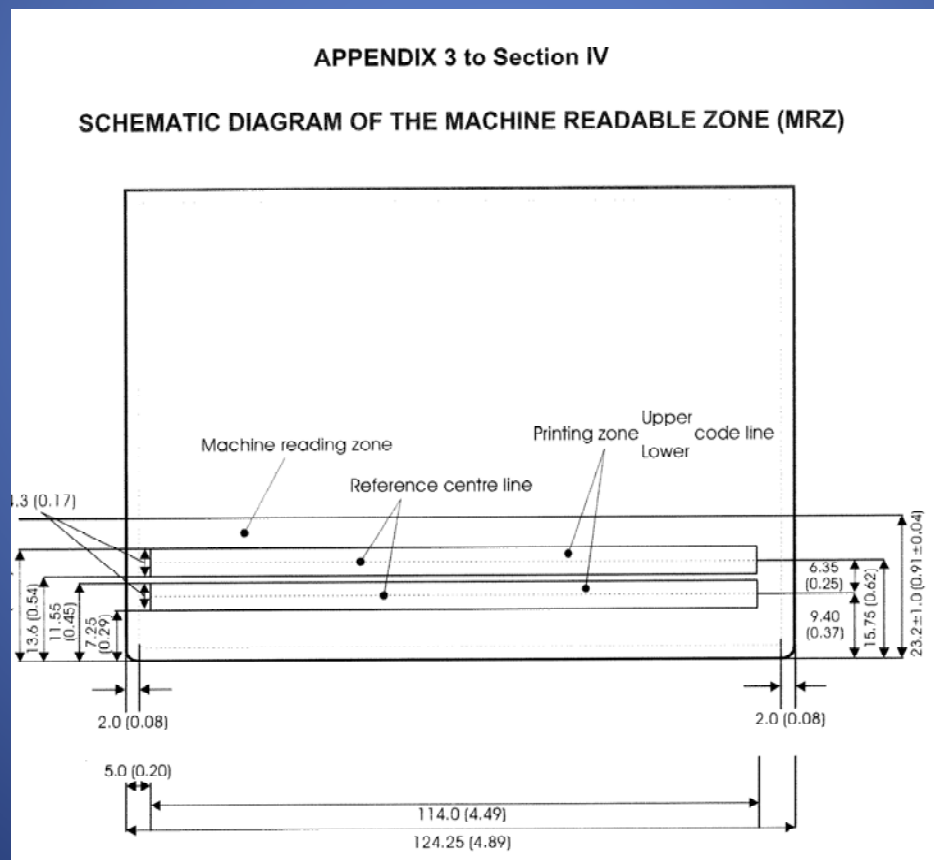
Category 1: MRZ formatting

- Issue: Incorrect check digits
- Impact: a) Possible alerts/flags in border systems
b) Prevent BAC on ePassports



Category 2: MRZ Personalization

✓ Correct positioning is key to readability



Category 2: MRZ Personalization

- Common problems, found in MRPs & eMRPs:

- ✗ Poor print quality
- ✗ Incorrect positioning
- ✗ Intrusions into the MRZ



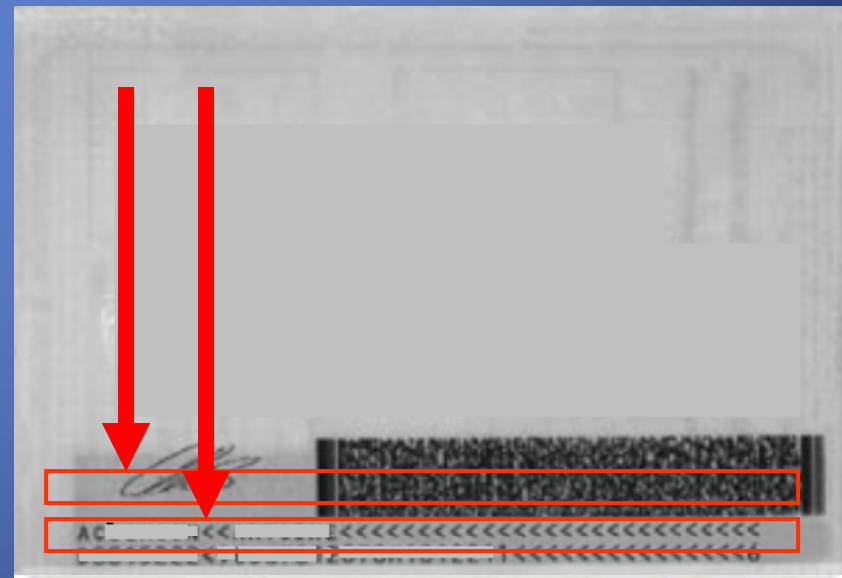
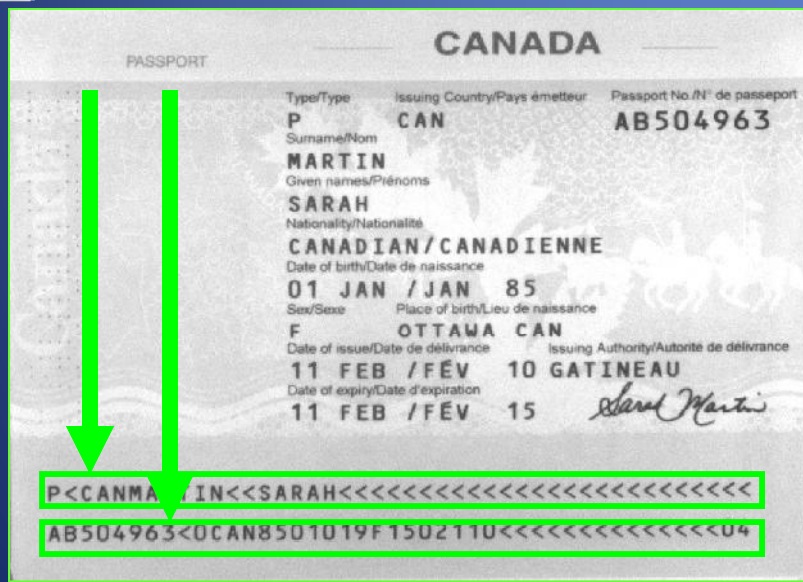
Category 2: MRZ Personalization

- Issue: Poor print quality
- Impact: Not readable, not compliant



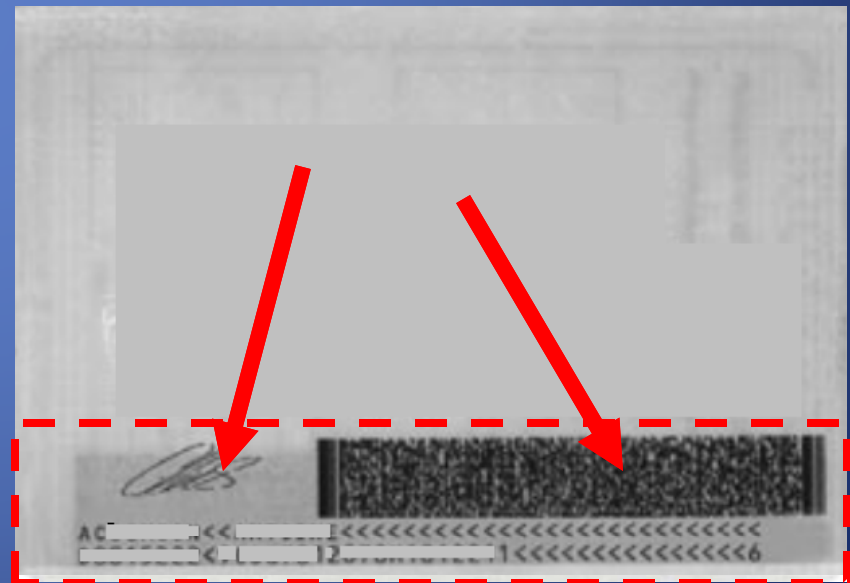
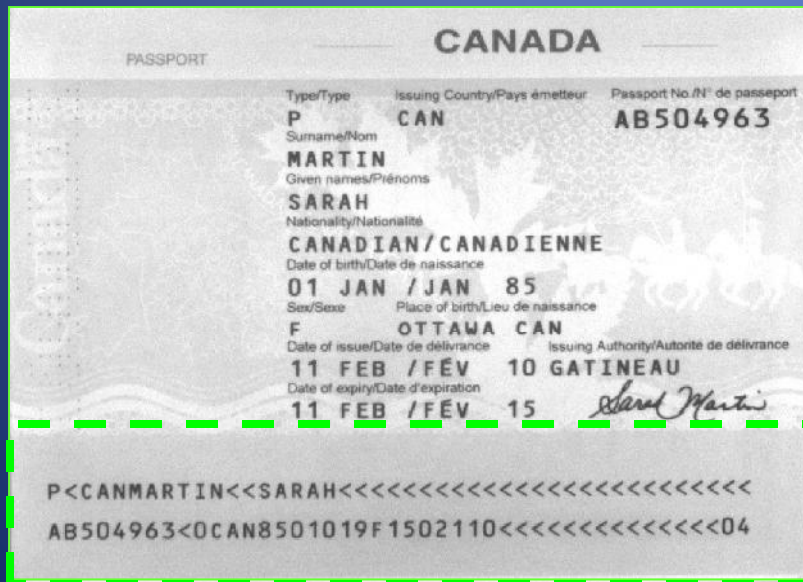
Category 2: MRZ Personalization

- Issue: Position error
- Impact: Interfere with readability, not compliant



Category 2: MRZ Personalization

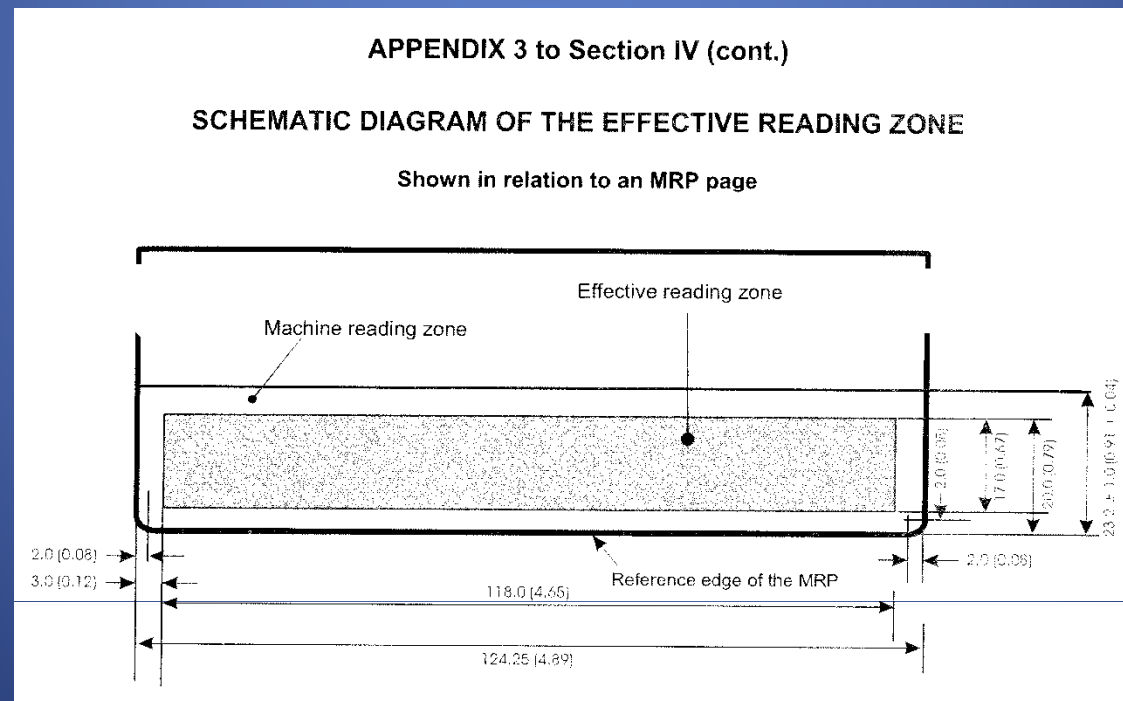
- Issue: Intrusions into the MRZ
- Impact: Not readable, interference



Category 3: Passport materials

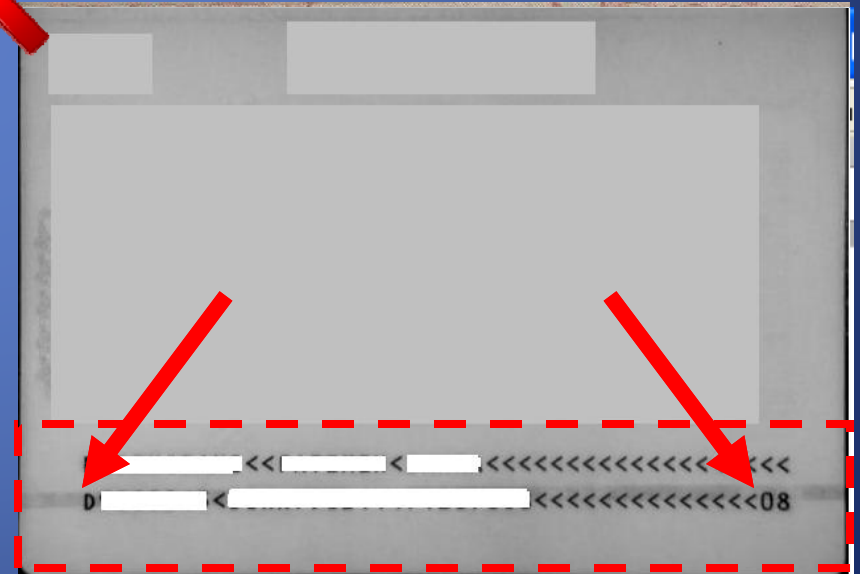
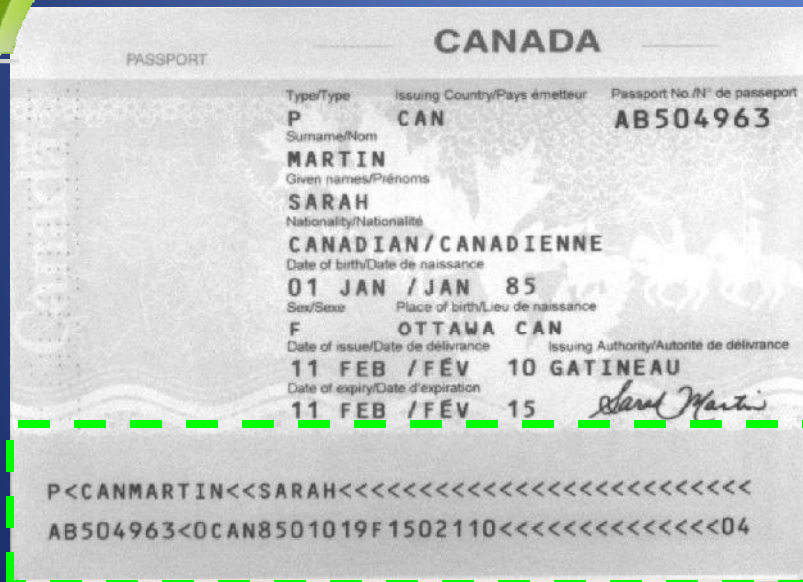


ICAO 9303 has physical specification regarding the MRZ



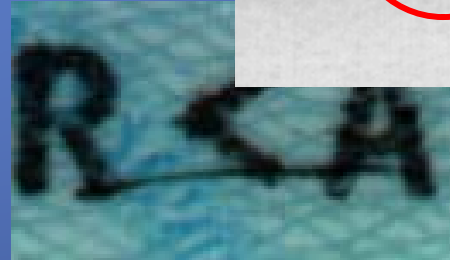
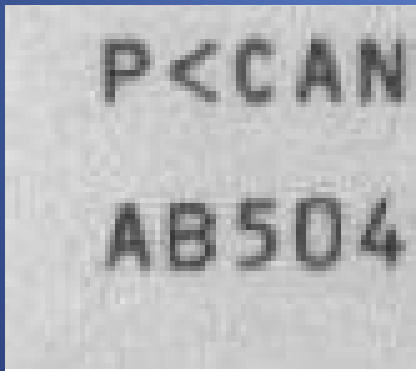
Category 3: Passport materials

- Issue: Presence of security features in the Infrared (IR)
- Impact: Interference with MRZ



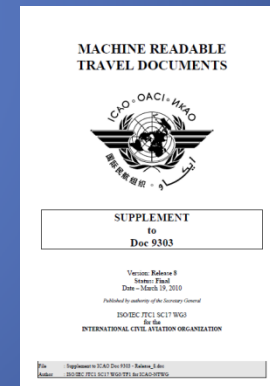
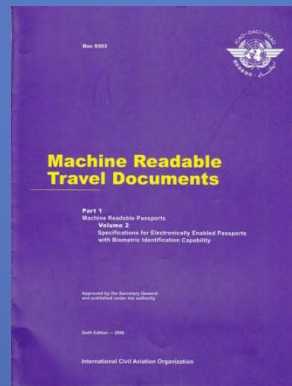
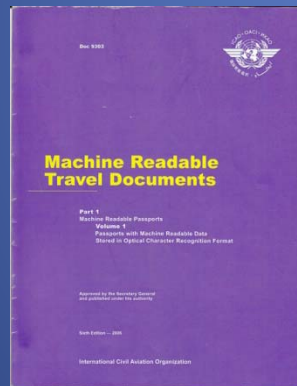
Category 3: Passport materials

- Issue: Security Fibres
- Impact: Interference with character recognition



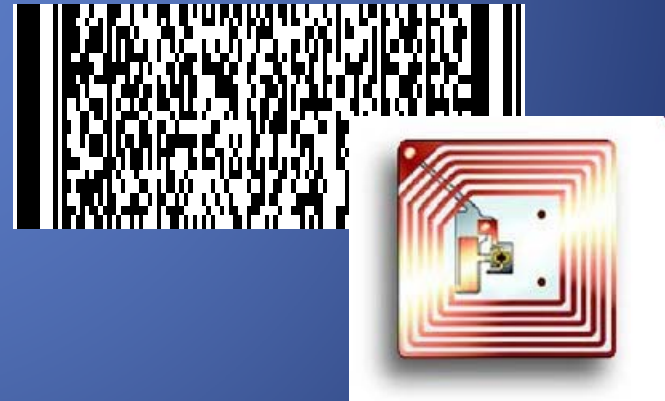
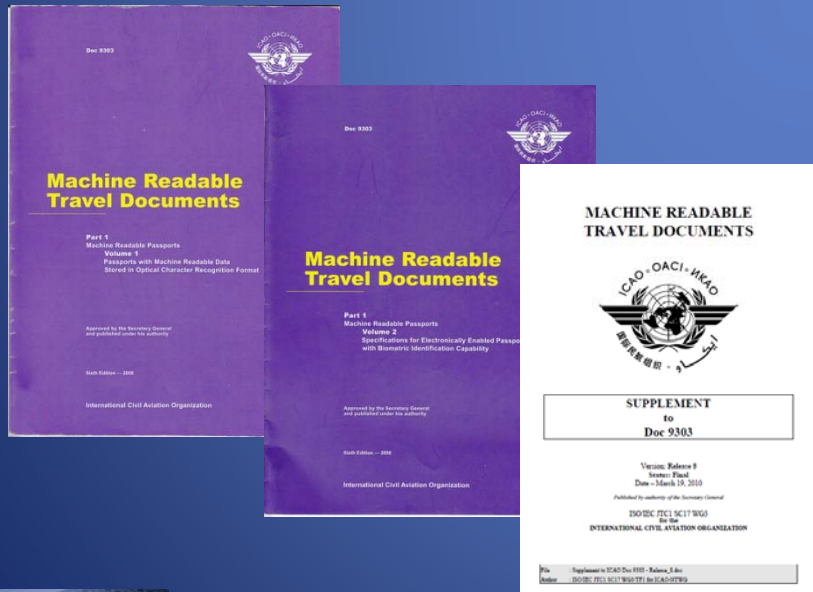
Category 4: ePassport formatting

✓ An ePassport must comply with 9303, Part 1, Volume 1 AND 2, and Supplements.



Category 4: ePassport formatting

- 2D barcode is not an 'electronic' passport
- Confusion over 'chip' in passport vs. 'ePassport'

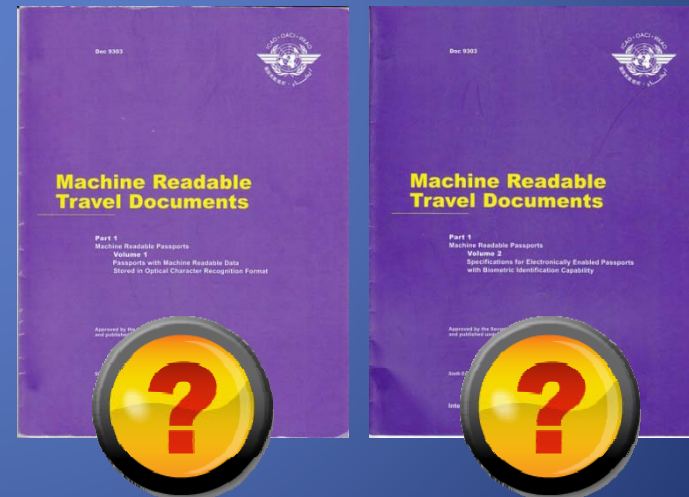


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Category 4: ePassport formatting

- Issue: Incorrect (or no) PKI infrastructure
- Impact: a) Erroneous results during inspection
b) Erosion of confidence in the ePassport



Not compliant??



Summary

- Many of the aforementioned issues can be detected through basic quality practices
- States encouraged to validate their book against 9303 prior to issuance & develop their own in house expertise on the standards
- Particular attention should be paid to eMRP....it must comply with 9303 Part 1, Volumes 1 & 2



Closing Remarks

- ICBWG can assist governments in achieving compliant, interoperable passports
- ICAO Secretariat is interested in receiving information about suspected non-compliance/interoperability issues
- Contact:

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