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# ePassport: Do Yours the Right Way

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# Summary

- There have been enormous strides made over the past decade in researching, designing, developing and deploying today's generations of travel documents.
- Building on the fundamental specifications of ICAO Document 9303, the most tangible results of these efforts have been the incorporation of RF chips and biometrics in passports and other documents.
- This presentation will describe these efforts, provide an understanding of how we have gotten where we are and provide some insight into the work now underway on the next generation of travel documents. This presentation is intended for those of you who are considering ePassport implementation, AND who are considering implementing changes in an existing ePassport program.
- Of particular current note is the widespread interest in making ePassport a global mandatory standard.
- Stated simply, the fundamental message of this presentation is to convey the benefits of ePassport implementation as well as the requirements that are needed to insure that the “e” is carried out in ways that will USE the capabilities of the technologies.





# *Threshold Questions*

- Do I WANT an ePassport system?
- Do I NEED an ePassport system?
- Am I prepared to USE an ePassport system?
- Is the INTEGRITY of my current process consistent with and complementary to the technological advances of an ePassport program?
- “Make everything as simple as possible, but not simpler.” – Albert Einstein





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## *Do You WANT an ePassport System?*

- Have you done a comprehensive risk identification and management analysis of your present system?
- Are you confident that your vulnerabilities are or will be identified and corrected to take advantage of the ePassport?
- Why is an ePassport useful to your country?





## *Do You NEED an ePassport System?*

- What will the “e” do for YOU that a traditional MRP will not?
- Are you prepared to take advantage of the economies of scale (centralization) often accompanying ePassport implementation?
- Have you considered the impact on overseas issuance?
- Is your border management procedure and process equipped to deal with **properly** inspecting ePassports?





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## *Are You Prepared to USE an ePassport System?*

- Are your inspection processes ready to use the cryptographic keys in ePassport?
- Are you going to join the PKD prior to ePassport implementation; have you taken appropriate budgeting precautions?
- Have you prepared your traveling public for the changes that biometric capture and use will bring about?





## *Overall System Integrity: Is YOURS Enough?*

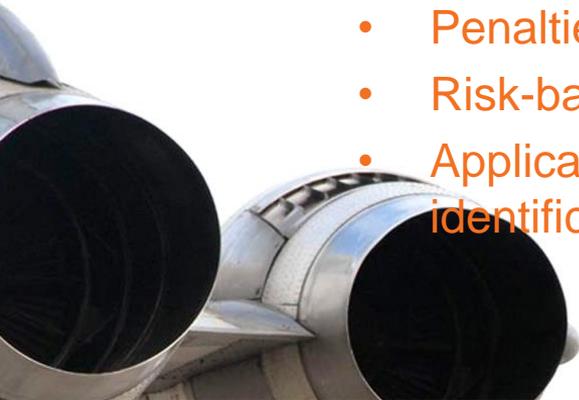
- Is the integrity of the current issuance and handling process consistent with and complementary to the technological advances of an ePassport program?
- Are evidence of identity procedures and safeguards as strong as the document that you issue that alleges identity?
- Have you effected changes to insure to respect personal privacy of biometric and other data?
- Have your human resource issues been thoroughly addressed?
- Do you comply with both the letter as well as the *spirit* of 9303?
- Have you examined overseas issuance considering inherent differences of culture, infrastructure, external pressures?
- Will emergency travel documents be a fraudster loophole?





## *Measures of Integrity*

- Human systems-zero tolerance
- Work atmosphere and environment
- Spoiled document handling
- Blank document controls
- In-house auditing
- Penalties-legal/judicial system as well as administrative
- Risk-based decision making
- Application and entitlement procedures - evidence of identification (deserves its own slide)





## *Application and Entitlement Processes: Evidence of Identification*

- **Evidence** that the claimed identity is valid, i.e. that the person was in fact born and, if so, that the owner of that identity is still alive.
- **Evidence** that the presenter links to the claimed identity – i.e. that the person claiming the identity is who they say they are and that they are the only claimant of the identity.
- **Evidence** that the presenter uses the claimed identity – i.e. that the claimant is operating under this identity within the community; **Social Footprint**
- Standards of performance and indices of variances-expectations and a framework so employees know the rules
- Beyond breeder documents-e.g., over 7,000 differing kinds of US document of birth
- Online database linkages of a wide nature with real time access; civil registries, systems of birth, death, marriage, tax, real estate, and related commercial services





## *Lessons-Learned to Keep in Mind*

- Pragmatics of mischief with ePassports
  - Skimming
    - Reading the electronic data in an IC chip surreptitiously with a reader in the vicinity of the travel document.
  - Eavesdropping
    - When data from an IC chip are intercepted by an intruder while it is being read from an authorized reader.
  - Cloning
    - Copying the data that has been placed on a chip
      - “Although he can clone the tag, (the hacker) says it's not possible, as far as he can tell, to change data on the chip, such as the name or birth date, without being detected. That's because the passport uses cryptographic hashes to authenticate the data.”
- Distance, power, visibility, at what price? And then “what” do you have?—  
The So what test!
- Not just a Chip
  - The e-passport is everything that non-ePassports have ever been, but in addition, there is a chip





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*Thank you for your  
attention...*



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