



International Civil Aviation Organization

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

ICAO Headquarters, Montréal, Canada
12 - 15 September 2011



PKD and ePassport - Inseparable Twins



Duncan Westland
Deputy Director Identification Technologies,
Identity and Passport Service, UK

- Together, the ePassport and ICAO PKD provide assurance that:
- The biodata (biometric and biographic) on the passport's chip was put there by the issuing state and by no one else; and
- The data has not been altered in any way

But how does it do that?.....

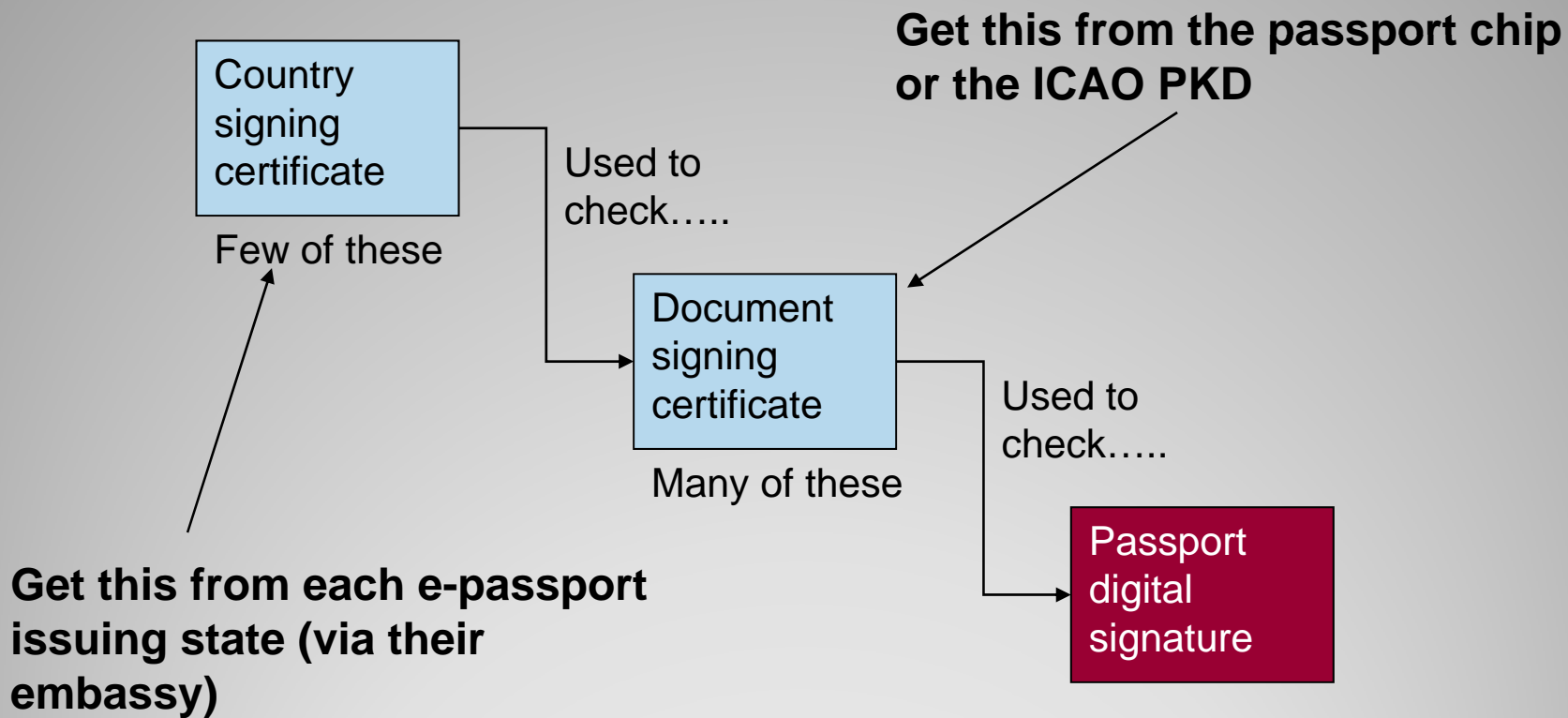


The advantage of an eMRTD

- For the PKI to work you have to trust *someone!*
- Once you trust someone, you can trust any certificate that they've signed under their Certificate Policy
- You can also trust data that is digitally signed and checks out against any of these certificates



It's all about trust



The passport hierarchy of trust

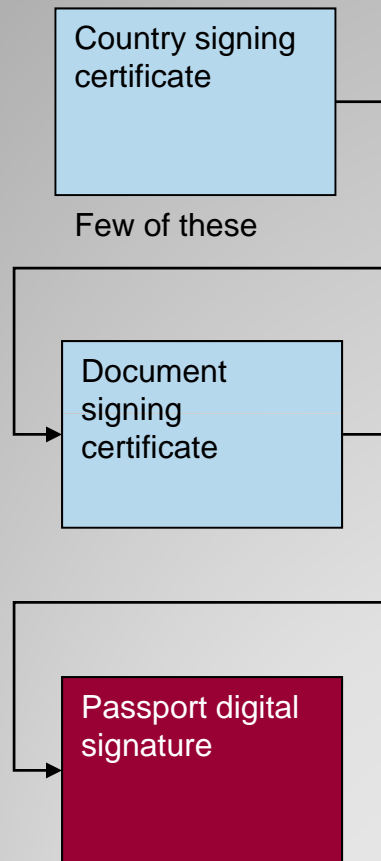
Country
signing

certificate

- Did I get this in-person from an accredited government official?
- No?
- Oh dear....



How do I decide who to trust?



- ICAO PKD carefully checks the provenance of these....
- ...and then cryptographically checks and publishes these...
- ...so all we need to do is this!



ICAOPKD to the rescue!

Certificate
Revocation

Lists

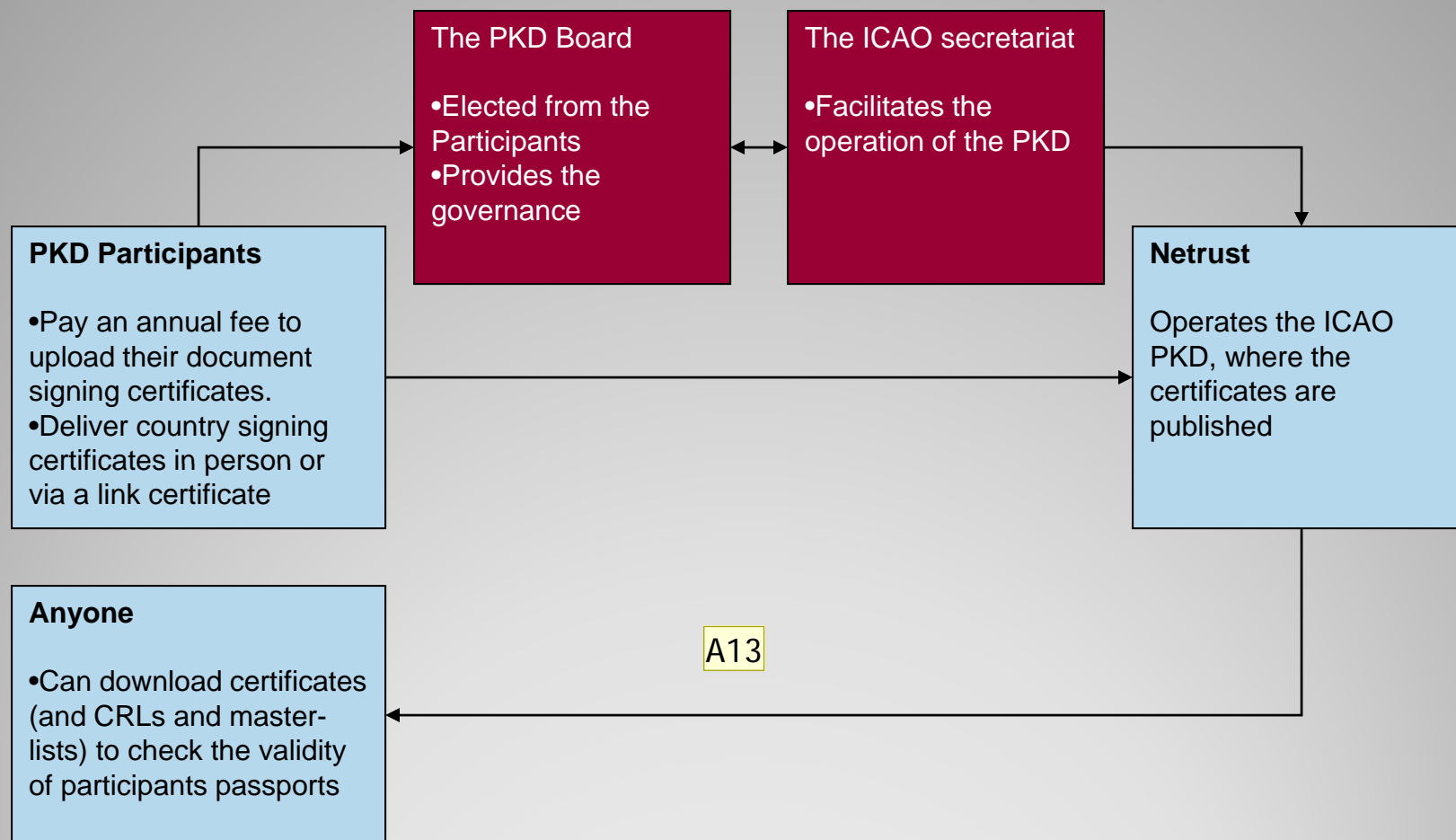
Master lists

- Without the PKD there's no easy way to check that a certificate is still valid...
- ...Or to check that the Country Signing certificates you have are genuine



Other benefits of the PKD

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The structure of the ICAO PKD

Slide 8

A13

this slide is very coarse and should be sexed up: e.g. I would expect that you mention the Registration Fee (1x) and the Annual Fee (recurring) with the two components (ICAO costs / Netrust charge); moreover I would expect that you mention fewer costs with rising participation; you may give the figures for 2011 to make clear what dimension prospective PKD Participants must take into account; you should also use the world map to show the 27 good examples (i.e. the PKD Participants); you may also say a few words about the technical documentation and the support from Netrust (Registration Fee is taken to connect new PKD P.); you may also say that meetings can be observed on invitation (next in SGP); also mention standard conformity is checked before import/upload ... the message must be that the PKD and the ePassport belong together but nothing in life is free of charge and the PKD lacks any sensible alternative

Author, 22/08/11

Public Key Directory



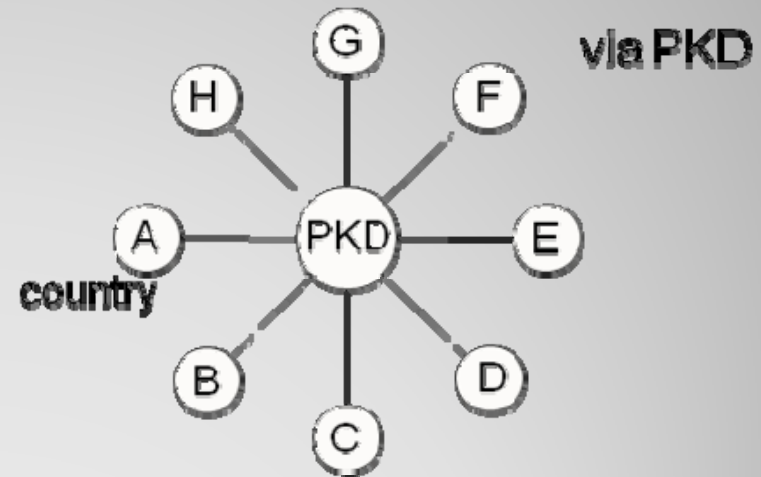
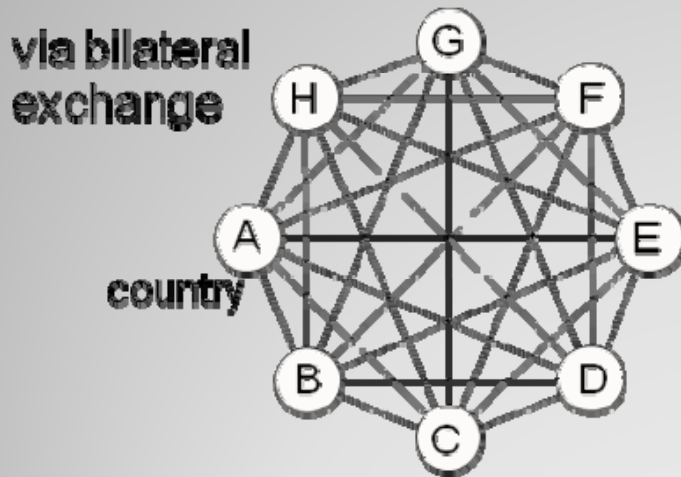
The sun never sets on the
ICAO PKD

- The more members the cheaper it gets and the better it works!
- In 2011 the annual fee is USD 57k with a one-off registration fee of USD 56k. This pays for Netrust's services and for the ICAO secretariat
- If you're thinking of joining, why not ask to go along to a PKD Board meeting as an observer?



How much does it cost?

- The ePassport gives unprecedented document security
- But only if we use the ICAO PKD (or do a lot work ourselves)



The bottom line