



INTERNATIONAL CIVIL AVIATION ORGANIZATION

ICAO Regional Seminar on MRTDs, Biometrics and Border Security

30 November - 2 December 2011
Singapore



PKD and ePassport - Inseparable Twins

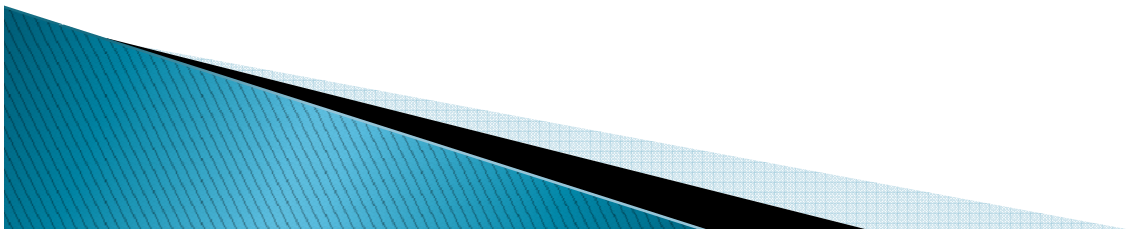


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UK

The advantage of an eMRTD

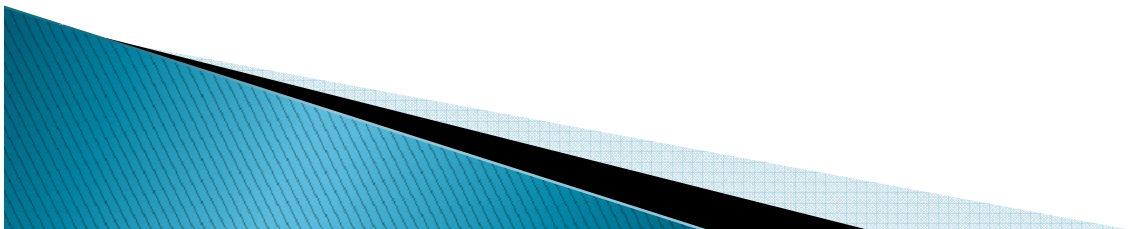
- ▶ Together, the ePassport and ICAO PKD provide assurance that:
- ▶ The biodata (biometric and biographic) on the passport's chip was put there by the issuing state and by no one else; and
- ▶ The data has not been altered in any way

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

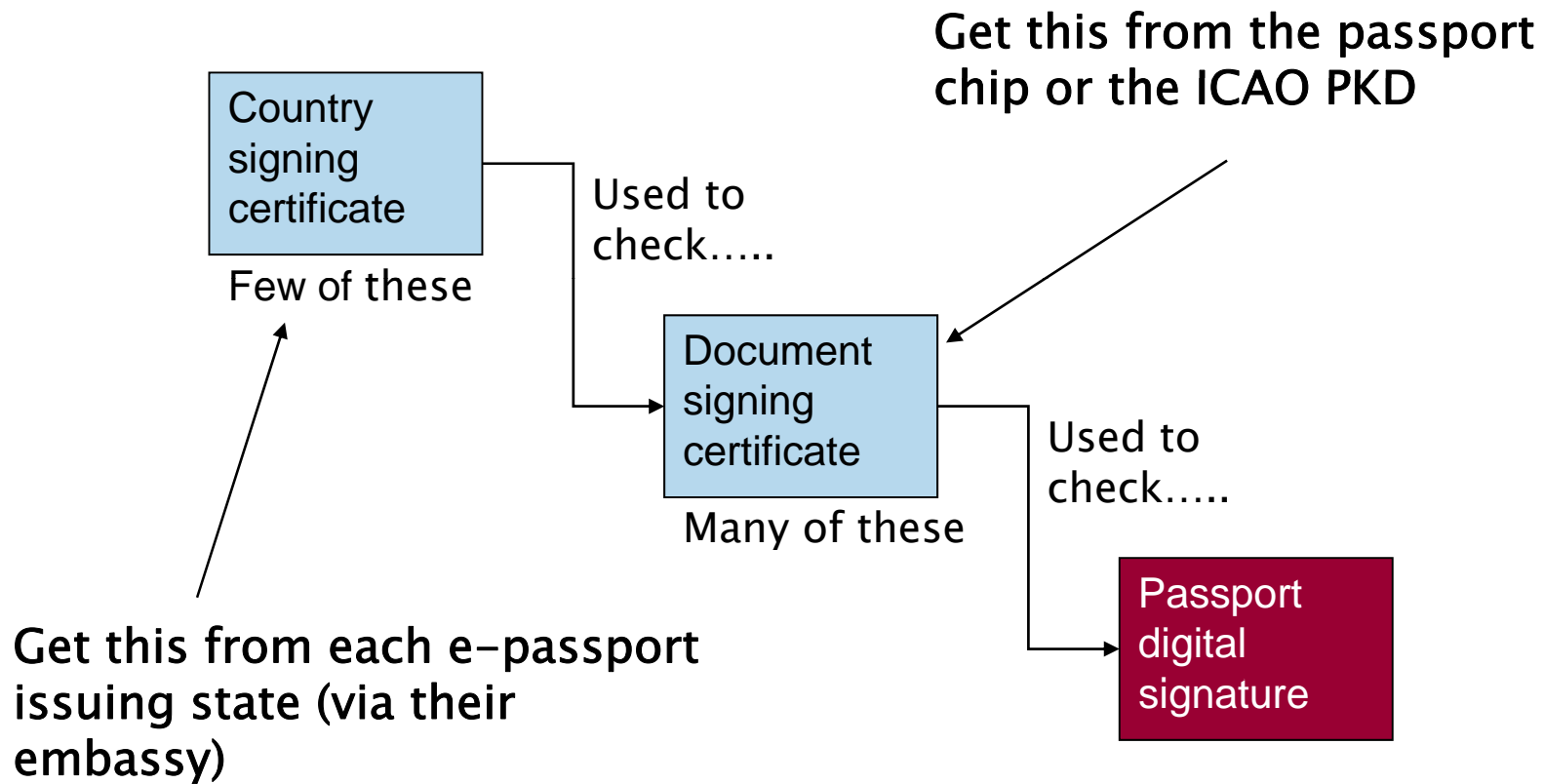


It's all about trust

- ▶ 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



The passport hierarchy of trust



How do I decide who to trust?

Country
signing

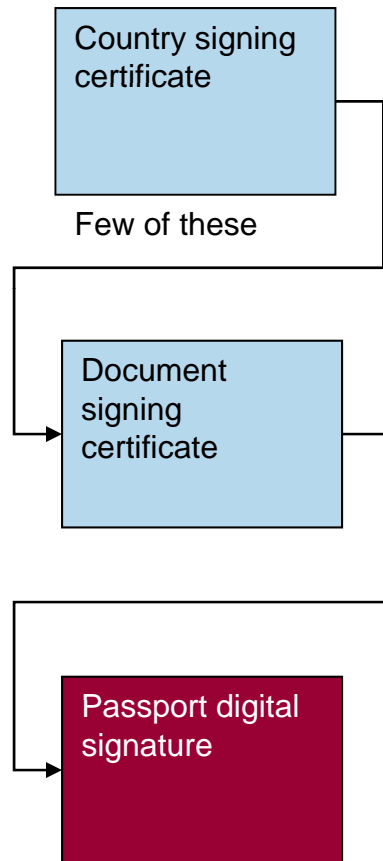
certificate

Did I get this in-person
from an accredited
government official?

No?

Oh dear....

ICAO PKD to the rescue!



ICAO PKD carefully checks the provenance of these....

...and then cryptographically checks and publishes these...

...so all we need to do is this!

Other benefits of the PKD

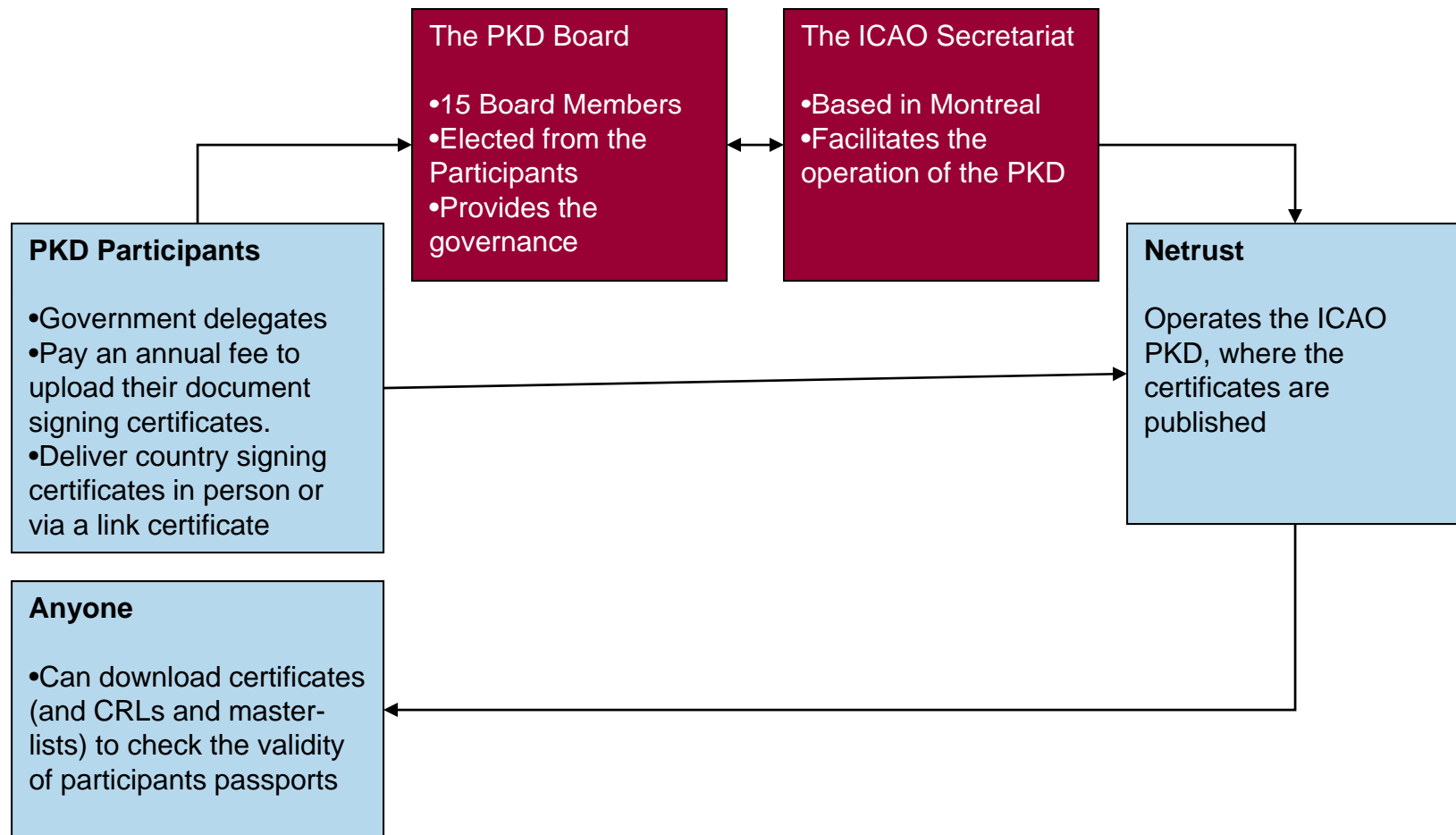
Certificate
Revocation

Without the PKD there's no easy way to check that a certificate is still valid...

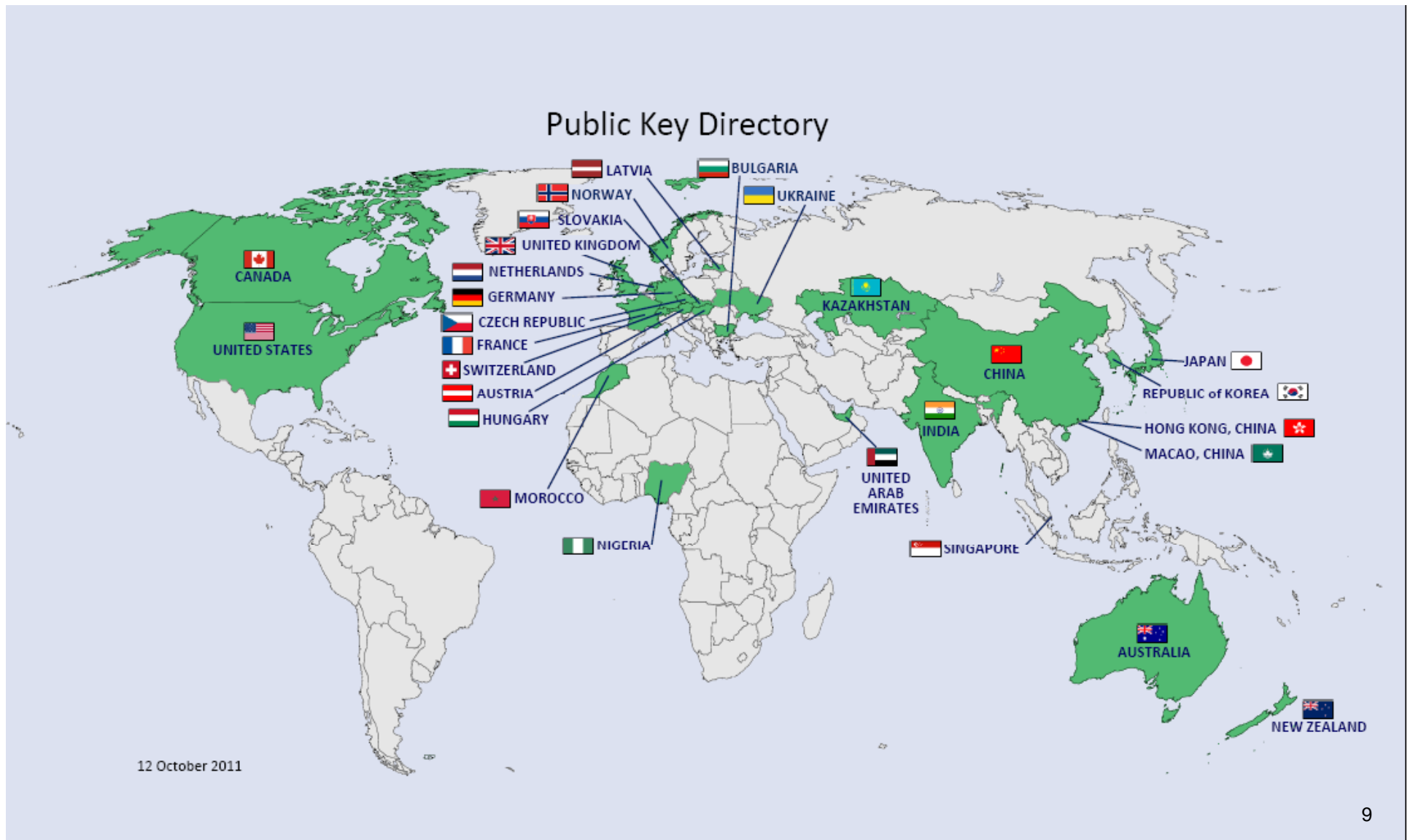
Master lists

...Or to check that the Country Signing certificates you have are genuine

The structure of the ICAO PKD

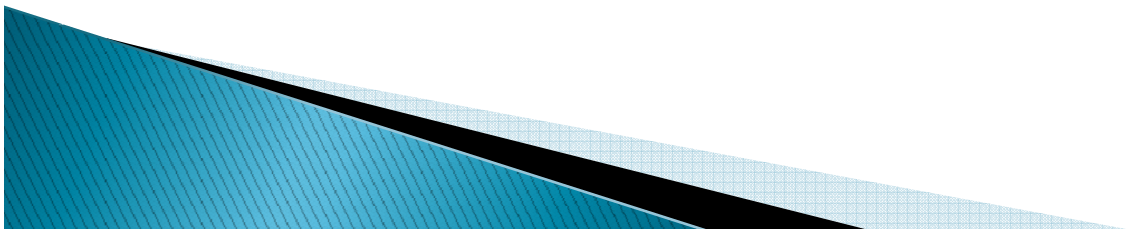


The sun never sets on the ICAO PKD



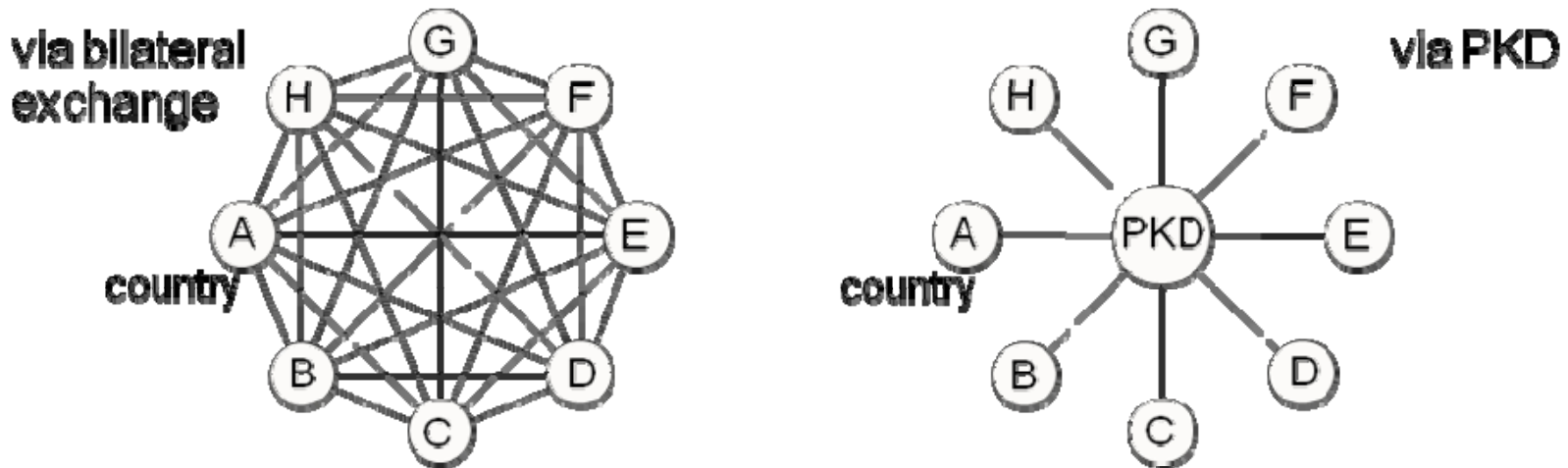
How much does it cost?

- ▶ 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?



The bottom line

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



Thank you for your attention

