

# 2<sup>nd</sup> Symposium on ICAO-Standard MRTDs, Biometrics and Security

## Travel Document Evolution: Interoperability, Biometrics and ICAO

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MRTD Symposium  
ICAO Headquarters, Montréal  
6 – 7 September 2006

# Summary

- ✿ Overall, to provide an international perspective on the application of ICAO standard chip-based, biometric enhanced travel documents and the challenges that confront us today
- ✿ The use of technologies in globally interoperable MRTD programs is well underway and on a solid foundation, thanks to massive multilateral cooperation and effort in partnership between governments and industry.
- ✿ While the documents themselves are becoming near-bullet-proof in terms of security, the systems on which entitlement decisions rely are vulnerable and demand immediate attention.

# *The Partnership*

- ✿ ICAO is the fulcrum around which the travel document standards deliberations revolve
- ✿ As well, ISO, the International Standards Organization, and ICAO have forged a highly effective working relationship
- ✿ ISO SC17, Cards and Personal Identification, where WG3 and WG8 reside, is THE center of ICAO interests
- ✿ Additionally, ISO SC37, the Biometrics standards-making body is also important

# *Documents of ICAO*

- ✿ ICAO Doc 9303, when endorsed, becomes ISO Standard 7501
- ✿ ICAO Technical reports (TR's) are the mainstay of the work carried out to embrace ultimate specifications
- ✿ Document 9303 Supplement, the maintenance vehicle, to update and amplify

# *Testing to Date*

- ✱ Canberra, Australia
- ✱ Morgantown, West Virginia, USA
- ✱ Sydney, Australia
- ✱ Baltimore-Washington International Airport, USA
- ✱ Tsukuba, Japan
- ✱ Singapore
- ✱ Several “live tests” recently
- ✱ Interoperability and conformity testing in Berlin, June, 2006



# *Summary of 9303 Development*

- ✱ London November 2000—Contactless chips
- ✱ Biometrics Selection TR 2001
- ✱ London July 2003--Joint ICAO/ISO meeting
- ✱ LDS TR 2003
- ✱ PKI TR 2003
- ✱ Biometrics Deployment TR 2003
- ✱ Canberra, February 2004
- ✱ 9303 Supplement—Kyoto, September 2004
- ✱ NTWG—Auckland, December 2004
- ✱ Berlin, February 2005—the “Guide”
- ✱ Montreal, September 2005—TAG acceptance of Edition Six Draft
- ✱ Berlin, May-June 2006—Testing and TF/WG3 meetings
- ✱ Supplement, Edition Four, published as posted

# ***Results of Five Years of Work: The New Orleans Resolution***

- ☀ March 2003 in New Orleans, Louisiana, USA
- ☀ Face is THE biometric for global interoperability
- ☀ Issuers may optionally use fingerprint and/or iris as additions to facial recognition
- ☀ Contactless chips are the data storage medium of choice

# ***The Wave of the Present: Travel Document Enhancements***

- ✱ Inks
- ✱ OVD's of many hues and flavors
- ✱ Paper and accompanying measures to protect
- ✱ Watermarks of various technologies
- ✱ Security printing
- ✱ Many other physical features
- ✱ Contactless chips-ISO 14443
- ✱ Biometrics-face, finger, iris
- ✱ Cryptography-data security and integrity
- ✱ Data Sharing-bilateral, multilateral, special-purpose, commercial and government
  - Bilateral and multilateral data sharing
  - Law enforcement interfaces
  - Civil records systems-birth, death, marriage, tax, real estate
  - Commercial services-document features, background checking



# ***Recent Developments***

- ✱ The European Union has directed that passports of member countries will incorporate both face and fingerprint
- ✱ Work continues on PKI and related matters, including EAC, still the least mature area of travel document specifications
- ✱ The very ambitious reality of the EU-wide visa system is proceeding
- ✱ In September of 2005 ICAO TAG endorsed the newly revised suite of 9303 Part 1 specifications, WG3 and TF's 1, 4 and 5 held meetings in Berlin in June, and Supplement 9303 Edition 4 was issued to update specifications and is posted on the ICAO website
- ✱ The passport interoperability testing in Germany at the beginning of June has been more of a litmus test than any thus far
- ✱ The recent APEC Workshop convened in Hong Kong demonstrates the extensive interest as well as impressive reality of the use of chips and biometrics in e-passports and other identity applications in many of those member economies
- ✱ Many countries are proceeding toward implementation—approximately 54 have indicated they will have or begin to develop programs for e-passports by 2007

# Country Profiles

- ✱ Passport programs
- ✱ Inspection programs
- ✱ The work is completed; the work is just now beginning

# ***Nature of Current Threats***

- ☀ Counterfeit documents
- ☀ Theft of blank documents
- ☀ Malfeasance, nonfeasance, corruption
- ☀ False identity-using genuine evidence obtained improperly to obtain a genuine document
- ☀ False identity-using manufactured evidence of support to obtain a genuine document
- ☀ False identity-using lost or stolen already-issued genuine documents
- ☀ Multiple issuance/multiple identities

# ***Best Practices***

- ☀ The fundamental first step for system integrity is to conduct a comprehensive risk analysis and THEN construct a risk management profile; this is particularly critical for assessment of the biometric data collected and its uses
- ☀ Insure that all aspects of the biometric system(s) are thoroughly understood by all involved, especially the staff on the line and those affected by its administration
- ☀ Make extensive use of the tools of technology, e.g., rules-based adjudication software
- ☀ Standards define requirements that must be addressed as minimum specifications both for technical soundness as well as adherence to quality control
- ☀ Overseas issuance-inherent differences of culture, infrastructure, external pressures
- ☀ Fraud prevention programs-detection, deterrence, follow-up, information sharing
- ☀ Monitoring and auditing-border crossings as well as document issuance and entitlement authorizations
- ☀ Database linkages and data sharing are multiplicative in impact and become especially powerful tools when combined with biometric data



# ***The Prognosis***

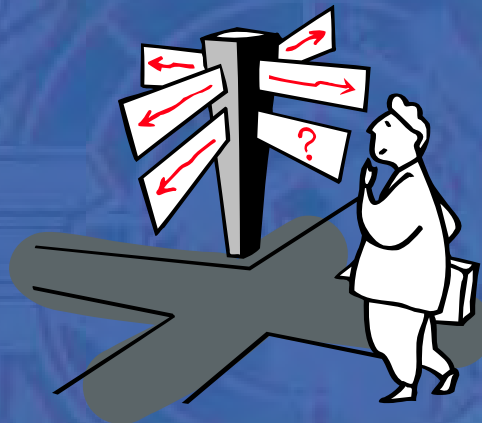
- ☀ Chips
- ☀ Enrollment systems
- ☀ Biometrics
- ☀ Inspection systems



# *Issues Facing Border Control Today*

- ✱ Biometrics
- ✱ Enrollment and other systems
- ✱ Profiling
- ✱ Information sharing
- ✱ Privacy and data integrity
- ✱ New visions

# Thank You



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