

2nd Symposium on ICAO-Standard MRTDs, Biometrics and Security

e-Passport/MRTD Observations

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MRTD Symposium
ICAO Headquarters, Montréal
6 – 7 September 2006

Live Test Overview

☀ Objective:

- Test performance of e-Passports from participating countries: Singapore, Australia, New Zealand and the United States
- Test the operational impacts of processing e-Passports on the primary inspection process

☀ When: January 15 – April 15, 2006

☀ Where: San Francisco International (SFO) Airport, International Terminal G

- Other participating Airports include Singapore's Changi Airport (SIN) and Australia's Sydney Airport (SYD)

Actual Test Participants (at SFO)

☀ Planned e-Passport Participants:

- Australia: Began issuing (October 2005)
- New Zealand: Began issuing (September 2005)
- Singapore: Singapore Airline Crew (SQ)
 - ☀ (SQ staff – only issued to SGP citizens)

☀ Other e-Passports Processed:

- | | |
|---------------------|--------------------|
| ➤ Belgium (Non-BAC) | Sweden (BAC) |
| ➤ Germany (BAC) | Switzerland (BAC) |
| ➤ Japan (BAC) | Thailand (Non-BAC) |
| ➤ Monaco (BAC) | UK (BAC) |
| ➤ Norway (BAC) | |

e-Passport Information

e-Passport Chip Types

A Chips – 64%

B Chips – 36%

Geometry (Chip/MRZ Same or Opposite Side)

Same Side – 43%

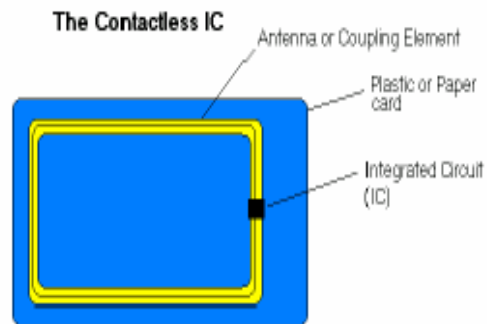
Opposite Side – 57%

Basic Access Control (BAC)

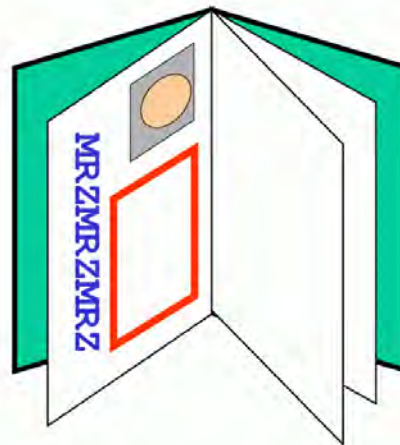
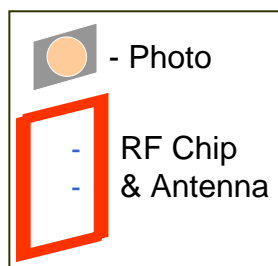
Yes – 86 %

No – 14 %

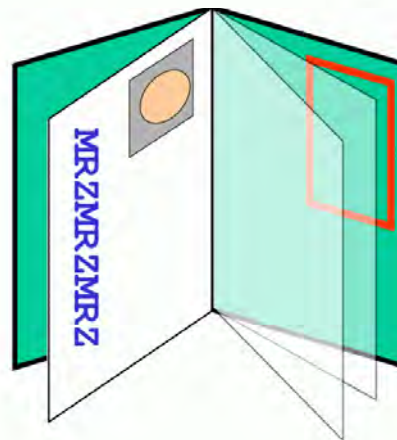
e-Passport Configurations



Chip may be located
anywhere along antenna loop



Geometry I:
Chip and
data page
on same
side of fold



Geometry II:
Chip and
data page
on other side
of fold

Live Test Observations

☀ e-Passport Read Issues

- e-Passport not appropriately placed on reader to trigger read (new, stiff books may require specific placement)
- Thumb is held underneath e-passport, between chip and reader (issue for e-Passports with opposite geometry)
- Officers remove the e-Passport too soon resulting in incomplete read (or try to swipe e-Passport as with existing OCR-B reader)
- Movement of e-Passport once placed on the reader
- Thick books with chips in middle pages may not read due to distance of the chip from the antenna
 - ☀ Insertion of visas or other stickers, travel documents will expand the depth of the book from cover to chip

Live Test Observations (Continued)

☀ MRZ issues (all passports)

- Worn and used passports can cause problems on reading the MRZ, thus causing problems opening the chip for BAC enabled e-passports
- Shiny laminates on the data page can cause the MRZ not to be read on some units
- Patterns behind the MRZ can cause the MRZ to be misread
- Poor quality printing or non-standards size MRZ characters cause misreads (MRZ stickers should NOT be used, even for emergency passports)

Live Test Observations (Continued)

☀ Other Operational Issues

- Insertion of data page only into the reader “tenting” results in no chip read for those e-Passports with the chip in the front cover
 - ☀ This practice could also result in tearing of the data page
- New reader technology sometimes distracting – officers take eyes off travelers or workstation screen and look at reader screen (if applicable)
- Size comparison of readers to existing OCR-B reader – officers commented on amount of desktop space required as opposed to regular MRZ swipe reader
- Oversize passport covers may make some e-passports unreadable using flat bed scanners
- ID-1 size documents can be read and “forgotten” as the document is not visible on some of the scanners with certain hood configurations

Live Test Observations (Continued)

☀ e-Passport Identification

- Travelers are often times not aware they are carrying an e-Passport
- Signage used identifying e-Passport Test but not always read or followed
- The ICAO logo on book does not always equate to “e-Passport” ; electronic lane signs used could not display ICAO logo

☀ Other Issues

- Not all e-Passports processed through designated lanes
- Some e-Passports had documents stapled through the chip page or cover of book (where chip located)
- e-Passports with chip in front cover need to be removed from passport covers/folders to properly place document in reader (this is also required for the officer to identify an e-Passport if the cover is not clear/transparent)
- As processing e-Passports takes more time, officers process changed (placing document on reader and then continue interview concurrently while e-Passport processing)







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