

12TH TRIP SYMPOSIUM AND EXHIBITION

STRENGTHENING AVIATION SECURITY THROUGH
IMPROVED TRAVELLER IDENTIFICATION

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COUNTRY-SPECIFIC FORENSIC FEATURES ENABLED BY THE PASSPORT CHIP

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CONTENT OVERVIEW

- Passport forensic features
- Forensic features on the chip ?
- What kind of features ?
- How to implement it ?
- Summary and takeaways

ICAO TRIP ENABLES TO THINK IN NEW WAYS

- The holistic approach of the ICAO TRIP strategy helps to ask new questions. For example:
- What is holding us back to implement country-specific forensic features in the secure chip of the electronic passport ?
- Would it enable a new approach to document security and border crossing efficiency ?



NATIONAL FORENSIC FEATURES AND VALIDATION I

- **Country-specific forensic features of physical booklet**
 - represent a key element of physical document security
 - countries define and implement its own set of forensic features
 - develop associated process for validation and response actions



NATIONAL FORENSIC FEATURES AND VALIDATION II

- **Country-specific forensic features on the passport chip**
 - the secure microcontroller of an electronic passport has the capacity to implement country-specific forensic features in the security chip



PASSPORT CHIP – NATIONAL COMPLIANCE

National Requirements

- Country-specific command
- Link physical booklet security with chip security
- Country entry / exit data
- Frequent traveler information ...

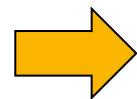


HOW TO IMPLEMENT IT ?

- **The implementation of such functionality**
 - utilize chip-specific mechanisms
(e.g. PUF physical unclonable function is like a unique fingerprint of a chip)
 - customisation of OS (via Java applet or native commands)
 - adaptation of ABC / inspection system software
 - adaptation of response protocols
 - national qualification of the solution

SUMMARY AND TAKEAWAY

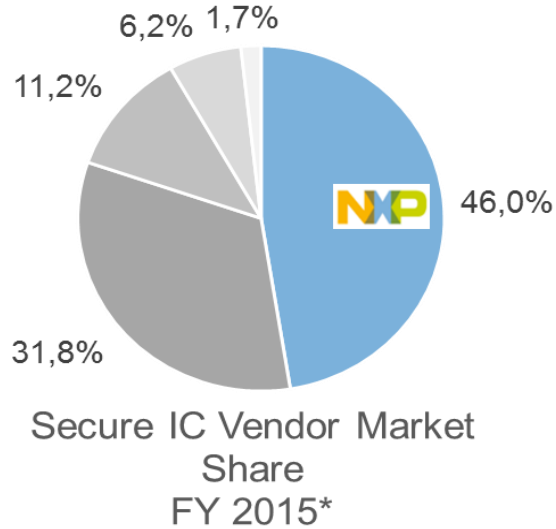
- The holistic approach of the ICAO TRIP strategy enables to think in completely new ways about document security and the usage and benefits of the secure chip in the electronic passport.
- Today, the ICAO compliant secure chip offers already the flexibility and capacity to implement national/custom-specific functionality apart from ICAO compliance.
- NXP offers specific technology to enable country-specific forensic functions of the chip and is ready for project implementation.



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- **#1 Provider** of e-Government Secure IC solutions
- **Global Coverage of 80%** (95 out of 120) of countries that introduced ePassport solutions qualified NXP
- **Local Project Support** across applications: 250+ projects worldwide are based on NXP's Secure ICs



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NXP is active in the area of mobile identities for governments



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