



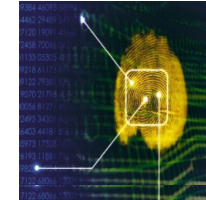
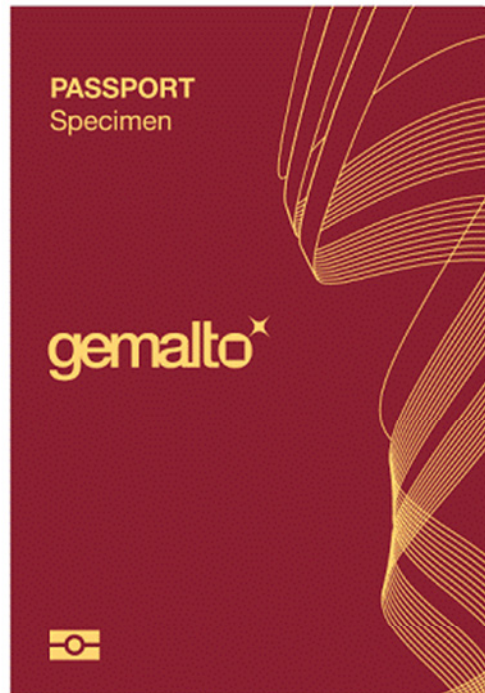
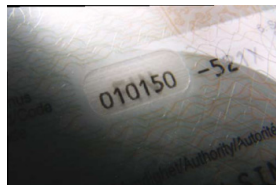
## 3<sup>rd</sup> Generation Electronic Passport

Supplemental Access Control (SAC) for future-proof security and privacy

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ICAO MRTD Regional Seminar, Doha-Qatar  
November 1<sup>st</sup> 2011

# Securing Identity Documents



# The use of a contactless system entails an element of risk

## ✘ Skimming

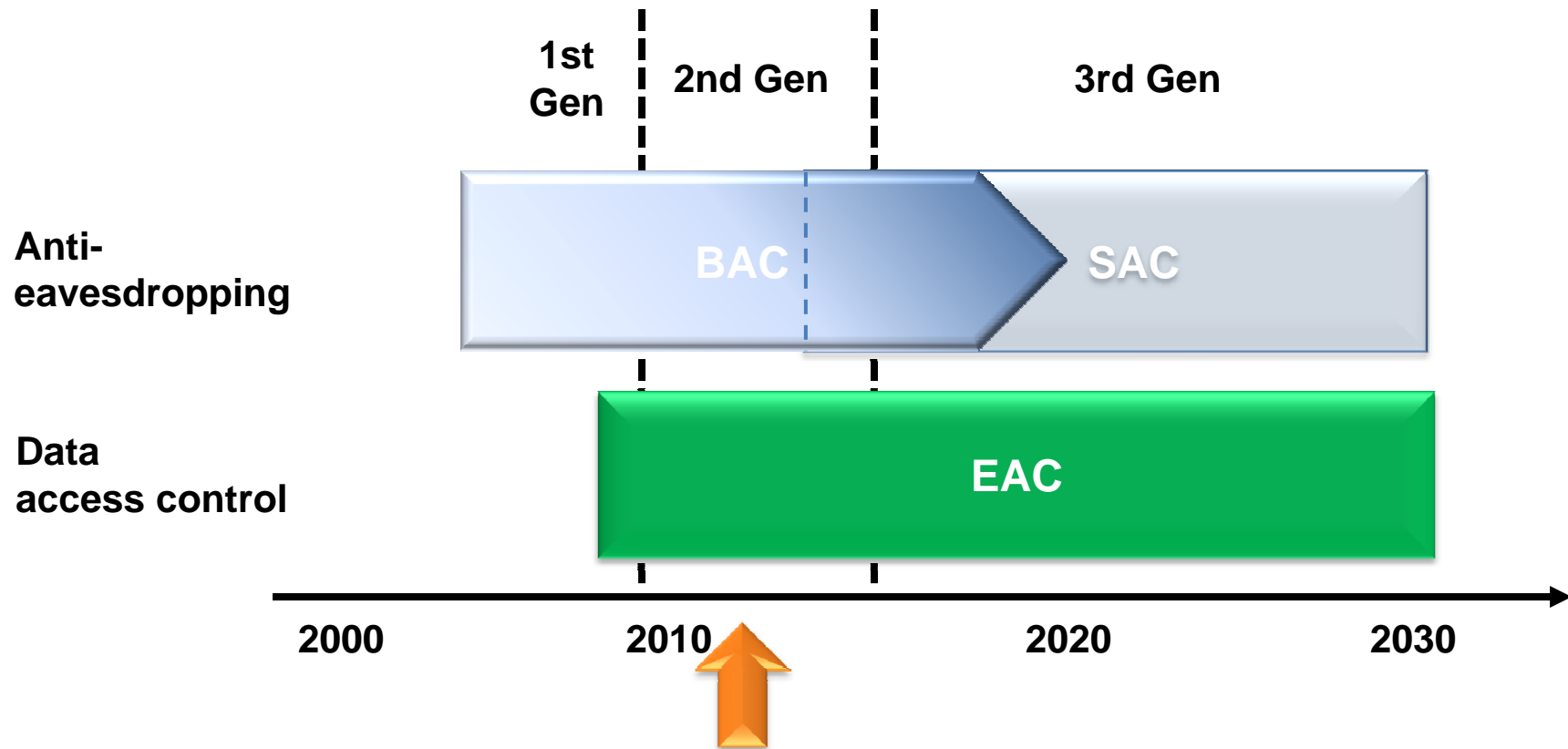
- Retrieve the data from the chip without passport holder's approval

## ✘ Eavesdropping

- Intercept data while the passport chip communicates with the reader



# Natural evolution of the ePassport...



# Supplemental Access Control (SAC): future-proof security in travel documents



## Beyond BAC...

- ✦ Privacy for citizens
- ✦ Strengthen BAC mechanism
- ✦ ICAO interoperability and backward compatibility



## ...to SAC

- ✦ Protection against eavesdropping
- ✦ Similar in function to BAC...
- ✦ ... but higher entropy cryptography
- ✦ Allows usage of Card Access Number (CAN)

# ...translated into legislations and standards



- ✦ ICAO recommends SAC for ePassports worldwide in 2014
- ✦ Europe mandates SAC in 2014 (Passport and Residence Permit)



- ✦ ICAO Technical Report (TR-SAC) for MRTD
  - Officially approved by ISO WG3, ICAO NTWG and ICAO TAG
- ✦ Common Criteria Protection Profile SAC from ANTS
  - certified by ANSSI



# Complete SAC Suite

- ✧ ICAO Technical Report Supplemental Access Control (TR-SAC)
- ✧ Common Criteria Protection Profile SAC Certified by ANSSI
- ✧ Conformity Test Plan
- ✧ Universal Reader Tool



# Transparent within existing usages, systems and processes



- ✧ Travellers: more privacy... and no other change!
  - Transparent usage, same as a BAC passport
  
- ✧ Border Control: same process, same equipment
  - Officer manipulation of SAC ePassport similar to BAC
  - Software upgrade of the readers to add SAC protocol in addition to BAC
  
- ✧ Passport issuers: enhanced security with minimal effort
  - Sourcing of SAC-enabled passports' Operating Software
  - Software update of issuance: data preparation, quality control



# Key requirements for smooth migration



## Full compliance

- Full **compliance** with international regulations and standards
- Rely on partners involved in **standard bodies**
- Leverage ICAO and EU **interoperability tests** (2004 – 2008)

## Seamless migration

- **BAC-SAC-EAC flexible configurations** for efficient stock management
- Return on experience from **BAC to EAC migrations**

## Trusted and future-proof

- **Long-term viability** through widest set of security features
- Trusted, long term, reliable supplier leveraging **international best practices**

# Who is concerned?



## ✧ Europe: EU Mandate

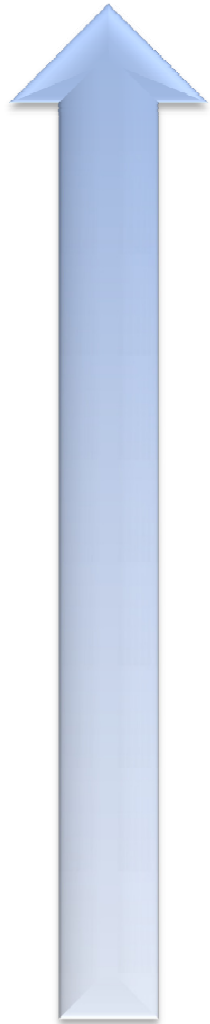
- Why: to secure the non-EAC protected data: name, face
- Who: all 27 EU countries

## ✧ Non-European: ICAO recommendation

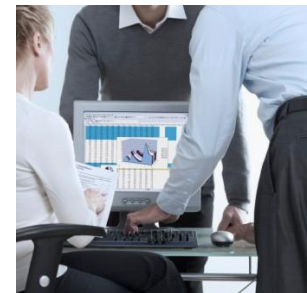
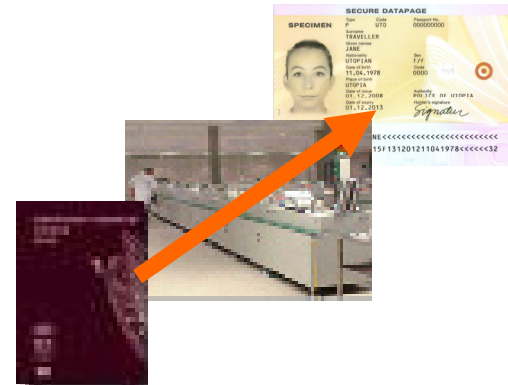
- Countries already with 2nd generation EAC passports
  - Why: to secure the non-EAC protected data: name, face
  - Who: Korea, Morocco, Singapore...
- Countries with 1st generation BAC passports
  - Why: to upgrade their security from BAC to SAC
  - Limited impact on infrastructure
  - Who: all other countries on all continents

→ All countries in the world are concerned by SAC

# When ?



- ✦ Deploy in 2014
  - Issue new SAC passports to citizens
  
- ✦ Migrate in 2012-2013
  - Agree on plan with supplier
  - Upgrade issuance system
  - Source SAC-ready passports
  
- ✦ Prepare it now
  - Build understanding
  - Define migration plan



# Gemalto Trusted Partner

## ✧ The number one choice...

- Over 25 ePassport references
- 500 million citizens addressed

## ✧ ...with a long track record

- 2004-08 **First class ICAO OS performance** in all ICAO and EU interoperability tests
- 2005 World's **1<sup>st</sup> BAC ePassport**, EU-compliant (Sweden, Norway)
- 2011 Europe's **1<sup>st</sup> SAC-enabled eResidence Permit**, in line with EU 2014 specification





Thank you.

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