Testing the borders of the future

NATIONAL PERSPECTIVES

Police Major Panagiotis Mertis
Ministry of the Interior and Administrative Reformation, Hellenic Police
Overview

I. Smart Borders Strategic Plan 2014-2020
II. Research and Pilots
III. Considerations
IV. Summary
Hellenic Police Doctrine

- Research
- Pilots
- Operations
# Smart Borders Strategic Plan 2014-2020

<table>
<thead>
<tr>
<th>2018 - 2020</th>
<th>National Smart Borders</th>
<th>Smart Policing</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2015 - 2018</strong></td>
<td></td>
<td>BODEGA Human Factors Toolbox</td>
</tr>
</tbody>
</table>

The future tested: Towards a Smart Borders reality
Overview

I. Smart Borders Strategic Plan 2014-2020
II. Research and Pilots
III. Considerations
IV. Summary
Smart Borders Pilot

- **Kipoi Evrou** (17/04/2015 – 19/08/2015)
  - Checks using hand-held device

- **Port of Piraeus** (04/05/2015 – 09/08/2015)
  - On-board checks using mobile suit-case
Smart Borders Pilot
Kipoi statistics

Kipoi (Kipee)  

<table>
<thead>
<tr>
<th></th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>Sum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entries</td>
<td>356,968</td>
<td>503,772</td>
<td>415,774</td>
<td>1,276,514</td>
</tr>
<tr>
<td>Exits</td>
<td>310,776</td>
<td>490,130</td>
<td>397,203</td>
<td>1,198,109</td>
</tr>
<tr>
<td>Sum</td>
<td>667,744</td>
<td>993,902</td>
<td>812,977</td>
<td>2,474,623</td>
</tr>
</tbody>
</table>

National EES: 09/04/2013 – 27/08/2015
Smart Borders Pilot: Kipoi setup
Smart Borders Pilot: Kipoi TC’s

- TC1: Enrolling 4 fingerprints
- TC2: Enrolling 8 fingerprints
- TC3: Enrolling 10 fingerprints
- TC5: Capture of iris pattern
Smart Borders Pilot: Kipoi Results

- The device could be helpful in case of large queues

- The device is sufficient for max 4 fingerprints

- Iris capture was difficult in eastern Asian travelers
  - It would be interesting to test this device for facial enrollment
Smart Borders Pilot
Piraeus statistics

Port of Piraeus

<table>
<thead>
<tr>
<th></th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>Sum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entries</td>
<td>129,774</td>
<td>273,963</td>
<td>146,188</td>
<td>549,925</td>
</tr>
<tr>
<td>Exits</td>
<td>194,250</td>
<td>334,098</td>
<td>113,221</td>
<td>641,569</td>
</tr>
<tr>
<td>Sum</td>
<td>324,024</td>
<td>608,061</td>
<td>259,409</td>
<td>1,191,494</td>
</tr>
</tbody>
</table>

National EES: 09/04/2013 – 27/08/2015
Smart Borders Pilot: Piraeus setup
Smart Borders Pilot: Piraeus TC’s

- TC1: Enrolling 4 fingerprints
- TC4: Enroll live facial image
- TC6: Capture facial image from e-MRTD
- TC7: Verification of FI captured from e-MRTD against a live facial image
Smart Borders Pilot: Piraeus Results

- An end-2-end process would be more enlightening
- Photo was very reliable and more acceptable
- Process helpful the device not very reliable
- Travellers Reluctant, hesitant, suspicious, sceptical mainly due to the fingerprints
Taking the Smart Borders Pilot One Step Further
The FastPass Profile

a harmonized, modular reference system for all European automated border crossing points

Facts:

Project start: 1.1.2013

Project duration: 4 years

Funding: EU FP-7 Security

Coordinator: Markus Ciabian, AIT Austrian Institute of Technology

Consortium: 27 partners

Source: https://fastpass-project.eu
The FastPass Sea Borders Scenario

MODI biometric identification kiosk with optional NIR translation technology. (NTT)

Flexible Kiosk design for different use cases and outstanding usability.

- Check In Kiosk
- Pre Border Check
- Document and ID Check
- Enrollment Kiosk

Optional Devices:
- Passport reader
- Biometric Face ID check
- Biometric Iris ID check
- Fingerprint reader
- Document reader
- Receipt printer
- Enrollment camera
- Visible and NIR illumination

The future tested: Towards a Smart Borders reality

08/10/2015
Athens International Airport ABC Pilot

- Private-Public Sector Collaboration
- Rollout – Late 2016
- It shall be based on the knowledge gained from Smart Borders Proof of Concept and Fast-Pass Project
- We envisaged to be established as a best practice for
  - Greek Airports
  - Greek Seaports
Human Factors
The BODEGA Project Profile

Proactive Enhancement of Human Performance in Border Control

Source: http://bodega-project.eu

The future tested: Towards a Smart Borders reality
Human Factors
The BODEGA Project

- Harmonization/standardization in order to provide a unified service
- Better BGs/Travelers experience
- Leveraged effectiveness through automation
- Advanced security through better identification
- Redeployment of BGs to deal with other areas
  - Threat assessment -
  - Predictive Profiling
Novel mobility concepts for land border security

- Mobile technology
  - could play a significant role in border control future
  - Is considered as user friendly
  - Is widely accepted
  - Is wide-spread
Overview

I. Smart Borders Strategic Plan 2014-2020
II. Research and Pilots
III. Considerations
IV. Summary
Smart Borders

- How Smart are they?
Passport
Greece
Current setup

- Travel Document and VISA reader
- LiveScans (2 & 10 Fingers)
- UV verifier
- PC
- Rupper for stamping
e-Gate Ingredients*

1. **ASDAS**: Passenger and fraud detection system
2. **Pre entry display screen**: Providing instructions to Passengers in the queue
3. **Indicator lights**: Signal to Passengers if they should walk forward or not (Green/Red)
4. **Secure Zone**: Controlled area monitored for Passengers and objects
5. **Instruction Screen**: Proving instructions to a Passenger using the system
6. **Integrated Camera**: Includes variable illumination
7. **ASDAS Time-of-Flight Camera**: part of the advanced detection system
8. **IP CCTV**: Video monitoring of the Secure Zone
9. **Travel document reader**: Passport reader
10. **Exit Gate**: High tempered glass exit barrier

*IATA Case Study 1 Heathrow Airport Limited & Border Force – August 2014*
Key Performance Indicators

TIME
Key Performance Indicators

ACCURACY
Key Performance Indicators

AWARENESS
The abolition of stamping
A deterministic consequence

- The most groundbreaking feature in Smart Borders
- Shall reduce dramatically the border control time
- The abolition of stamping shall take the passport technology one step further
- Is it feasible a paperless border control?
Mobile Passport

The future tested: Towards a Smart Borders reality

Officially authorized by the U.S. Customs & Border Protection
BES-06-2015
Exploring new modalities in biometric-based border checks

- Improving KPI rates
- Biometric combination
- 3D face, Gait Recognition
Overview

I. Smart Borders Strategic Plan 2014-2020
II. Research and Pilots
III. Considerations
IV. Summary
Summary

- Smart Borders shall facilitate border control and shall provide awareness to all MS

- MS to have the flexibility to adjust the level of innovation they would like to introduce
Thank you for your attention!

- Questions?

- E-mail:
  - pmertis@police.gr
  - smart.borders@police.gr