

Testing the borders of the future

NATIONAL PERSPECTIVES

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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



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Smart Borders Strategic Plan 2014-2020

2018 - 2020	National Smart Borders		Smart Policing
2015 - 2018	BODEGA Human Factors Toolbox		
2013 - 2019	FP7 – FastPass (Sea) (2013-2016)	Athens International Airport ABC Pilot (Air) (2015-2016)	BES-05-2015 (Land-Train) (2016-2019)
2013-2015	Smart Borders Initiative (Baseline) (2013-2015)		



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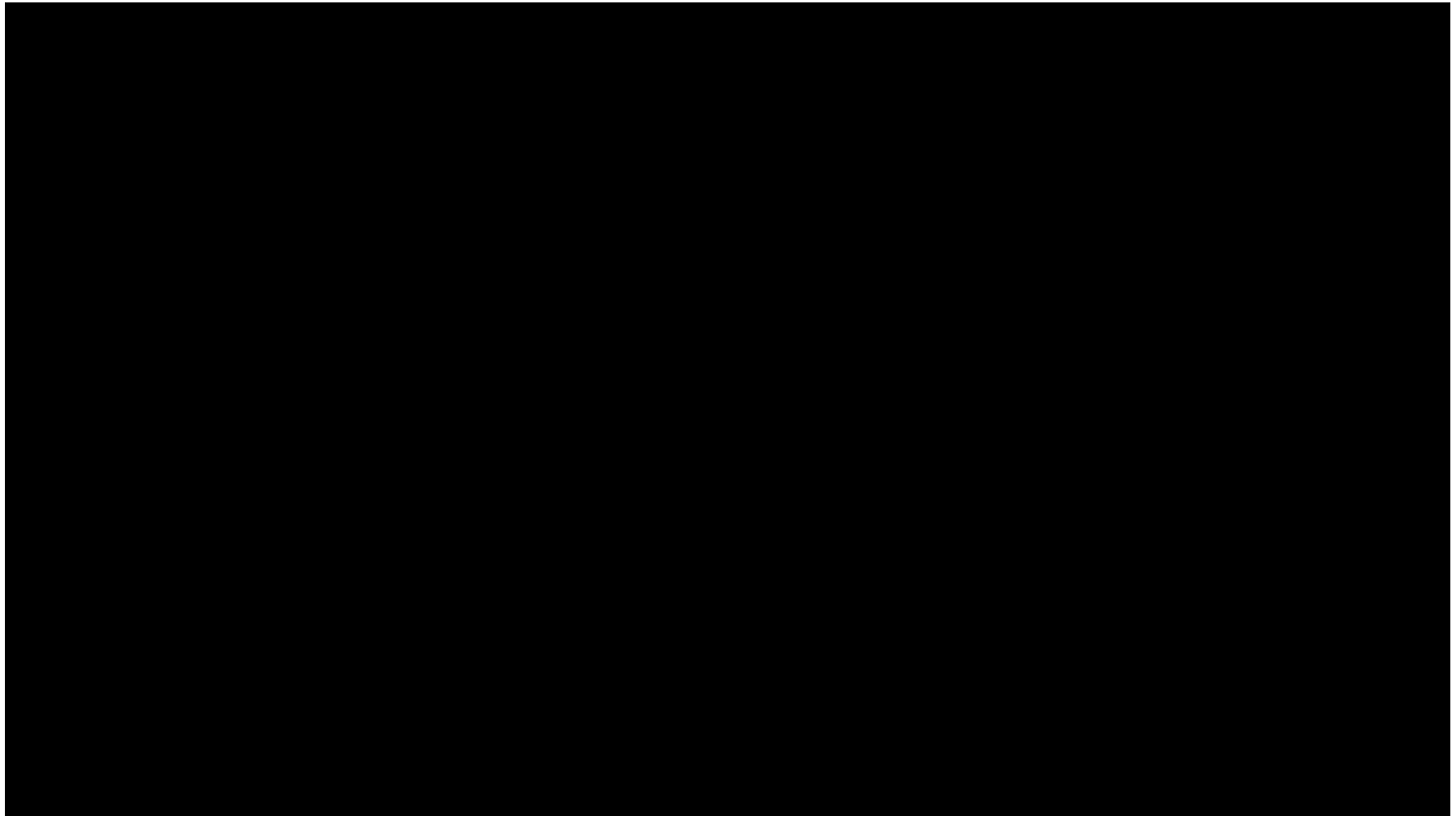


Smart Borders Pilot

- **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



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Smart Borders Pilot

Kipoi statistics



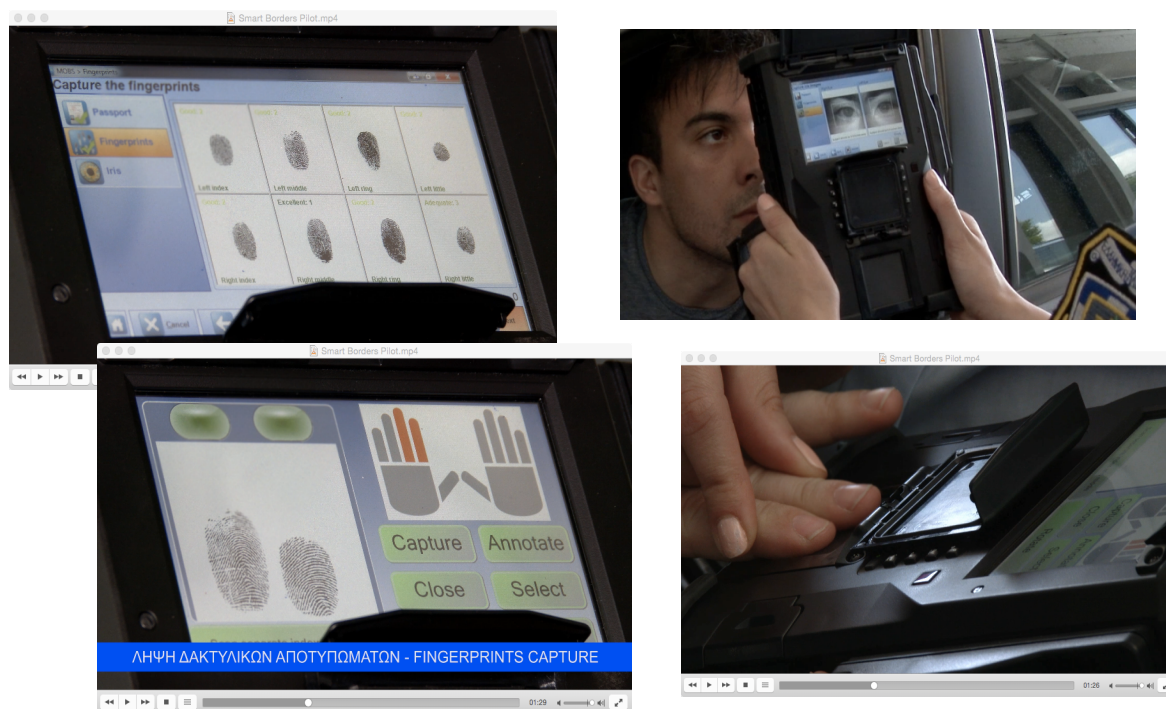
Kipoi (Kipee)				
	2013	2014	2015	Sum
Entries	356,968	503,772	415,774	1,276,514
Exits	310,776	490,130	397,203	1,198,109
Sum	667,744	993,902	812,977	2,474,623

National EES: 09/04/2013 – 27/08/2015



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Smart Borders Pilot: Kipoi setup



The future tested: Towards a Smart Borders reality

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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



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Smart Borders Pilot

Piraeus statistics



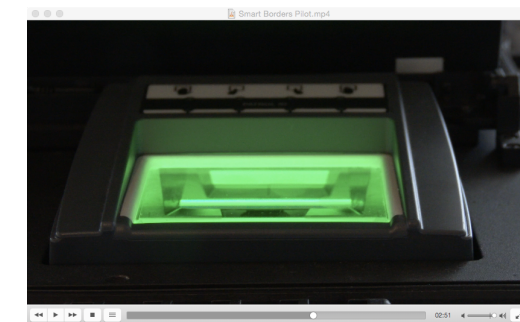
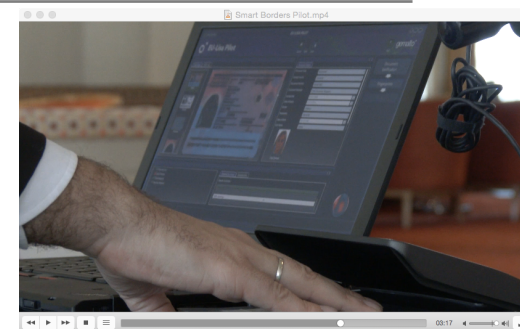
Port of Piraeus				
	2013	2014	2015	Sum
Entries	129,774	273,963	146,188	549,925
Exits	194,250	334,098	113,221	641,569
Sum	324,024	608,061	259,409	1,191,494

National EES: 09/04/2013 – 27/08/2015



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Smart Borders Pilot: Piraeus setup



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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



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Taking the Smart Borders Pilot One Step Further



The future tested: Towards a Smart Borders reality

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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 Clabian, AIT Austrian Institute of
Technology**

Consortium: **27 partners**



Source: <https://fastpass-project.eu>

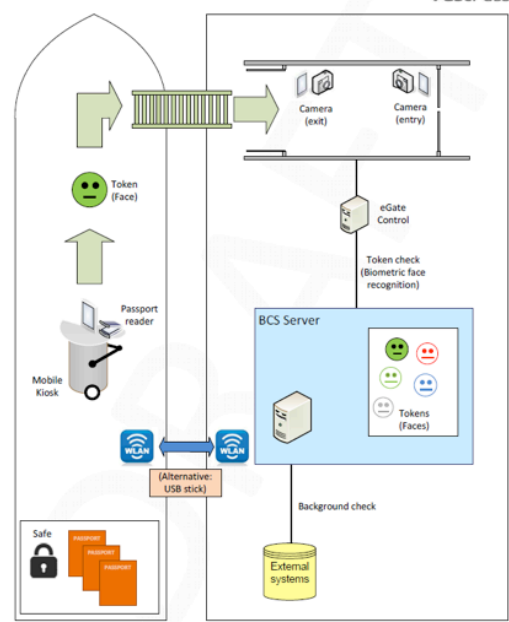


The FastPass Sea Borders Scenario



FastPass sea

(Last update: 03.12.2014)



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

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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



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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

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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

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BES-05-2015

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



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Smart Borders

- How Smart are they?



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Passport



Greece

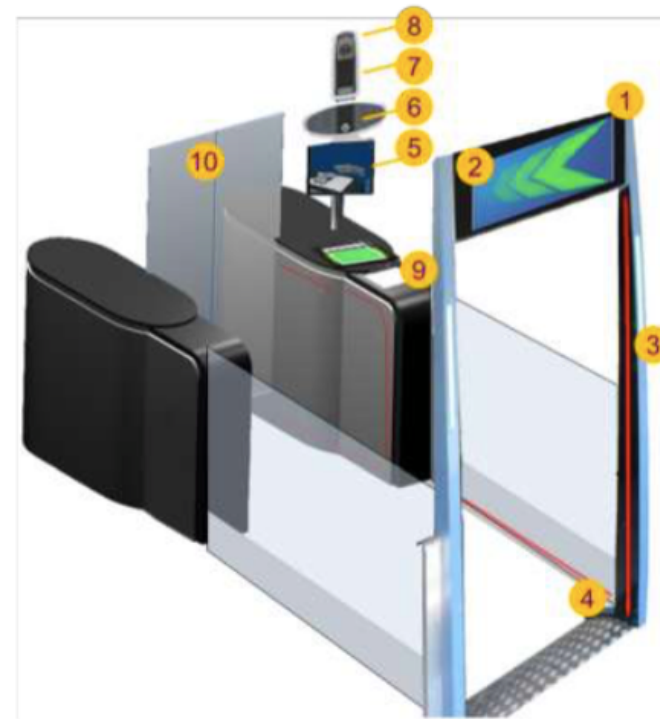
Current setup

- 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**: Providing 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*



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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?



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Mobile Passport

The image displays four sequential screenshots of the Mobile Passport app interface on a mobile device.

- Screen 1 (Welcome):** Shows a green "Welcome to Mobile Passport" message, approval by U.S. Customs & Border Protection, logos for AIRSIDE and ACT (Airports Council International), and the U.S. Customs and Border Protection seal. It includes a "Register" button and a "Login" button.
- Screen 2 (Add a Profile):** A form for creating a profile with fields for Surname, Given Names, Date of Birth (DD/MM/YYYY), Sex (Select Sex), Country of Residence (Select Country), Passport Number (Enter number), Passport issued by (Select Country), and Expiration Date (DD/MM/YYYY). A "Save Profile" button is at the bottom.
- Screen 3 (Question 1/4):** Asks "Do I (we) have any commercial merchandise or am I (we) transporting currency or monetary instruments equal to or greater than \$10,000 U.S., or foreign equivalent, in any form?". It has "Yes" and "No" checkboxes.
- Screen 4 (Ready to Enter the USA?):** Provides instructions on completing the U.S. CBP entry process. It offers two options: "SUBMIT NOW YES, I HAVE LANDED." (with a checked checkbox) and "SUBMIT LATER" (with an unchecked checkbox and a "Select Date and Time of Arrival" field). A "Proceed" button is at the bottom.

Officially authorized by the U.S. Customs & Border Protection



The future tested: Towards a Smart Borders reality

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BES-06-2015

Exploring new modalities in biometric-based border checks

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



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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:**

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