



**The situation today**  
**The perspective for the near future**

**Technology Convergence Focus-Group**

Nov. 17<sup>th</sup> 2009

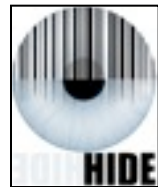


# *Why is there a need to implement Automated Border Control?*



Because more and more people want to travel quickly and safely.

# CONTROL CAN BE RANDOM ...



# ... OR AUTOMATED





# THE CHALLENGE OF EUROPE'S BORDERS



■ Schengen countries  
■ EU memberstates



Iceland



# BORDERS CHECK: EU COMMISSION'S INITIATIVE



**THE AIM:** striking the balance between the **fight illegal immigration** and **border crossing facilitation** for bona fide travelers => new technologies for more efficient border management:

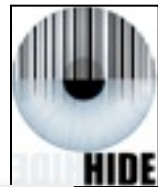
## ▶ Recent developments:

- **VIS** : to be fully operational at all border crossing points by 2014 – postponed twice
- **Automatic Border Crossing (ABC)**: no enrolment, with e-passport. Currently only for EU citizens

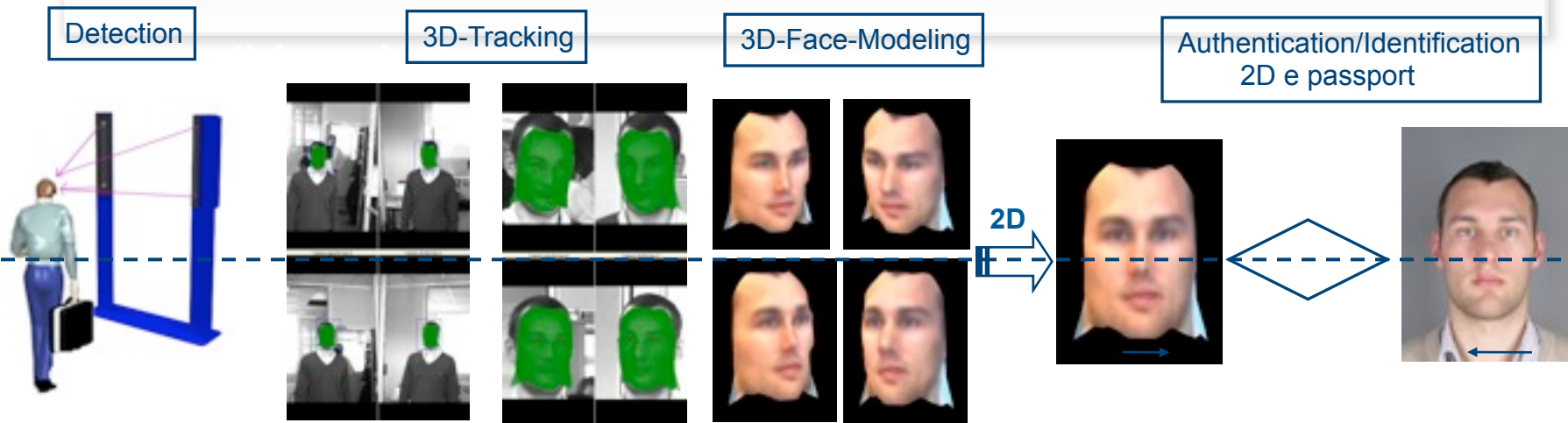
## ▶ Under study:

- **Resgitered Travelers (RT)**: pre-enrolled, pre-vetted. Third countries national only. Same e-gate? E-passport? Face +FP  
Enrolment+vetting: Schengen/EU Common Criteria and mutual recognition needed
- **Entry/Exit**: registration of entry/exit of third country nationals: **with visa or not, use of biometric identifiers? Central database? What to do with overstayers?**
- **ESTA**: predeparture travel autorisation for third country national not requiring visa

# FACE ON THE FLY : A NEW CONCEPT



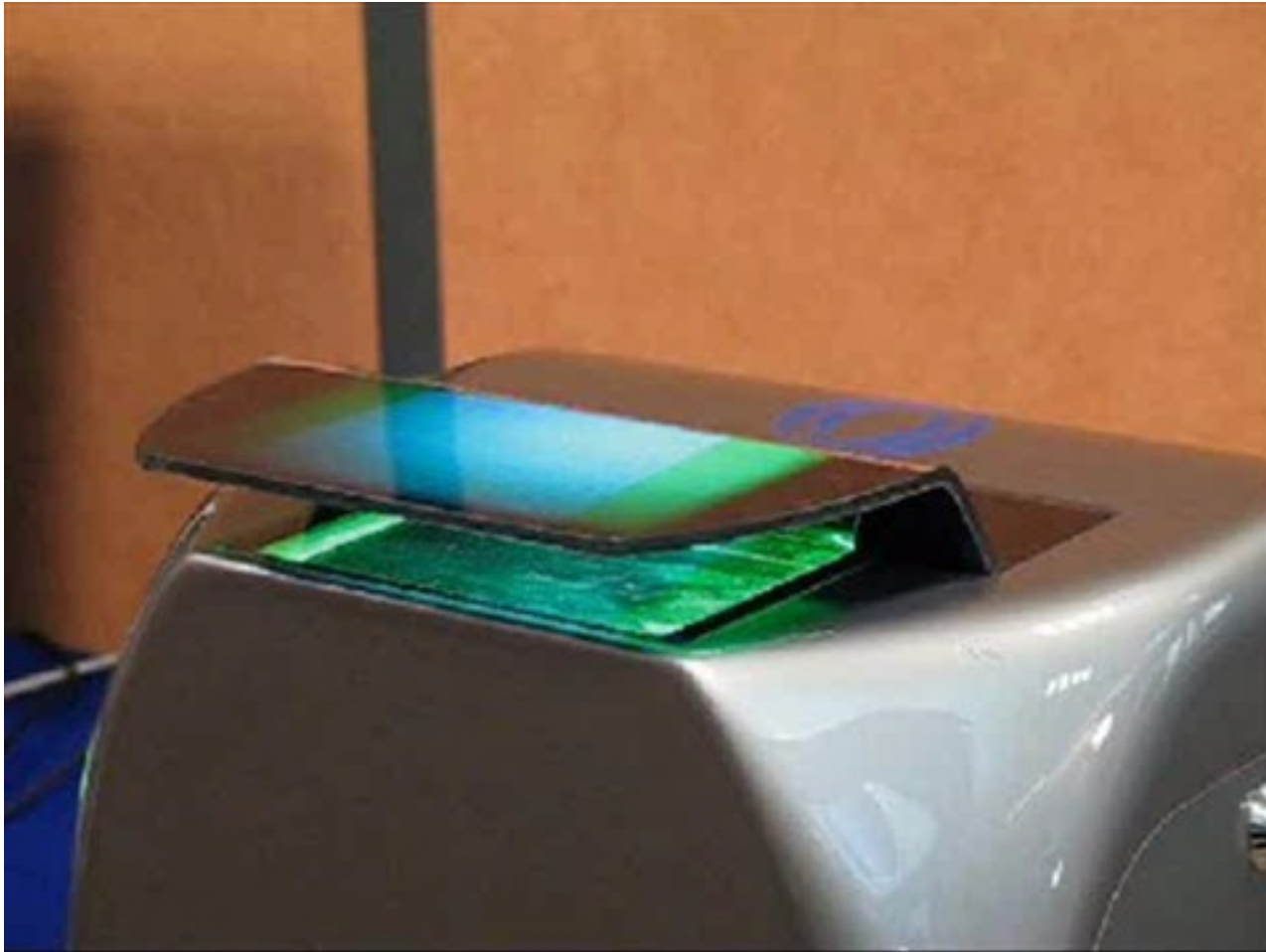
- An accurate **3D face tracking** and modeling to cope with movement and pose variability



# IRIS ON THE FLY

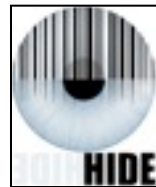


# ■ ■ ■ ■ ■ FINGER ON THE FLY



# BEHAVIOURAL BIOMETRICS

New opportunities  
– new challenges!



tsa behavio... The Privacy ... Technology ... Rewrite of p... Bags and be... Homeland S... AT U.S. 2

## Bags and behavior being screened by TSA at U.S. airports

Published Nov 10, 2009 by [Kay Mathews](#) - 29 votes, no comments  [Subscribe to author](#) ?

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**If you are acting suspiciously at a U.S. airport, it is likely that someone is watching you. TSA behavior-detection officers are on the job at 161 U.S. airports. In 2008 alone, 813 arrests were made based upon detection officers identifying suspects.**

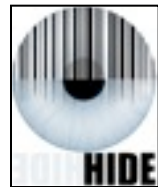
"Behavior-detection officers" are stationed at 161 U.S. airports, according to the [Washington Post](#).

The [Transportation Security Administration \(TSA\)](#) is not only screening carry-on bags, but also travelers' conduct in an effort to "identify potentially dangerous individuals."

TSA spokeswoman Sari Koshetz told the [Washington Post](#) that the TSA does "not focus on nationality, race, ethnicity or gender. We're not

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# BEHAVIOURAL DETECTION



# FAST

Future Attribute Screening Technology

The scope of malintent includes a spectrum of potential scenarios.

"After I get through I'll cause a disturbance"

"After I get through I'll detonate a bomb"

"After I get through I'll deliver the package"

The theory assumes several measures (cues) predict malintent.

Nonverbal Behavioral Cues (Body movements, illustrating gestures, etc.)

Paralinguistic Cues (Vocal effects)

Psychophysiological Cues (Physical responses to emotional reactions)

FAST M2 is designed to detect malintent by combining these cues.

Heart Rate

Respiration

Pupil Dilation

Thermal Signals

Additional Cues

CLARIFY

# DATABASES MULTIPLICATION & FUNCTION CREEP



ANPR



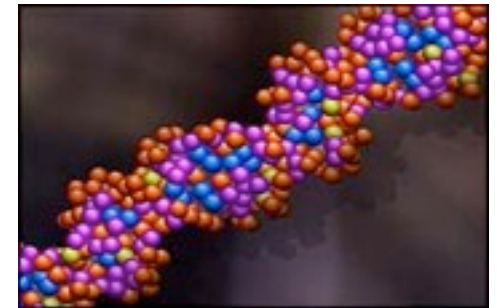
Nominal



Stolen & Lost  
Travel  
Documents



Child  
Abuse Images



DNA



NOVEMBER 11, 2009, 7:08 AM ET

## Facebook Facial-Recognition Tagger Goes Live

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By Andrew LaVallee

Face.com is opening its photo-tagging system, based on facial-recognition technology, to Facebook members Wednesday.

**PhotoTagger** by face.com

43 faces found! [Review results and save to Face](#)

**out and about!**  
(27 Photos By Suzan Hope)  
[Album page on Facebook](#)

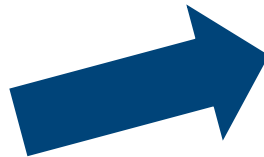
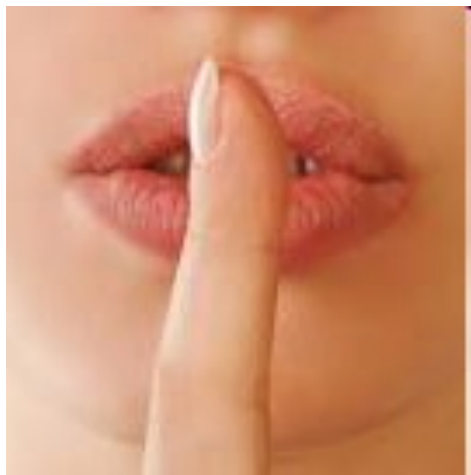
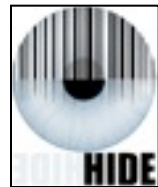
Faces    Photos

Suzan Hope?  
 Approve all  
 Change all

Photo Tagger, which launched to a limited group of users in July, scans a user's photo albums on the social-networking site, then lets him tag faces it identifies. It groups multiple shots of each person, making it easy to tag large albums, and users can also adjust or remove incorrectly tagged pictures.

Once a member has been identified, the app prompts him or her to approve the tag — a crucial privacy step, since he or she may not want to be labeled in a photo. It also works with a member's current photo-privacy settings on Facebook.

# HOW TO PROTECT PRIVACY?





**THANK YOU FOR YOUR ATTENTION**