

# Biometrics in Border Management: The Issue of Human Bodily Differences

## Panel on Societal Aspects of ABC Gates – CPDP 2015

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# Biometrics in Border Management and Security

Previous EU Projects:

BITE , HIDE, ACTIBIO, DIgIDEAS, PRISMS, ACTIBIO (EAB)

Ongoing :

**MobilePass, FastPass (EAB)**

# The Promise of Biometrics

More secure identification and verification

« The body does not lie »

More objective than human checking

More efficient border passage – no queue.

# « The body does not lie »

Every biometric system involves multiple **chains of translations**:

1 Enrolment:

bodily feature – input device (sensor, camera) – digitalization – feature extraction – algorithmic transformation - template – storage of reference dataset  
(e.g. chip in passport)

2 Verification or identification (at the gate): bodily feature – input device (sensor, camera) – digitalization - feature extraction- algorithmic transformation- template

3 Comparison 1 and 2 : data transfer, algorithmic processing

4 ‘Match’?: probabilistic score, threshold settings, visual display on screen

# « More objective than human checking »

Biometrics' in-built norms regarding human bodies:

- Unicity
- Similarity/universality
- Stability
- Availability



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# Social and ethical sensitivity of biometrics in ABC gates

- In contrast to context of development, context of use involves **maximum range of human bodily and cultural variation**.

Scale of application: even small error rates (FRR,FAR) produce **high absolute numbers** of error, likely to be **unevenly distributed** over the travelling population.

Border passage is a socially, politically, legally and ethically **high stake context**: **freedom of movement, asylum, migration, human trafficking, dignity, bodily integrity, counter terrorism, and international crime detection and prevention, non discrimination, presumption of innocence, privacy and data protection, ...**

Therefore: large scale roll-out of biometric ABC gates requires many safeguards, checks and balances, continuous monitoring and evaluation research!