Addressing privacy issues in Id-Management EC projects

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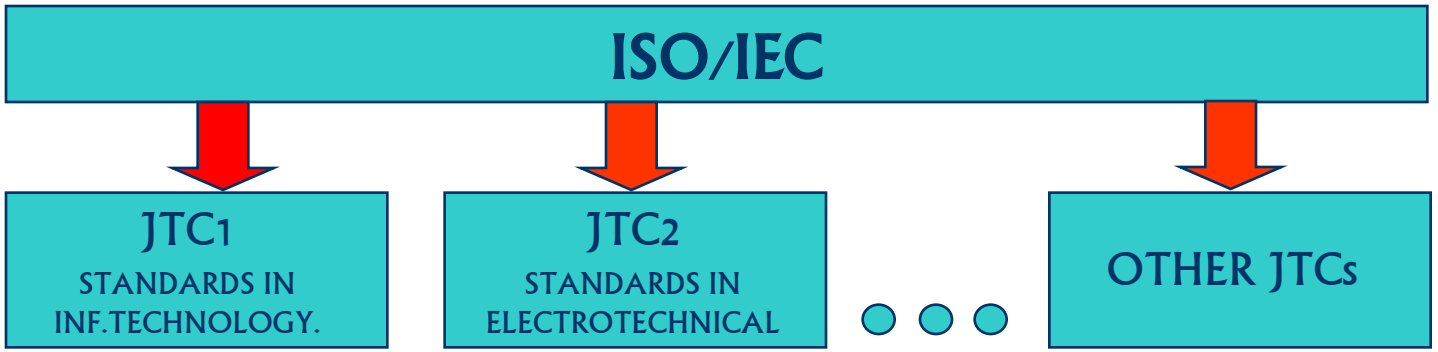
Structure of the presentation

- General Information on ISO
  - *The SC 37 "Biometrics" WG on cross-jurisdictonal issues of biometrics*
- Cross-jurisdictional aspects of biometrics
- Consideration on the PRISE project
- Privacy issues in two EC funded projects on Biometrics
  - 3D Face
  - BioHealth
- Conclusions

ISO


ISO
(INTERNATIONAL ORGANIZATION FOR STANDARDIZATION)
WORLDWIDE FEDERATION OF NATIONAL STANDARDS BODIES
ANSI
US ISO MEMBER
UNI
IT- ISO MEMBER
OTHER ISO MEMBER

ISO / IEC JTC s (Joint Technical Committees)



SOME JTC1 SUBCOMMITTEES AND WORKING GROUPS

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SC 17 - CARDS AND PERSONAL IDENTIFICATION

SC 27 - IT SECURITY TECHNIQUES

SC 31 - AUTOMATIC IDENTIFICATION AND DATA CAPTURE TECHNIQUES

SC 32 - DATA MANAGEMENT AND INTERCHANGE

SC 35 - USER INTERFACES

SC 37 - BIOMETRICS

ISO / IEC JTC1 SC37

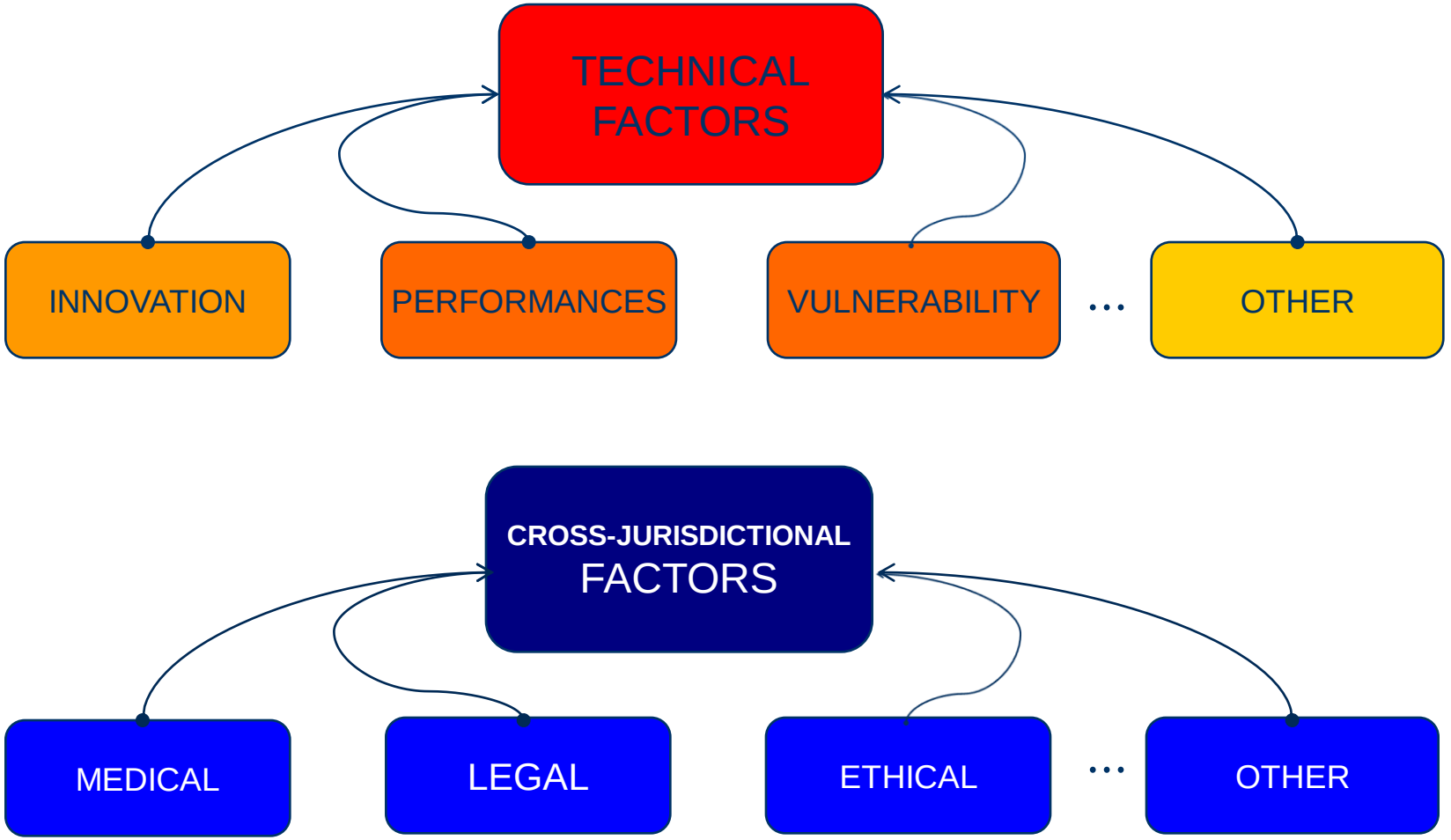
ISO/JTC1 SUBCOMMITEE 37 Working Groups

- WG 1 - WORKING GROUP ON HARMONIZED BIOMETRIC VOCABULARY AND DEFINITIONS (CANADA)
- WG 2 - WORKING GROUP ON BIOMETRIC TECHNICAL INTERFACES (KOREA)
- WG 3 – WORKING GROUP ON BIOMETRIC DATA INTERCHANGE FORMATS (GERMANY)
- WG 4 - WORKING GROUP ON PROFILES FOR BIOMETRIC APPLICATIONS (US)
- WG 5 - WORKING GROUP ON BIOMETRIC TESTING & REPORTING (U.K.)
- WG 6 – WORKING GROUP ON CROSS-JURISDICTIONAL AND SOCIETAL ASPECTS OF BIOMETRICS (ITALY)

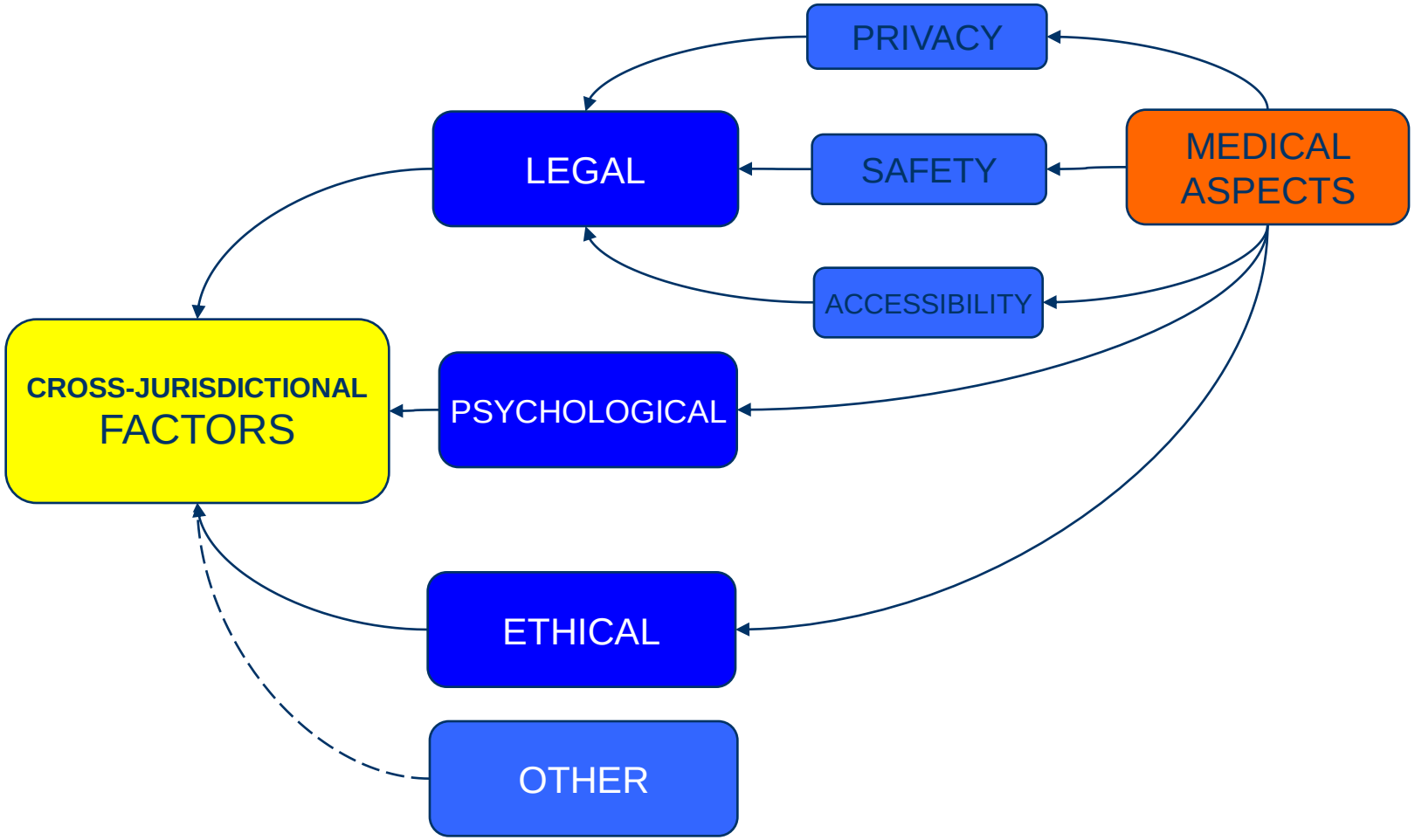
ISO/IEC JTC1 SC 37 "Biometrics"
WG 6 – Terms of reference

- Standardization in the field of cross-jurisdictional and societal aspects in the application of ISO/IEC biometrics standards. Within this context, the terms of reference includes the support of design and implementation of biometric technologies with respect to:
  - *accessibility*
  - *health and safety*
  - *support of legal requirements and acknowledgement of cross-jurisdictional and societal considerations pertaining to personal information*
- Specification and assessment of government policy are excluded from the scope of WG6

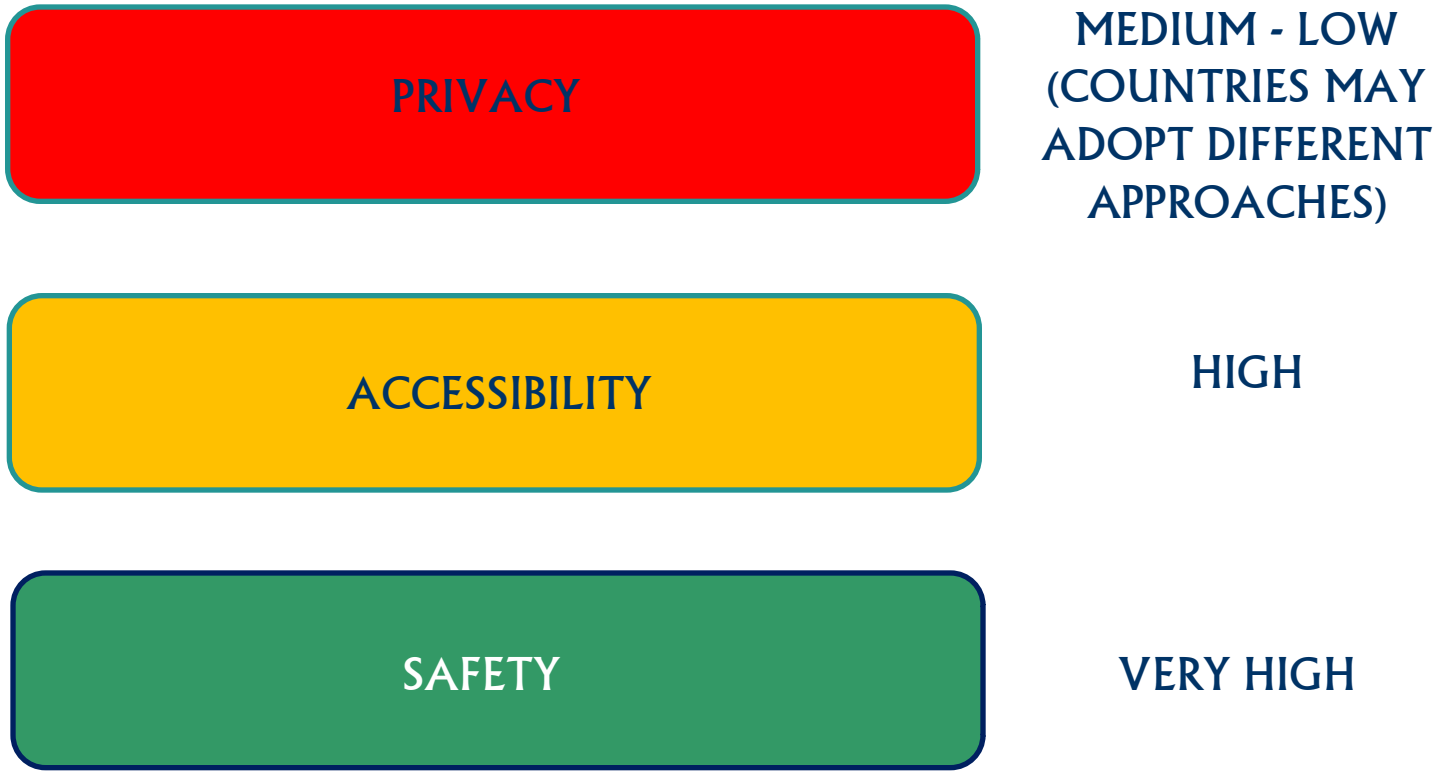
Some technical and and cross-jurisdictional factors of Biometrics



Interconnections among some cross-jurisdictional factors of biometrics



Three different levels of international consensus for some issues of biometrics



In analyzing privacy issues in biometrics it could be wise to identify two domains

Governmental Applications	Commercial Applications
Could be sustained by a higher compliance with "proportionality" principles	Could be characterized by a lower compliance with "proportionality" principles

Some considerations

- Many experts agree on a future sensible increaese of automatic screening of documents (e.g. in airports)
- Even if not very effective (errors in the bi-dimensional domain of face recognition are still a problem), the new procedures will provide very interesting data about the acceptance of the biometric systems
- Accessibility will become always more a fundamental point

2D /Three-dimensional face recognition

- 2D face recognition will probably evidence some limits of the technology
- 3D face recognition represents one of the possible answers
- The EC in 2006 funded the 3DFace project with the aim of exploring the improvements offered 3D face recognition

3D Face
Biometric Research

3D Face

- 2D face recognition technology that, as we have seen, will be probably used always more extensively for biometric-enabled border control, has known drawbacks
- The biometric performance of 2D systems is not satisfactory by far, in particular because it is extremely sensitive to:
  - *Pose variation*
  - *Illumination changes*
  - *Sensor condition*
  - *Other disturbance factors*
- Even more serious, 2D face recognition systems do not currently provide reliable mechanisms for liveness detection and for protection against spoofing and identity hiding attacks.

3D Face
Biometric Research

3D Face

- The project pays a great importance to fundamental human rights
- Items analyzed so far:
  - *Safety Aspects*
  - *Relations with Data Protection Commissions*
  - *Biometrics for children*
  - *Export of biometric data*
- Furthermore a website for addressing cross-jurisdictional issues has been created (for now, only accessible to 3DFace members)

The BioHealth Project

- The BioHealth project has focused on standards in ID-Management with particular reference to e-Health
- The project has collected many standards in a repository which will be made publically available
- A description of the activity carried out by ISO and CEN in this area is the focus of the BioHealth project
- www.bio-health.eu

A…Vision

Need #1. The interdisciplinary collaboration in biometrics should be increased

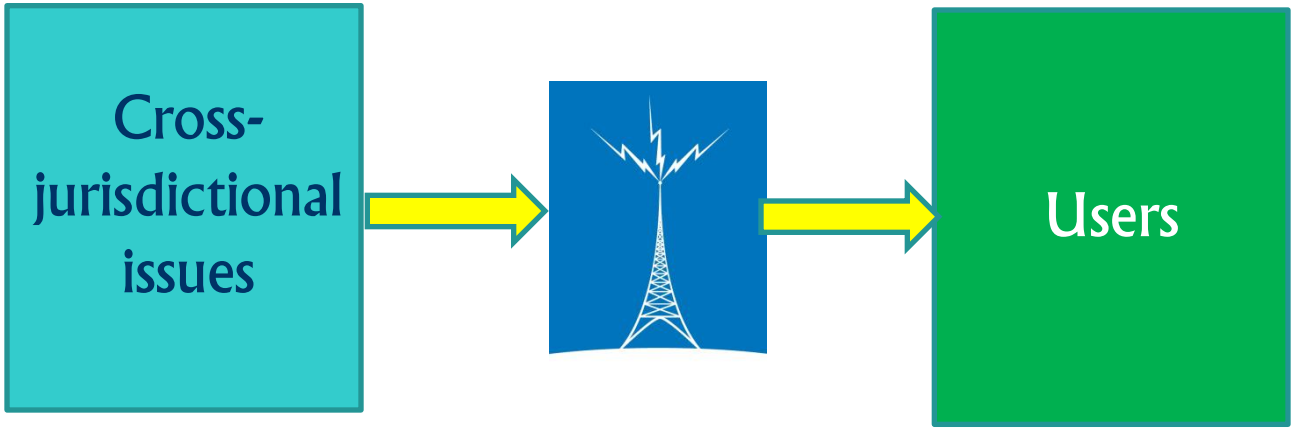
Experts agree that biometrics, probably more than other advanced technologies, need a strong interdisciplinary collaboration, e.g.

Cross-jurisdictional Expertise

Technical Expertise

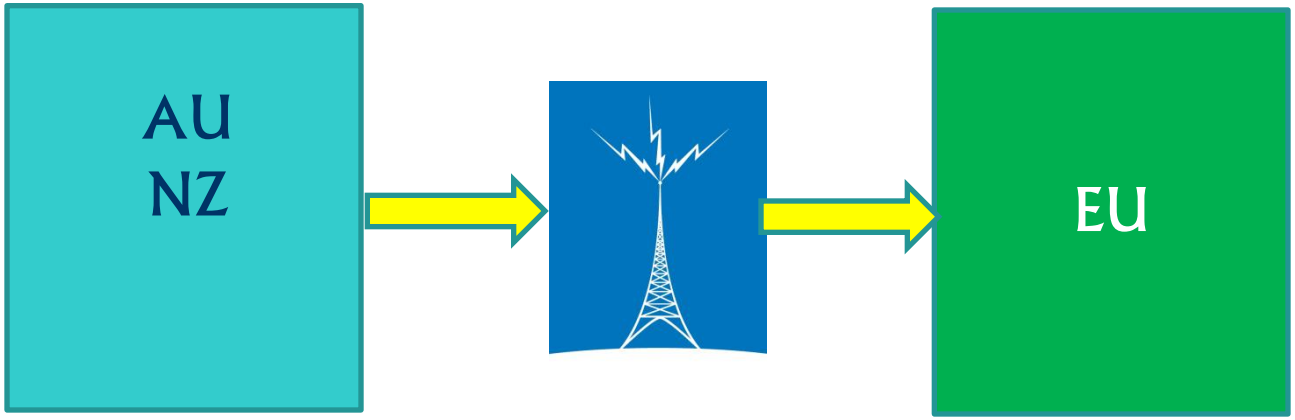
Need #2. The communication between the experts of cross-jurisdictional issues and users should be increased

- Sometimes the information on cross-jurisdictional issues (such as privacy) concerning new technologies (such as biometrics) is not broadcasted in a satisfactory way to users

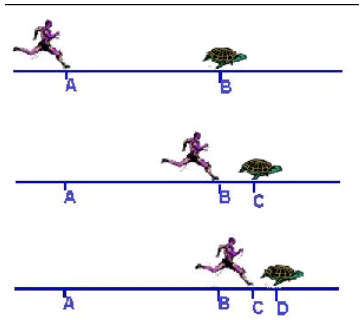


Need #3. The knowledge of extra EU approaches to biometrics and cross-jurisdictional issues should be increased

- Many countries such as Australia or New Zealand have interesting approaches to cross-jurisdictional issues of biometrics which should be broadcasted also in EU



Need #4: synchronization between cross-jurisdictional and technical issues should be increased



- Privacy and new technologies seem like Achilles and turtle
- When Achilles (privacy assessment) reaches the turtle (new technology) , the turtle is a step ahead
- Synchronization between privacy and new technologies should be improved
- This implies a good knowledge of privacy and technical issues coupled with an excellent collaborations between the experts

Starting from these needs Why we do not think to a EU centralized “Identity Management Human Factors” competence center ?

A EU Competence Center
Possible tasks (1/2)

- Collects privacy codes at an international level
- Collects recommendations
  - E.g. Art. 29
  - Iso, CEN
  - …
- Supports both public and private organizations in understanding and applying the privacy related, ethical, social and legal issues connected to id management
- Mantains a website containing all the documents

EU Competence Center
Possible tasks (2/2)

- Promotes the diffusion of international standards pertaining to privacy related, social, ethical and legal issues in Identity Management
- Propose New Work Items to the International Standards Organizations
- Mantain contacts with non EU contries in the area of the ID-Management cross-jurisdictional issues
- …

Conclusions (1/2)

- The PRISE project has been particularly important in gathering etherogeneous experts in discussing some complex aspects of new technologies
- In analysing the possible threats for privacy arising from the massive use of new technologies a separation between government and commercial applications should be made
- In general terms, government applications, may be considered, in some way, to better satisfly the "proportionality" principle from a privacy point of view

Conclusions (2/2)

- For governmental applications concerning biometrics some actions should be anyway carried out:
  - *Increase transparency*
    - *e.g.* on medical aspects
  - *Increase public consutations*
  - *Increase consideration of accessibility issues*
- A EU centralized "Identity Management Human Factors" competence center or working group could represent a pilot initiative in finding the way to harmonize new technologies with cross-jurisdictional issues

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