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Report on The Policy Forum on Body Issues



HIDE PROJECT

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BACKGROUND

Homeland Security, Biometric Identification & Personal Detection Ethics (HIDE) is a project promoted by the European Commission and coordinated by the Centre for Science, Society and Citizenship, an independent research centre based in Rome, Italy. HIDE's mission is to set up a platform devoted to ethical and privacy issues of biometrics and personal detection technologies which addresses transnational (European) and international problems. HIDE aims to become the preeminent catalyst for innovative policy solutions to emerging ethical problems in the area of surveillance technologies, especially where collaboration among national and international agencies, communities, businesses, and non-governmental organisations (NGOs) is crucial. HIDE promotes creative problem solving and provides for concrete tools for a successful dialogue.

One of HIDE's areas of focus is the theme of biometrics and bodily differences. Whereas biometrics is generally conceived of as using certain features of "the" human body for IT-mediated authentication and identification, "the" human body as a universal entity does not exist. People come in a variety of shapes, colours, genders, and ages. They share most, but not all, of their physiology and anatomy with each other. Moreover, these differences are commonly used to categorize people as belonging to a specific group defined in terms of age, gender, ethnicity, (dis-) ability, and so on; categorisations that, rightly or wrongly, all too often have social, ethical, legal and political significance.

There are at least two different ways in which issues of human bodily differences emerge in relation to biometric technologies. On the one hand there is the matter of *exclusion* of certain categories of "different" people from system use, because the systems can only cope with difference to a limited extent. In biometric discourse the set of problems connected with this issue is referred to by a number of concepts, such as, for example, usability, accessibility, failure to enroll, exception handling and template aging. In the discourses of social theory and politics, these matters invoke considerations in terms of divisions made between *normal* and *abnormal* or the *rule* and the *exception*. Such notions, then, are connected with concepts like normalisation and social inclusion and exclusion.

On the other hand, the issue of bodily differences emerges in relation to biometric technologies that *use* the differences mentioned, trying e.g., to *automatically classify* people in gender, age, and ethnic categories. So called soft biometrics (the use of characteristics such as height, weight, gender, eye color, or ethnicity that provide some information about the individual but lack the distinctiveness and permanence to differentiate any two individuals) uses what, within technical discourse, are referred to as partial identities in systems that are mostly in the research stage, with only a few applications in actual operation. Here questions may arise about the contingent, perhaps unscientific and contestable, or even unethical *construction* of those categories, and building them into the biometric systems.

The Policy Forum on Bodily Differences aims to articulate and discuss issues emerging from the various ways in which biometric technologies and human bodily differences interact and interfere with each other. Its purpose is to offer new ways in which to frame policy issues and problems connected with these matters in order to improve strategies for finding solutions. To accomplish this goal, the Policy Forum brings together a group of selected experts and stakeholders who are invited to conduct an on-going conversation about the issues involved.

ZUYD'S POLICY FORUM ACTIVITIES

The Policy Forum's activities started with background research into the topic, and the production of a background document. Contacts were established with the Focus Group on Biometrics of the Centre Européenne de Normalisation (CEN), which resulted in an agreement to convene the Policy Forum's face-to-face meeting in conjunction with the CEN Focus Group meeting in Brussels in March 2009.

The agenda for the Policy Forum face-to-face meeting was developed in close cooperation with the chair of the CEN Focus Group. The face-to-face meeting included a special session to discuss the CEN Focus Group's draft *Roadmap for Future Research on Biometrics in Europe*; also, several CEN Focus Group members gave presentations at the face-to-face meeting. Prior to the meeting, a background document to introduce the topic and initiate the conversation was distributed to members of the CEN Focus Group and to HIDE Partners. Furthermore, a questionnaire developed by the CEN Focus Group to obtain feedback about CEN's proposals for a roadmap for future research was distributed to those who would be attending the face-to-face meeting. Participants at the Policy Forum meeting represented the public and private sectors as well as academia. Vendors, system integrators, academic and scientific researchers, data protection authorities, advocacy groups, and politicians all contributed to the forum's face-to-face meeting.

The following individuals were speakers at the face-to-face meeting:

- Mr. Nicolas Delvaux, Representing HIDE partner SAGEM, and chair of the co-hosting CEN Focus Group on Biometrics, the TURBINE (TrUsted and Revocable Biometric IdeNtitiEs) project, which has privacy enhancing authentication solutions as its main research focus.
- Ms. Irma van der Ploeg, representing HIDE partner INM-Zuyd University, and Policy Forum coordinator introduced the topic and mission of the Policy Forum.
- Ms. Bénédicte Havelange, representing European Data Protection Supervisor (EDPS) presented on biometrics in EU large-scale IT systems, in particular discussing age limits, and calling for more research on the reliability of fingerprinting children to inform the on-going work by the EDPS on the question of age-limits for taking fingerprints from children.
- Ms. Ruzayda Martens from the International Organisation for Migration (IOM) presented IOM's experiences with biometric identification in the context of international migration, explaining how, after 9/11, migration procedures have been increasingly (mis-)used as tools for combating terrorism, and pointing out the trend that migrants from developing countries increasingly try to actively avoid biometric enrollment.
- Mr. Roel van Houten from the CG-Raad (Dutch Organisation for people with disabilities), who presented on issues of usability biometrics for people with a disability, emphasising the need for respectful and non-stigmatising fallback procedures.
- Ms. Annemarie Sprokkereef from the Tilburg Institute for Law, Technology and Society (TILT) presented a recently finished study of biometrics as privacy enhancing technology in the Dutch private and semi-public domains, in which a general lack of awareness about potential data protection issues, system weaknesses and limitations of biometric technologies in users/buyers of these systems was evident.

- Ms. Gillian Ormiston from the Biometric Identity Management and Security Solutions department of the Motorola Ltd. presented ways to increase the usability of the biometric solutions, pointed out how system design, in particular user interfaces, need to be more informed by the experiences of the users actually operating the systems as well as insight in local conditions at the sites of operation.
- Mr. Asbjørn Hovstø (ITS, Norway), read Mr. Mario Savastano's (University of Naples), presentation on accessibility issues of biometrics in relation to the work of ISO Working Group 6 on Cross-jurisdictional and societal aspects of Biometrics.
- Mr. Ben Schouten, from Fontys University of Applied Sciences, The Netherlands, and member of the CEN Focus Group on Biometrics, presented on soft and multi-modal biometrics for automated authentication, explaining how, in his view, soft biometric features such as body weight, height, age, or gender may be used to enhance "classic biometrics" performance, or classify people while preserving anonymity, and pointing out social/ethical risks such technologies pose with regard to potential for discrimination.

A roundtable discussion on the CEN Focus Group's draft roadmap for future research on biometrics in Europe was moderated by Mr. Ben Schouten, reiterating the key questions from the Policy Forum's mission statement: *Where and how do problems relating to biometrics and bodily differences occur and whom are they affecting in particular? Moreover, what is and should be the role of standardisation efforts in mitigating these problems?*

Finally, the continuation of the Policy Forum's activities in an online environment was explained to the participants. These activities include identifying themes for further development and encouraging the meeting participants to continue their active contribution to the Policy Forum through the on-line environment.

Policy Forum activities that took place after the face-to-face meeting included posting the meeting presentations, background documents, and participant list on the Policy Forum website. In addition, a report of the face-to-face meeting was published in *Dialogue*, the newsletter of the HIDE project (Vol.2, No. 5, June 2009; http://www.hideproject.org/downloads/newsletter/HIDE_Newsletter5_200906.pdf).

The Policy Forum's online environment includes several topics and questions (see the next section of this report) that were identified at the face-to-face meeting as central themes requiring further discussion. Policy Forum members have been regularly invited to add their reactions, views and suggestions in the on-line environment.

The Policy Forum's activities during the next reporting period will include enriching the online forum, encouraging Policy Forum members to participate in the on-line activities, and expanding the number of active Policy Forum members and range of involved stakeholders.

KEY ISSUES RAISED AND QUESTIONS FOR FURTHER INQUIRY

Standardisation and Body Issues

Some standards do have an effect on who will and who will not be able to use a biometric system. Thus, more insight is needed about which current biometric standards are problematic with respect to the ability of biometrics to adequately handle human differences. Moreover, we should ask how and where standardisation plays a positive role with regard to accessibility and usability of biometrics. For instance, can biometrics respond to and support the needs of

specific categories of people such as the elderly, children, people with a disability, men, women, or people from specific ethnic backgrounds? Finally, there is a need to establish which form or type of standard is in urgent need of being developed and adopted to improve the usability of biometrics and its e-Inclusion.

Soft Biometrics

Soft biometrics is generally developed to be used in a multimodal way with other biometrics to increase performance of verification systems. However, once developed to maturity, there is no reason to expect their application to remain restricted to this purpose. Moreover, most soft biometric features (age, gender, ethnicity or skin colour, but also body weight and height) are implicated in discriminatory practices, social exclusion, economic and even legal privilege/disadvantage. Thus, it is important to weigh the advantages and disadvantages of the automation of classifying and registering people into the categories mentioned. And more insight is needed into what kind of applications, systems, and uses we can anticipate for soft biometrics. Finally, additional discussion is warranted to determine whether there are special regulatory issues relating to soft biometrics that need to be addressed and to determine the urgency of those issues.

Fallback Procedures: Respectful or Stigmatising?

It has often be remarked that fallback procedures should be in place to adequately deal with a biometrics system that does not work well from some people – for example, for people who lack or have damaged biometric features (e.g., fingerprints), or people with particular disabilities (e.g., blindness). However, such fallback procedures can be set up in ways that do not really prevent feelings of exclusion or discrimination due to their inconvenience, demands on time, or stigmatising nature. Thus, it is important to establish what requirements should be in place for fallback procedures in order to prevent or minimise any negative effects of biometric systems.

Stakeholders, Policy and Design

The Policy Forum on Body Issues is designed to bring together a wide range of stakeholders, and now includes representatives from industry, academia, science, politics, data protection supervision, and a range of special interest groups and NGOs that advocate for migrants, people with disabilities, and the elderly. However, it has been suggested that crucial input for improving usability, accessibility, and reliability of biometric systems will still be missed, because certain stakeholders and disciplines are not yet fully involved with the Policy Forum. In particular, system operators and users at the field level – such as embassy personnel and customs and immigration officers involved in enrollment procedures – are best positioned to notice when and how biometric systems fail to accommodate real life situations with their broad variety of clients, citizens, migrants and travellers.

Moreover, in designing and evaluating biometric systems, a too narrow view of what belongs to the technological system tends to prevail, which causes key factors to be overlooked, such as, for example, the existing organisational procedures, architectural spaces, and work routines in which the systems have to be fitted. Thus, there is a need for a clearer view on what to include in evaluations and whom to ask in order to arrive at designs that will not exclude or disadvantage people in unexpected ways.

Biometrics and Children: The Debate over Children's Passports and Fingerprints

Children's fingerprints are notoriously unreliable as an identifier because of the relative underdevelopment of their papillary relief. For this reason, adding fingerprint recognition technology to children's passports is not recommended for children younger than 12 years of age. For example, the European Data Protection Supervisor is investigating this issue and thus currently advises against the use of fingerprints for children below the age of 12. Nonetheless, some EU member states such as the Czech Republic permit the use of children's fingerprints in passports. The Policy Forum will focus on this issue by discussing the following questions:

- Is the age limit of 12 the appropriate cut-off point?
- Can the technical problems involved with obtaining reliable fingerprints of children younger than 12 be overcome in the near future?
- Are there significant positive effects of having young children's fingerprints in their passports?
- Are there other non-technical reasons *not* to use biometrics when children are involved?
- Are there important ethical, social or legal differences involved when using biometrics with children as opposed to adults? If so, what are they?