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# Biometrics and Identity Management

First European Workshop, BIOID 2008  
Roskilde, Denmark, May 7-9, 2008  
Revised Selected Papers

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## Preface

A key driving factor for biometrics is the widespread national and international deployment of biometric systems that has been initiated in the past two years and is about to accelerate. While nearly all current biometric deployments are government-led and principally concerned with national security and border control scenarios, it is now apparent that the widespread availability of biometrics in everyday life will also spin out an ever-increasing number of (private) applications in other domains. Crucial to this vision is the management of the user's identity, which does not only imply the creation and update of a biometric template, but requires the development of instruments to properly handle all the data and operations related to the user identity.

COST Action 2101 on Biometrics for Identity Documents and Smart Cards has operated as a valuable and effective platform for close collaboration of European scientists from academia and industry researching biometrics for identity documents and smartcards. This has led to the continuous advances achieved in various classes of biometrics and their implementations in the identity management domain. These contributions to knowledge in this field were first presented at the First European Workshop on Biometrics and Identity Management (BioID 2008) organized in Roskilde, Denmark during May 7–9, 2008.

The scope of this first COST 2101 open workshop covered all the research aspects of the Action, from biometric data quality, through biometric templates and modalities, to biometric attacks and countermeasures, as well as biometric interfaces and standards. More information about COST Action 2101 may be found at <http://www.cost2101.org/>. This site also hosts the official websites for the BioID 2008 workshop at <http://www.cost2101.org/BIOID2008>.

These proceedings contain the revised papers that were presented during the workshop. Position papers by invited speakers presented at the workshop are also included. The volume is divided into several sections:

1. Biometric Data Quality
2. Biometrical Templates: Face Recognition
3. Biometrical Templates: Other Modalities
4. Biometric Attacks and Countermeasures
5. Biometric Interfaces, Standards and Privacy
6. Position Papers by Invited Speakers on Biometrics and Identity Management

The first section is concerned with the quality of biometric data. Not only on how to quantify and qualify data representing unique biometric characteristics, but also to provide classifications for comparison of different biometric-based solutions to identity management.

The next two sections are concerned with biometrical templates, firstly focusing on face recognition, and highlight several aspects on the contextual conditions such as pose and illumination. A new database is presented in two papers that includes several

facial expressions. Secondly other modalities like speech, signature, and fingerprint are researched upon. In Sect. 4 several contributions are dedicated to the important aspect of security and trust in biometrical applications.

In Sect. 5, several systems and interfaces are introduced as well as standards for biometrics, and the last section concludes with papers addressing the current state in the art of biometrics and identity management. Ben Schouten et al. focus on 19 urgent research topics (the research agenda) for biometrics and identity management. Andrzej Drygajlo lays out the actions within COST 2101 to address these issues. Emilio Mordini discusses the ethical issues related to biometrics and John Gill investigates authentication systems and applications for the blind and shows how solutions are applicable for a much broader set of vulnerable groups (outliers).

We are grateful for all contributions towards making the workshop and these proceedings a success. BioID 2008 was an initiative of the COST Action 2101 on Biometrics for Identity Documents and Smart Cards. It was supported by the EU Framework 7 Program. Other sponsors of the workshop were: The European Biometrics Forum, The Danish Biometrics Research Project Consortium, the UK Biometrics Institute, the Institution of Engineering and Technology, Fontys University of Applied Science and Roskilde University.

Extended thanks go to everyone who made the first workshop a success and a fruitful platform for the exchange and dissemination of results within biometrics and identity management at future workshops as well; COST Action 2101 has planned the second workshop to be held in the fall of 2009 in Madrid, Spain.

The Chairs want to extend their thanks to the nine members of the Program Committee; who had a tough, but enjoyable, job of reviewing the submissions. The final decision was made by the Chairs.

August 2008

Ben Schouten  
Andrzej Drygajlo  
Niels Christian Juul  
Michael Fairhurst

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- UK Biometrics Institute
- Institution of Engineering and Technology (IET)
- Fontys University of Applied Science
- Roskilde University

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