EAB Newsletter January 30, 2020

Report on the ISO/IEC JTC1 SC37 Meeting in New Orleans

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Full story

New Standards for Biometric Passports published

ISO has published the new 3rd generation standards for biometric data interchange (ePassport standards)

Full story

PAD Workshop Registration Website open

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Full story

Special reports:

BTAS 2019 Conference

Conference report on IEEE BTAS 2019

EAB RPC 2019
EAB Research Projects Conference
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16-18 September 2019

Darmstadt
18th BIOSIG Conference 2019
Biometrics Special Interest Group
September 18 to 20, 2019

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Report on the ISO/IEC JTC1 SC37 Meeting in New Orleans

The ISO/IEC JTC1 subcommittee on biometrics has met for its working group and plenary meeting in the city of New Orleans, US from January 20 to 24.

Working Group (WG1), which is in charge on biometric vocabulary, concepts, terms and definition has prepared during this week the publication of the 2020 edition of the Harmonized Vocabulary (ISO/IEC 2382-37), which received 310 comments prior to the week, which were successfully disposed. The Draft International Standard (DIS) circulation of ISO/IEC 2382-37 will take place in February.

The WG2 that is working on biometric technical interfaces progressed the work on the revision ISO/IEC 19785 Common Biometric Exchange Formats Framework, which is known under the abbreviation CBEFF (Part 1 and 2) and also on ISO/IEC 30106 Object Oriented BioPAI part 2 and 3 all of which are now progressed to Final Draft International Standard (FDIS).

The WG3, which is addressing the standardisation of the content, meaning, and representation of biometric data formats, image quality and presentation attacks in the biometric capture process has continued the work on the ISO/IEC 39794 multipart standard on extensible biometric data interchange formats, for which the first three parts (Part1 Framework, Part 4 Finger image data and Part 5 Face image data) had been published in December 2019 and will be adopted by ICAO later this year. The further parts of ISO/IEC 39794 that are under development contain Part 2 Finger minutiae data, Part 6 Iris image data, Part 9 Vascular image data, Part 16 Full body image data and Part 17 Gait image sequence. WG3 also discussed the maintenance of the NFIQ2.1 reference implementation (available in GitHub) of ISO/IEC 29794-4 and started equivalent standardisation work now for the assessment of face image quality.

The development of technical best practices, guidance, implementation requirements and biometric profiles that support the successful use and interoperability of biometric applications is the responsibility of WG4. This group has worked at the January meeting on ISO/IEC 22604 Use of Contactless Biometrics in Access-Related Systems and on the new work item ISO/IEC 24358 Face-aware capture subsystem specifications.

For the standardisation of testing and reporting methodologies SC37 operates WG5, in which one of the most relevant standardisation projects is the revision of ISO/IEC 19795-1 Biometric performance testing and reporting — Part 1:Principles and framework, that is currently under DIS ballot. Work of WG5 in the week in New Orleans was focused on ISO/IEC 21472 Evaluation methodology for user interaction influence in biometric system performance.

WG6, which is responsible for the field of cross-jurisdictional and societal aspects in the application of ISO/IEC biometrics standards has progressed with the ISO/IEC 22116 A study of the differential impact of demographic factors in biometric recognition performance and the ISO/IEC 24714 Jurisdictional and societal considerations for biometric applications.

The next working group meetings of SC37 will take place from July 12 to 17 in Singapore.

EAB Biometric News,

New Standards for Biometric Passports published

ISO has published the new 3rd generation standards for biometric data interchange (ePassport standards)

Theses standards have been developed by ISO/IEC JTC1 SC37 WG3 over the last 6 years. A great thanks to all experts that served as editor or commentor of the many drafts that we had seen.

A core concept followed by this new standards series is that encoding of biometric data will be done in an extensible data structure, as it is needed for future ePassports.

You can preview (and buy) the new standards:

- ISO/IEC 39794-1:2019 Part1: Framework
- ISO/IEC 39794-4:2019 Part4: Finger image data
- ISO/IEC 39794-5:2019 Part5: Face image data

The further timeline agreed with SC17/ICAO and SC37 is as follows:

- ICAO will adopt its 9303 specification by April 2020 and refer to ISO/IEC 39794 and its Parts 1, 4 and 5 by December 2020.
- Passport reader equipment must be able to handle ISO/IEC 39794 data by 2025-01-01 (5 years preparation period).
- Between 2025 and 2030, passport issuers can use the old version or the new version of standards (5 years transition period).

While these parts are now completed, WG3 will continue on other parts among others on Part 2 (Finger minutiae data), Part 6 (Iris image data), Part 9 (Vascular image data)

EAB Biometric News,

PAD Workshop Registration Website open

Idiap Research Institute and the European Association for Biometrics EAB are organizing the first EAB Winter Workshop on Presentation Attack Detection evaluation and certification in Martigny on February 20 and 21.

The aim of the workshop is to bring together researchers, companies, customers, practitioners in biometrics to present latest research findings and challenges in Presentation Attack Detection, to unveil industrial solutions and to discuss the need for evaluation and certification. The workshop will start with an half-a-day introduction to biometrics and presentation attack detection taylored for beginners. The second day will be dedicated to scientific presentations, industrial spotlights with demonstrations and networking.

The full program is available at: https://eab.org/events/program/202

You can register at: https://eab.org/events/registration/202

EAB Biometric News,

Last Review Round for Draft International Standards on Performance Testing Framework

The ISO/IEC JTC1 Subcommittee 37 on Biometrics is seeking comments on the Draft International Standard (DIS) on the revision project of ISO/IEC 19795-1 Biometric performance testing and reporting — Part 1: Principles and framework.

The initial edition of this standard, which was published back in 2006, established the framework for biometric testing in academia, industry and operators tests, as it presented best scientific practices for conducting and reporting performance testing. This standard is seeking to determine error and throughput rates, with the goal of understanding and predicting the real-world error and throughput performance of biometric systems. The error rates include both false-positive and false-negative rates, as well as failure-to-enrol and failure-to-acquire rates across the test population.

The DIS for the second edition of this standard is seeking comments prior to 2019-02-19. This round of comments will be the last opportunity to contribute technical comments. The second edition will replace the first edition (ISO/IEC 19795-1:2006) likely later this year.

Please consider to contribute with your comments to ensure technical correctness of future biometric performance tests.

In order to submit comments on the DIS document please contact your national standardisation body (and the respective mirror-committee of SC37 – see: https://www.iso.org/members.html)

EAB Biometric News,

Academic Graduation Monitoring Report

EAB has composed the first annual Academic Graduation Monitoring Report that contain lists of entries of Bachelor-, Master- or PhD-theses and a short summary of each thesis.

During the 2019 EAB general assembly in September it was proposed to compose an annual academic graduation monitoring report, which should provide information about academic theses that are completed in EAB member institutions. This report should provide an overview of the research going on in Europe.

The document will be a living document until the next general assembly in September 2020. Afterwards we will start the monitoring report for the year 2020.

You can review the draft at: https://www.eab.org/upload/documents/1799/EAB-research-report-2019.pdf

EAB Biometric News,

Face Recognition Vendor Test (FRVT) MORPH Updated

The U.S. National Institute of Standards and Technology (NIST) has published an updated draft report on performance of automated face morph detection, which is also known as NIST-FRVT-MORPH.

The new report, which is demonstrating the current state of the art on Morphing Attack Detection (MAD) shows a leading position of various EAB members that are active in this reasearch area.

You can find the report at: https://pages.nist.gov/frvt/reports/morph/draft_frvt_morph_report_2020jan24.pdf

Note that recently issued request for comments on the German anti-morphing law: https://www.eab.org/news/eab-news.html/308

See also the EAB news on the recent Frontex workshop on morphing attacks: https://www.eab.org/news/eab-news.html/263

For more information on the morphing problem and possible countermeasures you can read: https://www.christoph-busch.de/projects-mad.html

EAB Biometric News,

Special session on Bias in Biometrics at EUSIPCO

A special session on the topic of "Bias in Biometrics" is going to be held at the 28th European Signal Processing Conference (EUSIPCO2020)

The special session is jointly organised in the context of National Research Center for Applied Cybersecurity ATHENE mission Next Generation Biometric Systems (NGBS) by researchers from Hochschule Darmstadt (Pawel Drozdowski), Inria Sophia Antipolis (Dr. Antitza Dantcheva), and Fraunhofer Institute for Computer Graphics Research IGD (Dr. Naser Damer).

Topics of interest include, but are not limited to:

Transparency, explainability, accountability, and fairness in biometrics.
Estimation of inherent biases in biometric algorithms, including recognition, classification, and quality assessment w.r.t. factors such as sex, age, ethnicity, and image acquisition conditions.
Bias-aware, bias-mitigating, and bias-free biometric algorithms.
Balanced training and testing datasets.
Differential performance in biometric systems.

The deadline for submissions is on the 21st of February 2020. Submission information is available at the conference website. The special session announcement is available here: https://dasec.h-da.de/special-session-on-bias-in-biometrics-co-organised-by-da-sec-researcher/

EAB Biometric News,

Frontex invites Industry

Frontex, the European Border and Coast Guard Agency is organising the next Frontex Industry Days on 17-18 March 2020. The intention is to learn about the latest technological developments, products and services in the field of border control and surveillance.

The Industry Days will feature pioneering products made available by industry and showcase them to the end user community of Member States' border authorities and Frontex experts. The aim of the event is to create a forum to freely discuss innovation in border control among all participants.

You can read more at: https://frontex.europa.eu/research/invitations/invitation-to-frontex-industry-days-s18nYe

EAB Biometric News,

Request for Information on counter-biometric Expertise

According to biometric update the U.S. Justice Department is seeking information from vendors on counter-biometric expertise to perform *'biometrics due diligence and to catalog the biometric threat environment'.*

The Request for Information (RFI) is expressing the need to monitor various kinds of trends in biometrics, and apply that information to risk assessment.

You can read more at: https://www.biometricupdate.com/202001/marshals-service-seeking-information-on-counter-biometric-services

In this context it is also of interest that the U.S. House Committee on Oversight and Reform is holding another hearing focused on biometric face recognition, as reported here: https://www.biometricupdate.com/202001/u-s-lawmakers-hold-third-facial-recognition-hearing-as-more-government-bans-and-privacy-bills-introduced

EAB Biometric News,

Application Deadline for Biometrics Summer School Approaching

The University of Sassari has announced the 17th international summer school for advanced studies on biometrics: forensics and identity science for human-centered applications.

From the early days, when security was the driving force behind biometric research, today's challenges go far beyond security. Machine learning, Image understanding, Signal analysis, Neuroscience, Robotics, Forensic science, Digital forensics and other disciplines, converged in a truly multidisciplinary effort to devise and build advanced systems to facilitate the interpretation of signals recorded from individuals acting in a given environment. This is what we simply call today *Biometrics*.

For the last seventeen years, the International Summer School on Biometrics has been closely following the developments in science and technology to offer a cutting edge, intensive training course, always up to date with the current state-of-the-art.

What are the most up-to-date core biometric technologies developed in the field? What is the potential impact of biometrics in forensic investigation and crime prevention? What can we learn from human perception? How to deploy current Deep Learning approaches? How to deal with adversarial attacks in biometric recognition?

This school follows the successful track of the International Summer Schools on Biometrics held since 2003. In this 17th edition, the courses will mainly focus on new and emerging issues:

- Biometrics for social interactions and emerging applications;
- How to exploit new biometric technologies in forensic and security applications;
- Evaluation and assessment of biometric and forensic applications;
- Deep Learning for biometrics, forensic identification and Identity Science.

The courses will provide a clear and in-depth picture on the state-of-the-art in biometric verification/identification technology, both under the theoretical and scientific point of view as well as in diverse application domains. The lectures will be given by 18 outstanding experts in the field, from both academia and industry. An advanced feature of this summer school will be some practical sessions to better understand, *hands on*, the real potential of today's biometric technologies.

Advance pre-registration is strictly required by **February 15th 2020**

Read more at: http://biometrics.uniss.it/

EAB Biometric News,

French Government is testing Face Recognition in Video Surveillance

Radio France Internationale (RFI) reports that the French government want wants to test facial recognition in video surveillance. The state that the intention is to establish a legal framework for developing facial recognition for security and surveillance.

According to this report government officials are discussing with players in the fields of research, industry and civil liberties over how to best regulate the rapidly spreading technology.

You can read the full article at: http://www.rfi.fr/en/france/20200108-government-wants-test-facial-recognition-video-surveillance-security-civil-liberties

EAB Biometric News,

Request for Comments on German Draft Passport Live Enrolment Law

The German Ministry of Interior is seeking comments on the draft passport live enrolment legislation, to counter the morphing attack problem.

Following the European Regulation 2019/1157 (recital 32) for passport enrolment the German government has now presented the draft legislation for a passport enrolment law, which has the intention to prevent document falsification by manipulated facial photos.

The ministry is seeking comments, which are to be submitted by 2020-01-28 to DGI2@bmi.bund.de.

By revising the passport law, the German Ministry of the Interior wants to ensure that only photos taken under supervision in the application office will be used for passports and identity cards. With this new law live capture of facial images would replace the previous procedure of accepting printed photographs, which is known to be a critical risk for border control security due to morphing attacks.

For more information visit: https://www.bmi.bund.de/SharedDocs/gesetzgebungsverfahren/DE/gesetz-zur-staerkung-der-sicherheit-im-pass-und-ausweiswesen.html

See also the EAB news on the recent Frontex workshop on morphing attacks: https://www.eab.org/news/eab-news.html/263

For more information on the morphing problem and possible countermeasures you can read: https://www.christoph-busch.de/projects-mad.html

EAB Biometric News,

NIST Face Recognition Vendor Test 1:1 Verification Report – Update

The US NIST has updated the report on the Face Recognition Vendor Test for 1:1 Verification systems.

The new report now include measures on runtime and memory usage. The report also adds four new developers and provides new results for 13 returning developers.

Read more on the update at: https://pages.nist.gov/frvt/html/frvt11.html

You can download the new report at: https://pages.nist.gov/frvt/reports/11/frvt_report_2020_01_06.pdf

EAB Biometric News,

Submission Deadline for IWBF is extended

The paper submission deadline for the International Workshop on Biometrics and Forensics (IWBF) has been extended until February 15.

The workshop is devoted to facilitating synergies in research
and development among the areas of multimedia forensics, forensic biometrics, and forensic science. For more information about IWBF please visit: http://vcmi.inesctec.pt/iwbf2020

EAB Biometric News,

ICAO issues new Request for Information

The International Civil Aviation Organisation (ICAO) New Technologies Working Group (NTWG) issues a triennial request for information (RFI) to the global community.

The exercise provides vendors from around the world to showcase new/emerging technologies that relate to travel documents to ICAO Member States. The rapidly changing landscape should make this year's process both extremely interesting and attractive to more and more companies.

The documentation and instructions to support the process have been posted on the ICAO website. For more information on the RFI please visit: https://www.icao.int/Security/FAL/TRIP/Pages/rfi.aspx

EAB Biometric News,

Amazon files Patent on Hand Biometrics

Amazon has filed recently a patent that covers outer skin hand biometrics as well as vascular hand biometrics.

It is likely that the scope of the patent is addressing Amazon's cashier-less "Amazon Go" stores, which intends to increase convenience with non-contact biometric identification of customers. A single hand capture device would capture palm skin and vascular images with first and second polarization respectively.

Read more details on the patent application at: https://www.patentlyapple.com/patently-apple/2020/01/amazon-files-patent-for-non-contact-biometric-id-system-for-their-amazon-go-stores-and-beyond.html

For further information on vascular biometrics read also: https://www.eab.org/news/eab-news.html/276

EAB Awards 2020

The European Association for Biometrics EAB is launching a call for nominations for the fourteenth European Biometrics Max Snijder, Research, and Industry Awards. These prestigious awards are granted annually to individuals who have been judged by a panel of internationally respected experts to be making a significant contribution to the field of biometrics research and innovations in Europe.

The awards are recognizing innovation in academic research as well as in industry. Thus, biometric experts with either of the following profiles should submit their work. Academic researchers enrolled in the last or penultimate year of a Ph.D. program or who have obtained a Ph.D., with major focus on biometrics, from a European academic institution no later than two years before the given deadline, might consider applying for the award. Further industrial researchers employed by European companies whose core business is biometrics might consider applying for the industry award, which will be granted to the candidate that has created the strongest impact for industry.

Applicants are asked to submit a research paper and supporting information by 15 May 2020. These papers will be reviewed by a jury composed of internationally recognized experts in the field of biometrics who will judge the academic and scientific quality for the EAB academic research award and the novelty, impact, applicability and the novelty, impact, applicability and other business aspects for the EAB industry award.

Shortlisted candidates will be asked to present their research made within the scope of the EAB Biometric Research and Industry Award, focusing only on one specific research topic, in front of the jury, EAB members and public audience on 16 September 2020 during the European Association for Biometrics scientific symposium in Darmstadt, Germany.

Read more at: https://www.eab.org/award/cfp.html

See also: https://www.eab.org/events/program/197

EAB to take part in ID Week 2020

EAB is happy to announce its renewed cooperation with TERRAPIN, the organizer of the ID WEEK Conference and Exhibition, which will be held at the London Excel on June 9-11, 2020 and be built around 3 co-located events, DIGITAL ID 2020, SDW 2020, and PLANET BIOMETRICS 2020.

EAB's active participation to the roster of speakers and panelists will naturally be centered on the 3rd event of the 2020 ID WEEK edition.

We invite all our Members to attend, including also by participating in the new 1-Day Summits which will take place during the 2020 ID WEEK. Please refer to the event Website for further details!

Most recent international Biometrics projects and achievements will be reviewed, while nurturing interactive discussions around advanced challenges and shared opportunities for all stakeholders.

An event not to be missed! Read more about it at:
https://www.terrapinn.com/exhibition/identity-week/index.stm

Please get back to Jean Salomon for early enrolment at: jean.salomon@eab.org

EAB Biometric News,

NIST Report on Demographic Effects in Face Recognition

The U.S. National Institute of Standards and Technology (NIST) has published a study on the accuracy of face recognition software tools regarding identication of data subjects of varied sex, age and racial background.

The results of this study are contained in the NIST IR 8280, which consitutes part 3 "Demographic Effects" of the Face Recognition Vendor Test (FRVT) report.

Read more at: https://www.nist.gov/news-events/news/2019/12/nist-study-evaluates-effects-race-age-sex-face-recognition-software

EAB Biometric News,

TReSPAsS Innovative Training Network

The TRaining in Secure and PrivAcy-preserving biometricS (TReSPAsS-ETN) project is an H2020 Marie Skłodowska-Curie Early Training Network. It will produce new cohort of early stage researchers capable of innovating the next generation of biometrics technology designed to protect security and preserve privacy.

The early training network couples specific technical and transferable skills training including entrepreneurship, innovation, creativity, management and communications, with secondments to industry. Together the newly trained cohort will enhance European expertise in security protection through generalised presentation attack detection (PAD) technologies, and privacy preservation through computationally feasible encryption solutions. The project will enhance European research leadership and competitiveness and will help to sustain the flourishing biometrics market.

TReSPAsS-ETN is a consortium of seven leading European universities and research institutes, supported by 7 industrial entities, in Belgium, France, Germany, Netherlands, Spain, Sweden and Switzerland. TReSPAsS-ETN starts in January 2020 and will support 14 fully-funded PhD positions.

PriMa Innovative Training Network

PriMa (Privacy Matters) is an Innovative Training Network (ITN) funded by the EU through the Horizon 2020 Framework. The project will start at January 1, 2020 and is a collaboration between 7 research locations and 7 industrial partner organisations with a focus on the analysis and mitigation of privacy risks in a rapidly digitalising society.

One factor contributing to the erosion of privacy is the growth in recognition technologies that not only facilitate the recognition of individuals but also the inference from biometric data of emotional state, gender, health, age, and even profession. Another factor is the fast advancement of artificial intelligence, allowing for extensive data mining, and aggregation, linkage and inference of personal information. Hence, there is a real possibility that acceptable privacy may become unattainable unless technological and societal steps are taken to allow citizens to regain control of their personal information. Therefore, the overall objectives of PriMa are:

- To train 14 creative, entrepreneurial, and innovative researchers as privacy protection experts.
- To contribute to a full understanding of the multidisciplinary nature of privacy protection in a digitalised society.
- To contribute to the development of solutions that address this important societal challenge.

PriMa will train a next generation of researchers to define, investigate and implement solutions that ensure secure and efficient privacy protection whilst keeping the advantages of a digitalised society, and provide them with transferable skills to enable effective planning, management and communication of research ideas and outcomes. This will give them excellent career opportunities.

PriMa is coordinated by the DMB group of the University of Twente. The coordinator is Raymond Veldhuis (r.n.j.veldhuis@utwente.nl). PriMa has 14 open positions for PhD students, more detailed information, including links to application sites, can be found at: http://www.prima-itn.eu/