EAB Newsletter March 30, 2019

EU Publishes Biometric Quality Requirements for the EES

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Full story

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Full story

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Full story

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Good quality of a fingerprint image is a prerequisite to assure a person can be reliably identified based on their fingerprint. This is especially important in government applications, such as the issuance and verification of electronic passports or in border crossing scenarios.

For the quality assessment of fingerprints, the Fingerprint Image Quality (NFIQ) algorithm of the US National Institute of Standards and Technology (NIST) – initially developed in 2004 – has become the de facto standard worldwide. As biometric technology evolved, so did the NFIQ standard to meet the requirements for secure biometrics of today as well as tomorrow.

Since 2017 the new version 2.0 of the NFIQ algorithm, which is based on artificial intelligence, has been available. It is an essential foundation for the security and reliability of modern biometric systems that use fingerprint verification. NFIQ 2.0 is now also set as the standard for fingerprint quality in the EU Entry/Exit System, which will become operational in 2021.

The Commission Implementing Decision (EU) 2019/329 is published in the Official Journal of the European Union No. L 57/18 laying down the specifications for the quality, resolution and use of fingerprints and facial image for biometric verification and identification in the Entry/Exit System (EES).

You can read the full document at: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32019D0329&from=EN

For more information on NFIQ2.0 you can visit: https://www.nist.gov/services-resources/software/development-nfiq-20

NFIQ2.0 is also standardised as ISO/IEC 29794-4: https://www.iso.org/standard/62791.html

The open source implementation is available on GitHub at: https://github.com/usnistgov/NFIQ2

The 6th Edition of the EAB Research Projects Conference is on the way

The 6th edition of the EAB Research Projects Conference will take place on the 16th, 17th and 18th of September 2019, at the premises of Fraunhofer IGD in Darmstadt, Germany.

The conference is organized by the European Association on Biometrics (EAB) in cooperation with the Joint Research Center (DG JRC) of the European Commission, through its Cyber and Digital Citizens' security Unit. The EAB-RPC 2019 will be co-located with the EAB Research Award and the IEEE BIOSIG Conference, later that same week. The conference is currently the largest event on research funded by the European Union in the area of Biometrics and Identity Management.

Over the previous five successful editions, EAB-RPC has become the main forum in Europe where attendees can simultaneously: promote research carried out in biometrics, forge new links and networks, and identify the appropriate partners for possible future project applications. Last year's edition welcomed over 100 participants from academia, industry and public institutions. For further information on the conference, a detailed agenda, or to register to the event, please visit the dedicated website: https://www.eab.org/events/program/177

If you would like your European-funded project to participate in the conference please contact the Scientific Chair: javier.galbally@ec.europa.eu

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EAB is delighted to announce a partnership with the London Identity Week that will take place at the ExCeL in June of this year. With over 3000 participants from all stakeholder group, it is the world's largest conference on identity and biometrics.

More specifically, EAB will chair the Planet Biometric Conference. Also EAB members will have a special rate to attend the conference.

As valued EAB member this is a unique opportunity for individuals, governments and institutions, start-ups, industry, academic or organizations to contribute to the program. If you are interested to share your experience, innovation or other updates on biometric related topics feel free to reach out to Michiel van der Veen.

michiel.van.der.veen@eab.org

Yearly Statistics on the Usage of SIS published

The EU Agency for the Operational Management of Large-Scale IT Systems in the Area of Freedom Security and Justice (eu-LISA) has published the 2018 yearly statistics on the usage of SIS.

Created as a compensatory measure for the abolition of internal border checks within the Schengen area, the Schengen Information System (SIS) was established with two intentions: to contribute to law enforcement cooperation between the Member States and to support external border control. SIS enables competent authorities, such as police and border guards, to enter and consult alerts on certain categories of wanted or missing persons and objects.

The management authority of SIS is the EU Agency for the Operational Management of Large-Scale IT Systems in the Area of Freedom Security and Justice (eu-LISA). Following its obligations, defined in the SIS Regulation, eu-LISA publishes every year the statistics on the number of records per category of alert, the number of hits per category of alert, and how many times the SIS was accessed (in total and by Member State). The 2018 statistics were published in late March and can be accessed at:
https://www.eulisa.europa.eu/Publications/Reports/SIS%202018%20statistics.pdf

The Swedish Biometrics Forum will meet in May

Halmstad University (HH) in cooperation with the European Association for Biometrics (EAB) would like to invite you to a new edition of the Swedish Biometrics Forum (SBF).

The meeting will take place on:
Date: **Wednesday**, May 29th, 2019
Time: 09.00 to 15.00
Location: Halmstad University, Kristian IV:s väg 3, 30118 Halmstad, Sweden

There are still free slots (30 minutes presentation). If you are interested in presenting, please write to feralo@hh.se to check for availability.

The Swedish Biometrics Forum (SBF) is a new open platform dedicated to regular exchange of information and experience related to the field of Biometrics and Security. The aim of this forum is to bring together researchers, companies, agencies and other stakeholders for a one-day meeting in Halmstad, where invited speakers talk about their research or activities in the area, and there is also space for discussion about new ideas and challenges. More information about the Swedish Biometrics Forum, including previous editions, is available at http://islab.hh.se/mediawiki/SBF

Evaluations of Face Quality Assessment Algorithms

NIST is establishing an evaluation of face image quality assessment algorithms. These algorithms can be submitted to NIST for evaluation for free at any time after May 1, 2019.

NIST has invited developers to review and comment on the following documents:

- Draft Quality Concept Document
- Draft API for public comment
- Participation Agreement

More information can be found at: https://www.nist.gov/programs-projects/frvt-quality-assessment

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UK Commissioner comments on Face Recognition

During a select committee meeting on 19 March, the commissioner for the retention and use of biometric material, Paul Wiles, noted the lack of ministerial oversight regarding the use of Automated Face Recognition (AFR).

Wiles confirmed that the Police National Database (PND) currently holds 23 million images taken while people were in custody, whether or not they were subsequently convicted. The "watch lists" that police AFR systems operate use these custody images to identify people in real-time.

"At present, there are 10 million searchable facial images, but – just to be clear – that doesn't necessarily mean 10 million people because some will be duplicates," said Wiles.

The potential issue with UK's law enforcement agencies' use of AFR is not an inadequate accuracy and/or performance of the face recognition systems being deployed, but the lack of a solid legal basis for the deployment of such systems as well as the usage and retention of data generated by these systems. Therefore the results of the recently opened "priority investigation" will be of great interest – not only to the UK's law enforcement agencies.

Read more at: https://www.computerweekly.com/news/252460016/UK-police-should-not-deploy-live-facial-recogntion-technology-until-issues-are-resolved-MPs-told

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Blockchain meets Computer Vision Workshop

During the Conference on Computer Vision and Pattern Recognition (CVPR), which will take place in Long Beach, U.S. in June 2019, a dedicated workshop "Blockchain meets Computer Vision/AI" will be organized.

Blockchain is a foundational technology that is revolutionizing the way transactions are conceived, executed, managed, and monetized. While the commercial benefits of blockchain infrastructure are imminent, the underlying technological problems need significant attention from researchers. Of specific interest to researchers and application developers in computer vision and artificial intelligence (AI) is the tremendous opportunity to make a connection to these emerging infrastructure capabilities and realize how their skills can be leveraged to make an impact by marrying computer vision/AI and blockchain technologies.

The call for papers for this workshop is available at: https://sites.google.com/view/blockchain-meets-cv-ai/home

Voice Data Set released

Mozilla releases the largest to-date public domain transcribed voice dataset, including 18 different languages including English, French, German and Mandarin Chinese (Traditional).

The dataset contains up to almost 1,400 hours of recorded voice data from more than 42,000 contributors. With this release, the continuously growing Common Voice dataset is now the largest ever of its kind, with tens of thousands of people contributing their voices and original written sentences to the public domain.

Read more at: https://blog.mozilla.org/blog/2019/02/28/sharing-our-common-voices-mozilla-releases-the-largest-to-date-public-domain-transcribed-voice-dataset/

Gemalto acquires Green Bit

The acquisition of Green Bit, a very successful producer of finger and palm print scanners, is the consistent continuation of Gemalto's respectively Thales' acquisition strategy to create a one-stop identity solution provider.

Together with IDEMIA Thales will become one of the dominant players in the biometrics market. Read more at:

https://www.biometricupdate.com/201903/gemalto-acquires-green-bit-to-integrate-fingerprint-scanners-with-business-unit

New Dynamic 2D/3D Face Dataset

The university of Edinburgh has announced a new dynmaic 2D/3D speaking face dataset.

The dataset contains dynamic 2D/3D facial biometric dataset with synchronized audio:

- 1 second of 500 frame per second IR intensity video (600*600 pixels)
  1 second of 500 frame per second registered depth images (600*600 pixels)
- synchronized 44.1 Khz audio

There are 77 participants looking at the camera. Each is speaking the same passphrase (Ni'hao). There are 10 repetitions for each subject (for a total of 770 sets of data).

There are an additional 26 (*10 repetitions) participants that were
moving their heads while speaking the same passphrase.

The data can be used for a variety of purposes: IR based facial recognition/verification, 3D facial recognition/verification, speech-based recognition/verificvation, facial motion analysis, etc.

You can find more details at:

http://groups.inf.ed.ac.uk/trimbot2020/DYNAMICFACES/index.html

New CEN Technical Specification relevant for Automated Border Control

The European Committee for Standardisation (CEN) the publication of CEN/TS 17262:2018 Personal identification – Robustness against biometric presentation attacks – Application to European Automated Border Control.

The technical specification (TS) will be available end of March 2019. For further information visit: https://www.cen.eu/news/brief-news/Pages/NEWS-2019-011.aspx

Draft International Standards for Biometric Passport

In the January meeting of the ISO/IEC JTC 1/SC 37 on Biometrics a ballot on the second Draft International Standards (DIS) of the new passport standard ISO/IEC 39794-1, Extensible biometric data interchange formats – Part1: Framework, was launched.

Now this framework standard can be reviewed once more and can be synchronized with

- ISO/IEC 39794-4 Finger image data
- ISO/IEC 39794-5 Face image data

The set of these three standards will after this last commenting round be promoted to Final Draft International Standard (FDIS), which will be a decision to be taken at the next SC37 meeting in Darmstadt on July 8–12, 2019.

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.

The current timeline agreed with ICAO is that the new standard series is to be finalized in December 2019 such that ICAO can adopt its 9303 specification by April 2020 and then refer to ISO/IEC 39794-1, -4 and -5.

If you are working in the field of biometrics (face-recognition) please take a look at the current DIS documents. As a fallback you can review the earlier publicly available Committee Draft (CD) under the following URLs:

ISO/IEC CD 39794-1 Extensible biometric data interchange formats –
Part 1: Framework:
https://isotc.iso.org/livelink/livelink?func=ll&objId=19612955&objAction=Open&viewType=1

ISO/IEC 2nd CD 39794-5 Extensible biometric data interchange formats –
Part 5: Face image data:
https://isotc.iso.org/livelink/livelink?func=ll&objId=19917728&objAction=Open&viewType=1

Please consider to contribute with your comments to ensure technical correctness of future passport standards.

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