
ANNUAL REPORT 2022

European Network of Forensic Science Institutes

ENFSI



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ENFSI Board



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Chairperson
NFC Linköping, Sweden



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Alexandra André
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Agnieszka Łukomska
CFLP Warsaw, Poland



Attila Kuczmann
LKA Kiel, Germany



Mark Pearce
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ENFSI SECRETARIAT



Lars Kern
BKA Wiesbaden, Germany



Nina-Kristin Hohmann
BKA Wiesbaden, Germany



Paul Fang
BKA Wiesbaden, Germany

Message from the Chairperson



My dear Colleagues,

2022 was a very difficult year for me personally. I had to resign from ENFSI's Chair! It was the most difficult mail that I had to write in my life. Resigning from ENFSI was even more difficult than to leave FSD, a job that I loved and dedicated myself for the last thirty years of my professional life.

My three years in the Board were a great challenge and at the same time an extremely rewarding time for me. I worked wholeheartedly, fully aware that I should do my best because ENFSI deserves the best. I felt that I owed this to the visionary scientists that had the very first meeting in Hague in early 1993. I owed this to so many other colleagues who tried to make ENFSI the great entity that it is today and I owed it to all of you, the great European forensic community that put its trust in me.

However it was not meant for me to conclude this mission....I was not meant to meet you all in Stockholm – even though I was looking forward to it after of so many years of video conferences due to COVID travel restrictions.

I'm very proud though, and I want to congratulate the current Board and the National Forensic Centre (NFC) of the Swedish Police Authority for the excellent work of organizing the extremely successful EAFS 2022. The biggest forensic event in Europe. I'm also very proud that ENFSI's Vision of the European Forensic Science Area 2030 became a European "priority" and you all have started working to make it a reality. You are working on the new era of forensics!

Closing, I would like to express my heartfelt gratitude to all the Board members I worked with (I have missed so much our long discussions), our precious Secretariat who made the most complicated matters seem easy and all of you for your unwavering support and dedication to our shared vision. It has been a privilege and an honor to serve as ENFSI's Chair. I will always cherish this time.

I wish each and everyone of you all the best and I encourage you all to contribute to ENFSI the best of you.... And please at the same time continue to enjoy the wonderful journey of forensics!

With my warmest regards
Pinelopi Miniati

Message from the Treasurer



Dear ENFSI members and friends!

It has been a challenging and yet successful year for ENFSI and ENFSI Board. It all started in March last year when Pinelopi Miniati suddenly and abruptly left the board due to a situation outside her control. We were lucky Christina Bertler Edlund took over, with her skills and devotion. The projects were kept running smoothly, and as later proved successfully. However it was only the first in a series of unfortunate events for the 26th Board. After a successful and really enjoyable meeting organized by Aleksandar Ivanović in Podgorica Montenegro, Aleksandar notified the board that he needed to resign due to a change in his position within the Ministry of Interior. According to the ENFSI Constitution, the remaining Board members are, in the case of a premature end of the Board member's term of office, entitled to select any Permanent Representative to replace him or her until the next business meeting, where the Membership accepts the selection of the Board by election, or to replace the temporary member with another candidate. Subsequently the Board considered the possible candidates and decided to offer the position to Mark Pearse, who had already stood for the position of regular Board member, which he accepted. It is important to note, that his contribution since he took over the post, has been outstanding and it is the unanimous wish of the Board for Mark to continue his work and that the Membership will accept the selection made by the Board.

Unfortunately, this has not ended the challenging period for the Board. In October our Chair, Christina Bertler Edlund notified the Board, that she would not be able to continue her work, at least for some time. The consequence of that was that as there was also no Chairperson designate, only the Treasurer was left as the member of the Executive Board (bullet point 32 of the Paragraph 9 of ENFSI Constitution). That meant that further Board work has been significantly hampered.

Nevertheless, the board continued the work and we have successfully finished the EFSA 2.0 Action Plan (it is appropriate to extend our sincere thanks to Bart Nys and

Emil Hjalmarsson for their outstanding contribution to the document), we have prepared both the ENFSI Action plan and ENFSI Strategic plan, and been involved in many other activities.

The unfortunate situation of last year has triggered a reflection of current Board organization and future professionalization of ENFSI, which will have to be addressed in the very near future. It is essential always to have all Executive Board members selected (the current Board has been left without a Chairperson designate, due to no candidates), and there is an urgent need to change some of our internal rules regarding the Board. With necessary changes we will be able to continue our mission and ENFSI will remain one of the most important forensic associations in the world, through the joint collaborative working across the Membership, Expert working Groups, Standing Committees and ENFSI Board. Only with full involvement of all parts of ENFSI will we develop and prosper in the future.

Attila Kuczmann

Member of the 26th ENFSI Board



Unbelievable! In writing this welcoming article I'm confronted with the fact that it's the 26th Board ahead of ENFSI now. Looking back on the founding of ENFSI in 1995 this stands for a long and continuous period of time, full of developments in the European forensic science landscape. Essentially being a network of forensic science experts searching for new ways to exchange their scientific knowledge, ENFSI has become much more. Its ongoing growth in influence has led ENFSI to be one of the most important stakeholders in the field of forensics, whilst also developing close links to the political authority in Europe. And the journey is still going on.

Taking the founding year of ENFSI 1995, I was still a student studying chemistry at the University of Kiel in northern Germany, not knowing anything about forensic sciences nor ENFSI. Then, after having finished my PhD-thesis, I started my forensic career in 2003 in moving to the fire and arson investigation unit of the Forensic Science Institute of the State Criminal Police Office Schleswig-Holstein. There I worked for about twelve years as an arson and explosion investigation expert. Additionally, I partially worked as a quality manager forming the basis of an ISO 17025 matching quality management system, while also acting as an auditor for the legal German accreditation body, in several accreditation audits of other forensic police institutes all around the country.

In March 2015 I had the honour of being appointed as the Director of the Forensic Science Institute in Kiel. In this new position, one of my first tasks was the institute's application to become a member of ENFSI. This was a very important step towards international forensic networking in order to intensify the level of exchange of scientific knowledge.

The first time I directly came in touch with ENFSI was during my activities as a forensic science expert at the meeting of the European Fire and Explosions Investigation Working Group in The Hague in 2009. There, I presented a poster with some details about the analytical differentiation of burnable liquids. I was impressed by the

variety of international expertise within this community and it was clear to me of the forensic-technical benefits of the ENFSI network. Later on, in my function as director, I visited the annual business meeting for the first time in 2015 in France.

And now, after having the opportunity to observe the ENFSI business for some years, I became elected as a member of the ENFSI Board last June. Thank you very much again for your confidence.

One of the main tasks of the ENFSI Board during the last months was to coordinate the contribution of ENFSI to the EFSA 2.0 Action Plan. By supporting the current EU Trio, ENFSI stays more and more in touch with the political landscape. On the one hand, this is a great opportunity to have influence on the general conditions of EU funding programs, and ENFSI will be able to benefit from these in the future. ENFSI's upcoming strategic and action plans will overlap with the main political goals of EFSA 2.0 branching into more operational measures, of course. On the other hand, ENFSI as the dominant player named in EFSA 2.0 program has to fulfil high expectations of the EU council. From my point of view, the main challenge will be to deliver beneficial results in time, without exhausting the resources and acceptance within the ENFSI community. Let's work all together to reach this aim!

Yours,
Attila Kuczmann

Agnieszka Łukomska

Member of the 26th ENFSI Board



Dear ENFSI members,
Dear readers,

First of all, let me thank the ENFSI Membership for nominating and supporting my appointment to the ENFSI Board. Whilst working in service to the most powerful forensic community in Europe is certainly demanding and entails a huge responsibility, I think it is worth every effort. ENFSI is facing new challenges and opportunities. My new assignment within ENFSI coincides with the introduction of the vision for European Forensic Science Area 2.0, which shall guide us towards an improved reliability and validity of forensic science across Europe in the near future. Needless to say, the successful implementation of EFSA 2.0 Action Plan is largely dependent on the ENFSI Community. For myself, this is a great impetus and motivator for the years to come.

I joined the Polish Central Forensic Laboratory of the Police (CFLP) in 1994 being full of passion for working in a forensic science milieu, and this still applies. In 1995, my first business trip to The Hague ended up with signing the Memorandum of Understanding with ENFSI, which is a milestone in the history of the CFLP. Over the years, whilst attending countless ENFSI meetings and conferences, I was a keen observer of the expansion and development of the Network, and also the evolution of friendly relations between the Members. At that time, I would not dare to imagine that was the beginning of an inspiring journey lasting nearly three decades...

Throughout my career, I had the advantage of a variety of positions in the Laboratory, spanning from international cooperation to the investigation of disaster sites. My experience allowed me to grasp a broad overview of forensic science and overarching management processes. For two years I held the position of the Secretary of CEN Project Committee 419 Forensic Science Processes responsible, among others, for the development of sector specific standards starting from crime scene through the reporting of findings. Presently, I continue work in the standardization area in the "mirror" committee for forensic processes, which was

created within the Polish Committee for Standardization and cooperates with the ISO 272 Forensic Science committee. My current role, however, focuses on increasing the effectiveness of investigation of disaster sites, mainly through the active involvement in the Polish Police DVI management team. In this respect, I act as a contact point for DVI Interpol and EU DVI Network. My knowledge on quality aspects of forensic performance, standardization as well as crime scene investigation processes was duly utilized in the ENFSI-led AFORE project team contributing to the development of the Best Practice Manual on quality assurance and accreditation of crime scene activities.

I hope to exploit my assets successfully in execution of tasks assigned to the ENFSI Board. I am convinced that the ENFSI potential will continue to deliver concrete benefits for effective operation of law enforcement as well as the execution of justice. It is my great privilege and honour to cooperate within our unique Network, for which I offer my commitment and support.

Yours,
Agnieszka Łukomska

ENFSI Secretariat

Another successful and eventful year lies behind us.

Alongside the first in person Annual Meeting since 2019 and the biggest EAFS ever (measured by the number of visitors), the Joint Meeting could finally take place in person again. You will find more detailed information on these events within this Annual Report.

During the Annual Meeting, our esteemed colleague Bianca Benisch bid farewell and started a new job within the Federal Criminal Police Office. We thank her for her commitment and the many beautiful moments we spent together and will greatly miss her.

Due to the steadily increasing administrative workload, the BKA has decided to establish ENFSI as a separate department and to increase the personnel resources. Therefore, since October, in addition to Nina, two more people, Detective Inspectors Lars Kern and Paul Fang, have been working full-time for ENFSI.

Projects for 2023 are: the conversion of the book-keeping; the installation of accounting software; data protection; the introduction of a project management system for the Direct Grants; the revision of document management as well as the professionalization of all documentation through the introduction of a style guide and the revision of the corporate design.

We would like to thank the membership, the working groups and the standing committees as well as the board and last but not least Raimonds Apinis for all their support especially during times of minimal staffing of the Secretariat.

We hope you enjoy reading our annual brochure!
Lars, Paul & Nina



Lars Kern, Nina-Kristin Hohmann, Paul Fang

ENFSI VISION

ENFSI VISION

ENFSI Vision of the EFSA 2030

In December 2011, European Council approved on the vision for European Forensic Science 2020 including the creation of a European Forensic Science Area and the development of forensic science infrastructure in Europe). This has been an important, perhaps even crucial step towards reinforced cooperation between police and judicial authorities across the European Union. To implement the conclusions, in May 2016 the Council has adopted an Action Plan on the way forward in view of creation of EFSA (6078/3/16-REV 3) focusing on six Actions:

- Improving mutual trust by encouraging continuous quality improvement of forensic procedures and processes through the development and use of Best Practice Manuals (BPMs) for forensic analyses.
- Stimulate the exchange of forensic information from databases similar to the methodology used under the Prüm Decisions 2008/615/JHA and 2008/616/JHA, focusing on the areas of weapons and ammunition, explosives and drugs.
- Improving mutual trust by increased use of Proficiency Tests (PTs) and Collaborative Exercises (CEs) by forensic service providers.
- Improving forensic awareness among law enforcement and justice communities.
- Stimulate accreditation of forensic procedures and competence of forensic personnel by forensic service providers on a voluntary basis.
- Stimulating full implementation of the Prüm Decisions 2008/615/JHA and 2008/616/JHA to exchange DNA profiles and fingerprints. In addition, improving the quality of forensic data exchanged between all Member States under the Prüm Decisions.

The implementation of this qualitative plan relied, in the main, on the ENFSI community and Member States, whereas LEWP was held responsible for monitoring the progress of the Action Plan.

After more than a decade, however, it became apparent that the completion of one project naturally opened new questions, challenges and opportunities. At an early stage, ENFSI recognized the need to further foster activities aiming at cooperation between key stakeholders and the development of forensic science in Europe. With this in mind, White Papers reviewed and evolved within ENFSI working groups and Trends in Forensic Sciences served

to develop the Vision of the European Forensic Science Area 2030 based on three main pillars: Meeting the Future, Strengthening the Impact of Forensic Results and finally, Demonstrating Reliability in Forensic Results.

ENFSI Vision served as a foundation for the Presidency-Trio made up of France, Czech Republic, and Sweden to start the process of implementing it into new Council conclusions. The effort of three permanent representatives from three countries in this process (Dominique Saint-Dizier, Pavel Kolar and Christina Bertler Edlund), as well as current ENFSI Board members, has been greatly appreciated by the ENFSI community.

During the French Presidency in March 2022 the ENFSI Vision 2030 was presented to the EU and on October 13th 2022 the Council approved the Conclusions of the European Forensic Science Area 2.0 (EFSA 2.0). At the beginning of November 2022, the Czech Presidency organized a conference in Prague, where the first draft of Action Plan has been presented by ENFSI Board. After receiving comments and some minor revisions from Member States and LEWP, the Plan was taken forward by the Swedish Presidency which continued work and organized a dedicated conference with a wide participation of forensic community, EU agencies and, naturally, ENFSI Board. The Malmö conference, held in mid-January 2023, was devoted to a thorough discussion on the EFSA 2.0 Action Plan, which evolved into a near-final draft of the document. Accordingly, the following actions were identified:

MEETING THE FUTURE

● Biometrics

1. Explore biometrics capabilities and the application of multimodal biometrics for use in criminal investigation.
2. Develop and implement an industry and academy engagement plan within the biometrics area.

● Artificial Intelligence

3. Develop and implement AI-based tools targeting the forensic science area.

- 4. Develop a strategic plan for validation and implementation of AI into forensic work, taking into account legislative developments at Union level.
 - 5. Engage judiciary regarding acceptance of AI as a tool within the legal framework through legislative review and relevant education.
- **Digitalization**
 - 6. Develop guidelines on how to create procedures on introducing digitalisation and use of technology in forensic science.
 - 7. Adapt the processes and workflow within forensic science to embrace and adapt to the possibilities enabled by the digital transformation.
- **New tools and emerging technologies**
 - 8. Monitor and horizon scan developments in other scientific areas (including emerging biological and chemical evidence types '-omics' and nanotechnology) for potential application to forensic science. Create an academic and industry engagement plan for emerging technologies that have potential for forensic use.
 - 9. Adapt, validate and implement new emerging technologies for forensic science application.

STRENGTHENING THE IMPACT OF FORENSIC RESULTS

- **Forensic examination and interpretation**
 - 1. Expand and develop the use of statistics and probabilistic reasoning for forensic science, including use of tools for evaluative reporting.
 - 2. Develop a uniform approach for source and activity level reporting across forensic disciplines.
- **Forensic data sharing**
 - 3. Explore the feasibility of implementing a system (or systems) including standardised data formats for efficient and quality assured exchange similar to the existing Prüm framework. The framework should consider the need of data for development and evaluation of forensic data science tools.
 - 4. Determine the impact of LED (Law Enforcement Directive) and GDPR (General Data Protection Regulation) for use of different data referring to individuals.
 - 5. Develop a common framework (lexicon) for communication of scientific evidence.
- **Multidisciplinary approaches**
 - 6. Review technology solutions and end user needs for intelligence and multidisciplinary approaches to optimize the use of forensic evidence.
 - 7. Determine the individual and combined evidential value of forensic evidence types and define pathways for the operational implementation of intelligence and multidisciplinary evidence types.

DEMONSTRATING RELIABILITY IN FORENSIC RESULTS

- **Fundamentals in Forensic Science**
 - 1. Promote research into the set of fundamental principles and empirical evidence for the use of forensic science in the justice system.
 - 2. Develop studies to understand and determine background prevalence, transfer and persistence of forensic evidence types.
 - 3. Develop technologies to optimize the recovery of forensic evidence.
- **Forensic Human Factors**
 - 4. Conduct research on the effects of bias and context management on decision-making in forensic science, from crime scene analysis to courtroom proceedings.
 - 5. Disseminate the findings of this research in order to increase understanding of these factors and to share solutions available to interrupt and mitigate bias.
- **Quality and Competence Assurance**
 - 6. Develop training programs for forensic practitioners and identify possibilities for platform development and hosting.
 - 7. Facilitate training and disseminate training material for end-users of forensic evidence on how to interpret forensic science results and comprehend the strength of the evidence.
 - 8. Strengthen the quality assurance of non-accredited forensic services, existing and forthcoming, to ensure their validity.

As of February 2023, when writing these words, the work on the Action Plan still continues, although its final form should be expected quite soon. The Action Plan dedicated to EFSA 2.0 is quite ambitious, but we strongly believe it will ultimately contribute to delivering the aims of the Council Conclusions, i.e. to foster cooperation and provide confidence through alignment of procedures and practices of forensic service as well as to improve the reliability and validity of forensic science. With a membership of of71 ENFSI members and (including17 Expert Working Groups) and considering other stakeholders involved, such as CEPOL, Europol or EJTJN – just to mention a few, we can justifiably expect a successful implementation of the actions in the future not so far away.

ENFSI MEETS

ENFSI MEETS

Board Meeting Overview



Board Meeting Lisbon



Board Meeting Montenegro

2022

25th Board

25th – 26th January
(Stockholm)

23th February
(Videoconference)

21st March
(Videoconference)

11th – 14th April
(Lisbon)

5th May
(Videoconference)

16th May
(Videoconference)

24th May
(Videoconference)

29th May
(Stockholm)

26th Board

6th July
(Videoconference)

25th August
(Videoconference)

26th August
(Videoconference with
EuCB)

27th – 29th September
(Montenegro)

27th October
(Videoconference)

16th November
(Videoconference)

29th November
(Bratislava)

16th December
(Videoconference)

ENFSI Annual Meeting 2022 – Stockholm

The 34th ENFSI Annual Meeting was organized by the National Forensic Centre (NFC) of the Swedish Police, simultaneously with the 9th European Academy of Forensic Science Conference - EAFS 2022.

The Annual Meeting was held in the City of Stockholm, Sweden, on the 30th and 31st May 2022, using the beautiful facilities of the Norra Latin building, which date from 1880 and are of the Neo-Renaissance style, which, due to its beauty and history, contributed to elevate and give prestige to the Annual Meeting, and also in the Stockholm City Conference Centre.

The 34th Annual Meeting took place in person after two years of annual meetings online, as a result of the COVID 19 Pandemic, but was still very much impacted by the pandemic, with impediments in terms of flights and illness of some members.

Despite all the constraints arising from the pandemic, the meeting was attended by 54 directors and delegates representing ENFSI member institutes.

As usual, the day before the official opening of the meeting, a get together took place in a pleasant and informal atmosphere.

Following the format of the Annual Meetings, on the first day of the meeting, 30th May, the business part took place and on the second day, 31st May, the thematic part took place.

The ENFSI Annual Meeting started with the opening ceremony, hosted by the ENFSI Chair, Christina Bertler Edlund, who officially opened the meeting and welcomed all participants. Christina also congratulated the ten new Permanent Representatives and presented them with their certificates.

During the first day of the meeting, ENFSI Board members presented on the work undertaken by ENFSI during the past year, covering topics such as new documents, finances, the Annual Board report 2021-2022, working group activities, EU Direct Grants and the Action Plan 2022-2023.

After the presentations, the members were called to pronounce and vote on some topics, namely approval of accounts, Board Report, Action Plan, Host for the Annual Meeting 2024 and the Election of new Board members.

Two regular members, Attila Kuczmanski and Agnieszka Lukomska were elected as regular members.

During the first day all participants were invited to attend the opening session of EAFS 2022.

At the official opening ceremony of EAFS 2022, Christina Bertler Edlund, Chairperson of the ENFSI Board welcomed all participants and gave a brief summary of the background of ENFSI and EAFS.

The first day of the meeting included a discussion session between the participants and the ENFSI board members.

During the closing of the business part, the ENFSI Chair Christina Bertler Edlund expressed her appreciation and gratitude to Board Member Stefan Becker who was leaving the ENFSI Board.

Stefan Becker then himself thanked Bianca Benisch who was leaving the ENFSI Secretariat after 4 years, on behalf of the entire Board for her efforts in the many tasks of the ENFSI Secretariat. Further Christina Bertler Edlund also expressed her thanks.

At the end Christina Bertler Edlund summarized the conclusions taken during the meeting, and presented the agenda for the Thematic Day and officially closed the Business Meeting.

As the annual meeting ran concurrently with EAFS 2022, 30th May to 3rd June 2022, and given the high interest of the lectures, the thematic agenda of the second day and part of the social programme was common to both events.



The second day of the meeting was held at the Stockholm City Conference Centre, where the participants of the Annual Meeting had the opportunity to attend high quality lectures, namely:

- The Role and Value of the Forensic Science Laboratory in an Ever-Changing World;
- Sydney Declaration;
- ENFSI Vision EFSA 2030;
- Essential strategic, operational and enabling reforms to implement a forensic operating model for the contemporary criminal and security environment;
- Shifting forensic science development from the organization to the discipline,
- Survey on the fitness for purpose of the standard ISO17025;
- Customer perspectives on forensic Science; and
- The Challenges and Possible Way Forward for the Forensic Science Providers.

So, looking back, the Annual Business Meeting of ENFSI as well as the EAFS conference created a symbiotic relationship giving all ENFSI permanent representatives present the chance to handle their official duties as well as receiving new forensic scientific input.

ENFSI Board want to say thank you to the Swedish organizers!



EAFS 2022 Stockholm

Finally! After the Covid 19 Pandemic the 9th European Academy of Forensic Science Conference (EAFS, www.eafs2021.eu) titled 'Together for a Safer World' was successfully organized by the National Forensic Centre of Swedish Police Authority and the European Institute of Forensic Science Institutes. It took place from 30th May to June 3rd in the Swedish capital Stockholm. And what a success it was. Despite relatively high costs, 1200 scientists from all over the world attended the meeting, which is the highest number ever for the EAFS.

The venues were two adjacent buildings of the Stockholm City Conference Centre, Norra Latin and Folkets Hus. Excellent facilities and skilled staff contributed to the success of the Conference.

The welcome reception was held at the City of Stockholm City Hall, which is commonly known as the venue of the Nobel Prize Banquet; and the conference dinner was offered at the Vasa Museum. This is the most visited museum in Scandinavia where the battleship Vasa, which capsized on its maiden voyage in Stockholm in 1628, is on exhibition. The ship was salvaged in 1961, and is the world's best-preserved 17th century ship.

Anders Thornberg, National Police Commissioner and Helena Trollang, Head of Department National Forensic Centre, both representing the Swedish Police Authority opened the congress. Further opening presentations were given by the Chairperson of ENFSI & Chair of the Organizing Committee Christina Bertler Edlund and Chair of the Scientific Committee Emil Hjalmarson

The program of EAFS 2022, "Together for a Safer World" emphasizes the importance of collaboration and exchange of experience within the global forensic science community. The Scientific Program had been organized according to Conference Themes, Tracks and sub-tracks, which had been selected by the Scientific Committee. The Program Book and the Abstract Book are available at www.enfsi.eu. The Plenary Speeches can be found on YouTube under "EAFS 2022".

Selected themes were:

- Digital Transformation of the Forensic Process



- Forensic Data Science
- Forensic Human Factors
- Forensic Social Responsibility
- Forensic Technology Innovation

The Conference was further organized into the following tracks (each with sub-tracks) for the convenience of the attendees:

- Chemistry
- Digital Evidence
- DNA/Forensic Genetics
- Forensic Medicine and Toxicology
- Marks, Impressions and Biometric Traces
- Scene of Crime
- European Perspective
- Forensic Management
- Forensic Statistics
- Legal & Ethical Aspects

Two plenary debates brought together various panellists to spark a vivid debate, and nine plenary sessions with plenary speeches tackling the most important issues and challenges of today's forensic science:

- *Christophe Champod and Didier Meuwly*: Forensic biometrics: Let's face it
- *Claude Roux*: The Role and Value of the Forensic Science Laboratory in an Ever-Changing World
- *Gillian Tully*: 'Customer' perspectives on forensic science



- *Niamh Nic Daeid*: "I'm not sure that you understood what I think it was that I just said" - the critical importance of communication
- *Eoghan Casey*: Crowdsourcing Digital Forensic Science
- *Fredrik Heintz*: A European Perspective on Artificial Intelligence in Law Enforcement
- *Peter M. Schneider*: Recent advances in forensic DNA phenotyping: the VISAGE Enhanced Tool offering new methods and markers for predicting appearance, ancestry and age
- *Justice Tetley*: Trust me? I am a forensic scientist
- *John M. Butler*: Are We On the Right Side of the Equation? Becoming Outcome-Focused Versus Process-Driven

Organizers also invited more than 30 Keynote speakers from 11 countries to address chosen themes and tracks. Altogether, the guests could have chosen between more than 300 oral presentations, well over 100 posters and 43 workshops.

The European Academy of Forensic Sciences offered two thematic events- a Management Day and a European Day.

The Management Day focused on the management questions relevant to the field of Forensic Science. New types of crime demand new policies within the judicial system and the Forensic Science community needs to share results from projects, reflect on how to meet future demands, explore best practice related to management of the process, e.g. effective case handling routines, communication strategies with the end user of results, handling requirements of quality and competence assurance. Attendees of EAFS 2022 thus had an opportunity to exchange knowledge and experience from dealing with the challenges in forensic management and listening to the plenary speakers, keynotes, and presenters of oral and poster contributions, as well as attending respective workshops.



The European Day (co-funded by the European Union's Internal Security Fund – Police. Grant Agreement number: 101051099 — CERTAIN-FORS — ISFP-2020-AG-IBA-ENFSI) promoted the ENFSI projects funded by EU over the last 15 years, by disseminating the results and products of those projects, provoking further discussions on future challenges for the forensic community and law enforcement.

An important and pleasurable part of the European Academy of Forensic Science Conference in Stockholm was presenting the following awards, given by ENFSI to outstanding individuals and their work:

- Emerging Forensic Scientist Award was awarded to dr. Maëlig Jacquet
- Distinguished Forensic Scientist Award was awarded to dr. Didier Meuwly
- Distinguished ENFSI Contributor Award was awarded to Richard Gill
- Best Poster Award was awarded to Kristiane de Cássia Mariotti and Rafael Scorsatto Ortiz

The Honorary Membership is one of ENFSI's most important means to express esteem to an individual who has contributed to the work of ENFSI in a most outstanding way. During the EAFS, the ENFSI Board and the whole ENFSI community showed its appreciation to Kimmo Himberg by finally granting him the long overdue Honorary Membership of ENFSI. As one of the founding members (since 1993), his contribution to ENFSI is immense.

With time passing, EAFS 2022 is still in our memory as an exceptional event, which will undoubtedly influence the future of European and global forensic science.

Joint Meeting

The Joint Meeting of the ENFSI Board, Expert Working Groups and Standing Committee Chairs took place from the 29th November to 1st December 2022. After having to hold the meetings virtually for the last two years, it was special to be able to meet again in person. The meeting was held at the Hotel SOREA Regia in the beautiful and vibrant city of Bratislava and was hosted by our colleagues at the Institute of Forensic Science, Bratislava. Attendees were duly welcomed to the event by their Director, Ondrej Laciak.

The meeting was attended by four members of the Board, the Standing Committee chairs, 14 chairs of the Expert Working groups, the ENFSI Secretariat and the Grant Manager. As is customary, the first day involved separate meetings in the morning for the Board to convene and for the chairs of the EWGs and SCs to meet.

The main meeting for all attendees was opened by Dr Dorijan Kerzan who thanked the participants for their commitment within ENFSI, set the agenda for the next two days and emphasized that the meeting will succeed through the discussions and interactions, encouraging everyone to ask questions and be involved.

Dorijan summarized the highlights of the ENFSI Annual Meeting 2022 which took place in May in Stockholm after which Chris Porter presented the Action Plan for 2022-2023 to the participants. Alexander Andre presented the achievements against the Action Plan 2021-2022, highlighting the recent process of creating the ENFSI Vision of the European Forensic Science Area 2030, in which the EWG Chairs were involved and that the CERTAIN-FORS project (Monopoly project 2020) had started under the guidance of the new Direct Grant Manager Raimonds Apinis.

Following a presentation by Dorijan on the QCC and RDSC initiative in 2017 to start an Education & Training Sub Committee within ENFSI, the group discussed the activity to date and how this might be taken forward, re-launching the Sub Committee with greater purpose and clearer objectives. Attila Kuczmann provided an update on the EWGs who had also returned to in person meetings as well as maintaining their communications through virtual meetings. We heard about the activity of the groups and discussed training, the stability of the groups and the differences in size of the various EWG Steering Committees.

Our Treasurer, Dorijan Kerzan, gave a short presentation on ENFSI Finances after which there was a substantial agenda item on the European Forensic Science Area (EFSA) 2.0 Action Plan with significant discussion by the group on the content and the future process for agreement.

RDSC and QCC reports were delivered by Bart Nys and Jos Toth respectively and Raimonds Apinis updated us on the Monopoly Programmes (MP2018 / 2020/ 2022) which have been renamed as Direct Grant Programmes. Paul Fang from the Secretariat updated the group on GDPR challenges, issues and activity and there was a discussion on EWG topics. A substantial discussion also took place following feedback from the EWG chairs on a range of issues including communications, White Papers, OOS sessions, deadlines and the EPE platform. Significantly also, the relationship between the Board and the EWGs and SCs was debated. Attendees discussed a concern about a lack of connection and a desire to improve the engagement and a number of options as to how this could be improved. The discussion resulted in an agreement to hold an additional Joint Meeting annually, either before or after the Annual Meeting, on a virtual basis.

The programme included a wonderful evening sightseeing tour of the city including stops at Bratislava Castle and the outside market in the City centre. Our hosts also provided two fantastic dinner events, one of them at the hotel which provided the opportunity to listen to some traditional local music. The feedback on the Joint Meeting was extremely positive. The event proved to continue to be a hugely valuable opportunity to connect the Standing Committee Chairs, Chairs of the Expert Working Groups and the ENFSI Board and it met all expectations in enabling some personal networking as well as creating a mutual understanding of ENFSI activity, direction and objectives.



ENFSI IN CLOSE- UP

ENFSI IN CLOSE-UP

Expert Working Groups (EWGs)

Animal, Plant & Soil Traces

Field of Activity

The Animal, Plant and Soil Traces expert working group (APST) supports the aims and objectives of the European Network of Forensic Science Institutes (ENFSI) in the area of casework analysis of all kinds of biological traces of non-human origin and soil traces.

The activities of APST offer a scientific platform to exchange experiences, to discuss analytical issues concerning morphological, chemical and molecular aspects, to plan collaborations in the field of general biology and to generate a network of forensic biological and soil experts. It will provide a forum for the validation, introduction and improvement of morphological, chemical, physical and molecular biological analysis in casework.

Chair

Irene Kuiper, Netherlands Forensic Institute

Size of EWG

106 experts
59 members
19 associate members
28 guests

Number of PT/CE performed

1 - PT, nhDNA
1 - CE, soil
1 - CE, botany

Meetings

Annual Meeting in April
Aberdeen, UK

Activities/Achievements

- Presentation of posters and speed-talks on actual topics and casework
- Workshops on non-human DNA and soil investigation
- Presentation of outcomes of PT/CE
- WG and SC topics: election of SC, finances, white paper, future venues

Outlook for the following year

Annual Meeting in April
Zurich, Switzerland
Including Workshops, PTs/CEs
Steering Committee Meetings in April and November

Digital Imaging

Field of Activity

Image and video processing and enhancement; Image and video authentication; Image and video generation/creation; Image and video recovery; Facial Image comparison (1 to 1, 1 to many, automated facial recognition systems); Photogrammetry and 3D techniques; Augmented and Virtual Reality

Chair

Patrick De Smet, NICC, Belgium

Size of EWG

180+ members

Number of PT/CE performed

3 (Facial Image Comparison PT, Video Recovery PT, Steganography PT)

Meetings

DIWG SC meeting online 03/05/2022, DIWG Virtual Annual Meeting 21-23/11/2022

Activities/Achievements

DIWG 2022 Virtual Meeting, approval by the Board on the ENFSI DIWG document "Guideline for Facial Recognition System End Users" (to appear on ENFSI website), liaising meeting with EuCB CoreGroup on Facial Recognition Technologies, organisation of 3 PTs

Outlook for the following year

Organisation of Annual Meeting in Prague (Oct. 16-20; start/stop days still to be set), workshop in collaboration with the <http://uncoverproject.eu/>, organisation of PT on Facial Image Comparison (to be confirmed), implementation of a new email list hosting solution

DNA
<u>Field of Activity</u> The ENFSI DNA Working Group provides a forum for implementation and improvement of DNA analysis in casework as well as validation of methods and software. It considers all aspects of DNA case analysis and case reporting.
<u>Chair</u> Sander Kneppers, Netherlands Forensic Institute
<u>Size of EWG</u> 158 members from 88 institutes
<u>Number of PT/CE performed</u> 1
<u>Meetings</u> <ul style="list-style-type: none">• Online meeting 3rd May 2022, hosted by the Netherlands Forensic Institute• In person meeting 28th September to 30th September 2022, hosted by the Forensic Science Laboratory of the Judiciary Police, Lisbon, Portugal
<u>Activities/Achievements</u> <ul style="list-style-type: none">• New Best Practice Manual for Human Forensic Biology and DNA Profiling• Updated document on database management• Updated guideline for the training of staff in forensic DNA-laboratories• Training Kinship Analysis
<u>Outlook for the following year</u> <ul style="list-style-type: none">• Updates on different guidelines of the EWG• Organize a training on a forensic DNA topic• Have one online and one in person meeting of the working group

Drugs
<u>Field of Activity</u> Drugs Working Group (DWG) acts as a platform for information exchange on the new developments and trends in the field of forensic drugs analysis. For that purpose, a number of documents are published and relevant libraries are maintained. A significant contribution to quality assurance and development of professional standards has been performed. The Group is dedicated to research and development activities as well. The collaboration with esteemed partner organizations like SWGDRUG, UNODC, EMCDDA, EC-JRC, AFSN is kept as continuous.
<u>Chair</u> Dr Natasa Radosavljevic-Stevanovic, National Forensic Center of Serbia
<u>Size of EWG</u> 55 full member institutes and 13 associate member institutes
<u>Number of PT/CE performed</u> 1
<u>Meetings</u> 5
<u>Activities/Achievements</u> <ol style="list-style-type: none">1. Workshops on the Use of Chemometrics in Forensic Chemistry conducted during the Annual Meeting in Belgrade and during EAFS Conference in Stockholm;2. Drugs Working Group was presented with poster presentation during the EAFS Conference in Stockholm;3. IR and MS libraries updated;4. A list of accredited methods over the member institutes created on Grouplevel;5. Discussion forum on Cannabis (legislation and analysis) held during the Annual Meeting;6. Representatives of the Group co-chaired the UNODC Forensic Drug Symposium and US Forensic Symposium, while the members of the Group delivered presentations on different topics during both events.
<u>Outlook for the following year</u> <ol style="list-style-type: none">1. Workshop on the use of Chemometrics in Forensic Chemistry to be held for the other ENFSI EWGs;2. IR and MS libraries to be updated;3. To hold a discussion forum on validation and accreditation during the annual meeting in 2023;4. Revision and update of the current documents;5. Separate meeting with EMCDDA representatives planned during the Annual Meeting 2023 with the aim to discuss about the new UNODC Forensic Drug Symposium,6. Participaption in Paris Drugs Conference (organization by the French Customs Laboratory).

Documents
<u>Field of Activity</u> "Entire field of document examination: Exchange of information and expertise, support on technical issues, promoting quality, proficiency testing and collaborative exercises, harmonisation of examination procedures and techniques, co-operation in research and development. EDEWG has a number of mainly technical based subgroups, each taking forward areas such as research and development, method validation, writing of Methods & Procedures, QA-trials, exchange of information, collection of samples and information for database purposes, etc. in specified areas of questioned documents. At the moment the topics of these subgroups are: <ul style="list-style-type: none">• Security documents• Non-destructive examination of printing products• Analysis of inks and toners• Document dating
<u>Chair</u> Rolf Fauser, State Criminal Police Office Baden-Württemberg, Forensic Science Institute, Stuttgart, Germany
<u>Size of EWG</u> 87 Members (66 full members, 21 associate members)
<u>Number of PT/CE performed</u> 2
<u>Meetings</u> 27./28.09.2022 - Conference in St. Gallen (Switzerland), 21./22.03.2022 - Steering Committee Meeting in Bilbao/Spain, 09./10.12.22 - Joint Meeting in Stuttgart
<u>Activities/Achievements</u> Main focus during the EDEWG Conference: 2 Workshops in paper examination; focus scientific session: Artificial Intelligence in document examination. Presentation of an AI-supported online inkjet printer classification for EDEWG members. Relocation of 7 EDEWG SQL databases to a server at the University of Police in Baden-Württemberg/Germany.
<u>Outlook for the following year</u> 29./30.03.2023 Steering Committee Meeting Stuttgart, 25.-27.10.2023 SC-Meeting & Annual Meeting Paris

Fingerprint
<u>Field of Activity</u> Friction ridge marks detection, imaging and comparison
<u>Chair</u> Aldo Mattei, RaCIS
<u>Size of EWG</u> 120
<u>Number of PT/CE performed</u> 3 (1 detection; 1 comparison, 1 multidisciplinary with DNA, documents, handwriting, fingerprint visualisation, imaging and comparison)
<u>Meetings</u> 3 virtual Steering committee meetings; 19th annual meeting in Timisoara (Romania): topics: Automatic assessment of fingermarks quality in the context of detection; Dissemination of the outcomes of the on-going MP2020 WP09 Multidisciplinary Ces, WP10 PTs benchmarking in the fingerprint domain; WP11 2nd edition of the Best Practise Manual for fingerprint examination; workshop on the update of the Whitepaper; Obile cyanoacrilate fuming devices; Rapid blood traces fixing at the sceneof crime; CEs and PTs in the fingerprint domain: perspective, design and error rates; Laboratory comparison through PTs; Competency based training for Forensic Scientist in fingerprint examination; Outcomes of visualisation CE; Eurodac System

Fingerprint
<p><u>Activities/Achievements</u></p> <p>In 2022 the FIN-WG was busy in the activities related to the MP2020 CERTAIN-FORS with 3 work packages aimed to (1) realise 2 multidisciplinary CEs; (2) Benchmark the commercially available PTs in the friction ridge domain; (3) realise the 2nd edition of the BPM for Fingermark Examination. Moreover 2 other collaborative exercises (one for detection and another one for comparison) were designed and distributed to participants. Other specific activities consisted in the revision of the Whitepaper, still on-going, the collection of the comments on the BPM for fingermark visualisation at the scene of crime, in cooperation with the SoC-WG, and a close cooperation with NIST-OSAC FrictionRidgesubcommittee and with the ASB Friction Ridge consensus body, aimed to develop a vast number of standards, covering the most relevant aspects of friction ridge profession. Through the intense work of the PTs/CEs Advisory Board the FIN-WG was capable to continue monitoring the performance of the Fingerprint laboratories and bureaus across Europe, identifying specific training needs for professionals. The 19th annual meeting, excellently organised and hosted in Timisoara by the INEC colleagues gave the possibility to FIN-WG members to get together after 2 years of virtual meeting, thus renewing the networking activity among professionals. The annual meeting was also the occasion to welcome newly elected Steering Committee members and to adapt the ENFSI Expert Working Group Terms of Reference into the Framework of FIN WG.</p>
<p><u>Outlook for the following year</u></p> <p>In 2023 the FIN WG is planning to complete the work related to the 3 WPs of the CERTAIN-FORS project thanks to the great enthusiasm and professionalism of the respective WP team members. The PTs/CEs Advisory Board has already made plans to ensure 3 CEs, one of which will be multidisciplinary with DNA, Fibres, Hair, Explosives and fingerprints visualisation, imaging and comparison. The training activities will be concentrated at the 20th annual meeting, but plans will be made to organise 2 workshops, one for detection and one for comparison in different times and locations, to increase the outreach of the professionals across Europe.</p>

Handwriting
<p><u>Field of Activity</u></p> <p>Handwriting and Signature Examination Digitally Captured Signature Examination</p>
<p><u>Chair</u></p> <p>Tomasz Dziedzic Institute of Forensic Research, Krakow, Poland</p>
<p><u>Size of EWG</u></p> <p>82 organisations (59 Full and 23 Associate Members) 250 individuals on ENFHEX mailing list</p>
<p><u>Number of PT/CE performed</u></p> <p>1 (CE22)</p>
<p><u>Meetings</u></p> <p>14th ENFHEX Conference and Business Meeting, 21-23 September 2022, Zagreb, Croatia</p>
<p><u>Activities/Achievements</u></p> <ul style="list-style-type: none">• 5 Steering Committee Meetings:<ul style="list-style-type: none">– 2 in-person (17-18 March; 21-23 September)– 3 on-line (10 January, 15 September, 19 December)• Business Meeting (22 September 2022, Zagreb), including elections for the SC• Producing Edition 4 of the Best Practice Manual for the Forensic Handwriting Examination (September 2022)• Monopoly/Direct Grant projects:<ul style="list-style-type: none">– AFORE WP5 BPM4 “Updating and expending BPM for forensic handwriting examination” (finished)– CERTAIN FORS project WP4 “Training and competency assessment for forensic handwriting experts” (on-going)– CERTAIN FORS project WP9 “A Multidisciplinary Collaborative Exercise Involving DNA, Documents, Fingerprints and Handwriting”• Organising 14th ENFHEX Conference, 21-23 September 2022, Zagreb, Croatia• Organising Collaborative Exercise 2022• Admission of an Associate Member (Mannheimer Schrift- und Urkundenlabor, Mannheim, Germany)
<p><u>Outlook for the following year</u></p> <ul style="list-style-type: none">• Organising Collaborative Exercise 2023• Pilot CE on photocopied materials• Preparing 15th ENFHEX Conference, 17-20 June 2024, Stockholm, Sweden• Implementing CERTAIN FORS projects WP4 and WP9• Preparing a project for Direct Grant 2022

Paint & Glass
<p><u>Field of Activity</u></p> <p>The European Paint, Glass & Taggants Expert Working Group (EPGT EWG) is an Expert Working Group of the European Network of Forensic Science Institutes (ENFSI), and it supports the aims and objectives of ENFSI in the area of forensic investigation of paint, glass, adhesive tapes and security inks.</p>
<p><u>Chair</u></p> <p>Christos Batis, Forensic Science Division / Hellenic Police Headquarters Greece</p>
<p><u>Size of EWG</u></p> <p>169 members</p>
<p><u>Number of PT/CE performed</u></p> <p>2</p>
<p><u>Meetings</u></p> <p>(2022 CE on Taggants, 2022 Glass mock-up ring test with focus on interpretation)</p>
<p><u>Activities/Achievements</u></p> <ul style="list-style-type: none">• EPGT EWG Annual Meeting in Rome• FTA subgroup meeting• EUCAP CG meeting• Seven online SC meetings
<p><u>Outlook for the following year</u></p> <ul style="list-style-type: none">• Implementation of EPGT EWG Annual Meeting in Riga in conjunction with a workshop on Interpretation• Enrichment of EPGT EWG e-learning platform with new topics and modules• Development of BPM on Taggants examination.• Investigate funding opportunities.• Preparation of two CEs (Paint, Glass)

Textile & Hair
<p><u>Field of Activity</u></p> <p>fibres identification and comparison textile identification and comparison textile and fibre damages/physical fits textile video imaging hair identification and comparison</p>
<p><u>Chair</u></p> <p>Jan-Eric Grunwald, State Criminal Police Office of Bavaria, Germany</p>
<p><u>Size of EWG</u></p> <p>on mailing list: 137; meetings: 50-60</p>
<p><u>Number of PT/CE performed</u></p> <p>2</p>
<p><u>Meetings</u></p> <p>ETHG Annual Meeting in Brussels, 15.-17.6.2022</p>
<p><u>Activities/Achievements</u></p> <p>E-learning Workshop at EAFS 2022 ETHG Annual Meeting 2022 in Brussels with Workshop on Databases Finalisation of review of BPM on Forensic Examination of Fibres (AFORE) Start of CERTAIN-FORS WP3: Expansion of the ETHG E-learning platform with 3 new courses</p>
<p><u>Outlook for the following year</u></p> <p>ETHG Annual Meeting in Helsinki, 14.-16.6.2022 with Workshop on textile damage examination</p>

Explosives
<u>Field of Activity</u> Explosives
<u>Chair</u> Dr Matthew Beardah Forensic Explosives Laboratory (FEL), Defence Science and Technology Laboratory (Dstl)
<u>Size of EWG</u> 77 42 Member Institutes, 35 Associate Member Institutes
<u>Number of PT/CE performed</u> Identification of precursor materials for the manufacture of home-made explosives (HME)
<u>Meetings</u> 1. Virtual Webinar: 'The UK's response to a series of coordinated bomb attacks on the London transport system, 21st July 2005 (23 September 2022) 2. FINEX Conference 2022 in The Hague, The Netherlands (8-11 November 2022)
<u>Activities/Achievements</u> As above
<u>Outlook for the following year</u> 1. Virtual Webinar: 'The World Trade Center Bombing of 1993; Perspectives From a Responding Chemist on the First Foreign Terrorist VBIED Bombing in the USA in the Modern Era' (17th January 2023) 2. Virtual Webinar: 'The 2016 Brussels attacks' (23rd May 2023) 3. Proficiency Test: Identification of explosives residues (May 2023) 4. Virtual Webinar: 'The 2011 Oslo attacks' (TBC September 2023) 5. 2023 International Symposium on the Analysis and Detection of Explosives (ISADE) in Charlotte, North Carolina (11-15th September 2023) - joined with FINEX Conference 2023 6. Collaborative FINEX research on recovery of explosives residues from surfaces - best practice (Autumn 2023)

Fire and Explosions Investigation
<u>Field of Activity</u> Fire and Explosion Investigations including analyst of accelerants
<u>Chair</u> Eva Ljungkvist National Forensic Services, Special Crime Unit, Danish Police
<u>Size of EWG</u> 152
<u>Number of PT/CE performed</u> 1
<u>Meetings</u> <ul style="list-style-type: none">• Annual Meeting at EAFS 2022 Stockholm including 2 workshops on Virtual Reality, oral presentations, posters• Steering committe meetings - 6• Planning meetings for EAFS conference - 7
<u>Activities/Achievements</u> <ul style="list-style-type: none">• CE in subgroup accelerants• Newsletter to WG aprox. every month• Updating EPE web site• Discussionforum on field questions
<u>Outlook for the following year</u> <ul style="list-style-type: none">• Annual Meeting 2023 in Lincoln UK including workshops, oral presentations, theme symposium on how to maintain quality on forensic science when daily work load, crises and war presses the situation.• Steering committee meetings• Planning meetings for annual meeting• Newsletters• CE for accelerants

Firearms
<u>Field of Activity</u> Firearms Identification Ballistics Shooting distance determination Detection & Identification of Gunshot Residue
<u>Chair</u> Kal Chana, Cellmark Forensic Service, UK
<u>Size of EWG</u> ~100
<u>Number of PT/CE performed</u> 2 PTs (one on D & I of GSR by SEM/EDS; one on Shooting Distance Determination)
<u>Meetings</u> January 2022 - SC online meeting May 2022- SC meeting in Lausanne August 2022 - SC online meeting September 2022 - Annual EWG meeting in Lisbon November 2022 - Chair attended ENFSI joint meeting in Bratislava
<u>Activities/Achievements</u> Webmasters training course attended by SC secretary in April 2022 – The Hague Election of a new Chair and two new members of the Steering committee – Currently 9 members of the steering committee (5xGSR, 4xFA, one FA vacancy remaining)
<u>Outlook for the following year</u> <u>Meetings:</u> 9th of February 2023: SC online meeting Mai/June 2023: SC meeting in Rome August 2023: SC online meeting September 2023: Annual EWG Meeting – Brussels <u>Projects:</u> A) Two R&D projects involving several laboratories (One re: GSR transfer and persistence, 1 re: firearms, ballistic soap standardisation) B) Investigation into the exchange of ballistic imaging data via X3P format; <u>Proficiency Tests:</u> Proficiency Test for GSR Proficiency Test for firearms examiners

Forensic Information Technology
<u>Field of Activity</u> Digital Forensic Science
<u>Chair</u> Zeno Geradts, NFI
<u>Size of EWG</u> 150
<u>Number of PT/CE performed</u> 1
<u>Meetings</u> EAFS meeting physical part, and two virtual meetings
<u>Activities/Achievements</u> Meeting and several EU projects which relate to Digital Evidence collaboration. Also networking and on line problem solving.
<u>Outlook for the following year</u> Meeting from 6-9th June 2023 in Lausanne, Proficiency Test, revise Best Practice Manual

Forensic Speech and Audio Analysis
<u>Field of Activity</u> Improvement/development/evaluation of methodologies used in forensic speaker comparison, forensic (semi-)automatic speaker recognition, audio enhancement and audio authentication - information exchange & collaboration
<u>Chair</u> Isolde Wagner, Bundeskriminalamt Wiesbaden, Germany
<u>Size of EWG</u> 40
<u>Number of PT/CE performed</u> 0
<u>Meetings</u> Steering Committee Online Meeting, 11th May 2022; Working Group Online Meeting, 4th November 2022
<u>Activities/Achievements</u> Writing of a new BPM for the Methodology of Forensic Speaker Comparison (within the AFORE Project) - document published on 2022-12-22; Writing of a new BPM for Digital Audio Authenticity Analysis (from the subgroup on digital audio authentication and investigation of audio file formats) - document published on 2022-12-22; Presentation and dissemination of the project results during EAFS 2022: BPM for the Methodology of Forensic Speaker Comparison (within AFORE project); Presentation of the FSAAWG's activities and EU projects during EAFS 2022
<u>Outlook for the following year</u> Focussing on research and development, education and training and further collaboration; Steering Committee Meeting 2023 and EWG Meeting 2023

Road Accident Analysis
<u>Field of Activity</u> to exchange information and recommended practices; exercises and tests to increase competence.
<u>Chair</u> Lina Lazarenko, Forensic Science Centre of Lithuania
<u>Size of EWG</u> 22
<u>Number of PT/CE performed</u> 1 per year
<u>Meetings</u> Anual online meeting of RAA EWG on 18th May, 2022 <ul style="list-style-type: none">• PT this and next year – discussion• Clipping as a source of uncertainty of delta-V• From black box recordings to movie, theory and real life examples• Updates on Tesla and BMW readouts• Application of the standard road markings for speed profile• Use of Digital Tachograph Data and Video Recordings in Traffic Accident Analyse• Uncertainty of recording delta-V in EDR• Examples of EDR readouts.• E-bike deceleration analysis• Election of a new chairman of the group
<u>Activities/Achievements</u> Information exchange about use of drones to investigate the scene; extraction and use of data from sources inside and outside the vehicle. Collaborative exercises on the analysis of pedestrian impact.
<u>Outlook for the following year</u> Collaborative exercises or proficiency test; annual working group meeting;Members of Working Group participate in The Annual Meeting of the European Association for Accident Research and Analysis; Participate in the development of the virtual reality training platform that will include a didactic framework and the tools to design, author and experience complex training scenarios - including car accidents investigation

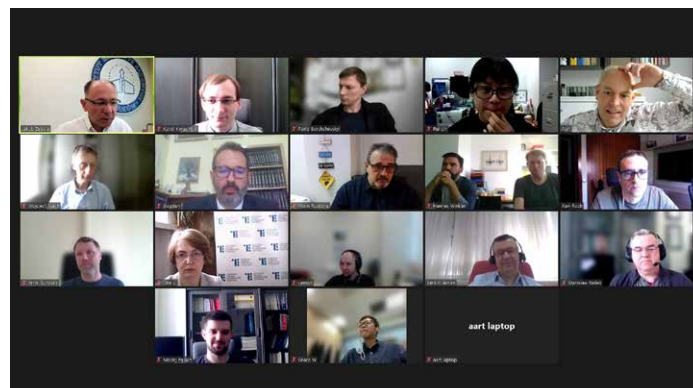
Scene of Crime
<u>Field of Activity</u> Crime scene investigation, Bloodstain pattern analysis, forensic archeology
<u>Chair</u> PETRETEI, David - University of Public Service, HU (external)
<u>Size of EWG</u> 160 (CSI 86, BPA 43, FA 31)
<u>Number of PT/CE performed</u> –
<u>Meetings</u> Online meeting February 2022; Annual meeting in September 2023 in Malta
<u>Activities/Achievements</u> "Hands on exercise" in Amsterdam for forensic archeology, BPM for forensic archeology, ongoing PT/CE with the DNA EWG
<u>Outlook for the following year</u> Annual meeting for the WG Q3 2023 (in Malta), FA sub-group hands-on excercises in search and excavation in May and June, planning a CE of SOC EWG and Fingerprint EWG on latent print enhancement

Marks
<u>Field of Activity</u> Forensic examination of footwear and bare foot marks, tire marks, tool marks, glove marks, manufacturing marks, locks and other related fields.
<u>Chair</u> Julien Pasquier, PhD Forensic Service, Police Neuchâteloise, Switzerland
<u>Size of EWG</u> 87 institutes (incl. 10 associates)
<u>Number of PT/CE performed</u> none
<u>Meetings</u> June 2022, group meeting (special session of the EAFS) Multiple online SC meeting during the year
<u>Activities/Achievements</u> Partial renewal of the SC, incl new chair Relaunch of BPM sub-groups for footwear and tool marks
<u>Outlook for the following year</u> CE footwear marks Preparation of SPTM2024 BPMs public review

ENFSI IN CLOSE-UP

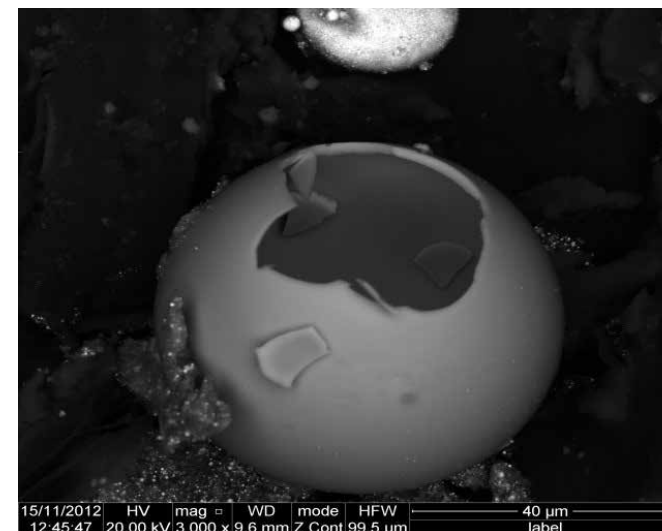


Animal, Plant & Soil Traces



Road Accident Analysis

ENFSI IN CLOSE-UP



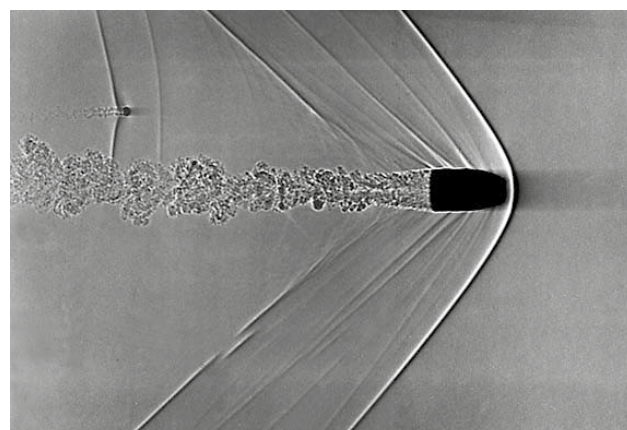
Firearms and Gunshot Residues



ENFSI EPG 27th Annual Meeting, September 2022 - Rome, Italy



Handwriting



Firearms and Gunshot Residues



Fire and Explosions Investigation



Road Accident Analysis



Drugs WG



FINEX / Explosives

Quality and Competence (QCC)

The QCC acts as an advisor and coordinator to relevant ENFSI entities on matters of quality and competence in a broad sense. The QCC supports the ENFSI Members to comply with international standards and best practices including achieving and maintaining accreditation. The QCC also supports ENFSI-run projects such as the monopoly projects and this year has been active in supporting the AFORE projects. In order to carry out its role, the QCC continues to engage with expert working groups, the board and quality representatives from the ENFSI community.

QCC Activities undertaken in 2022

1. QCC Meetings

Almost every month a MS Teams meeting was organized. Regular agenda issues included:

- Reviewed ENFSI documents and review process
- Discussion and responding to specific requests for help
- Change proposals regarding ENFSI documents
- ENFSI Survey (evaluation)
- Progress of the projects QCC is involved in
- Discussion and handling of EA and ILAC feedback
- Participation in AFORE projects
- Organizing QCLG meeting 2022
- Proficiency Testing

2. Yearly Meeting of Quality and Competence Liaison Group (QCLG)

The purpose of the yearly QCLG meeting includes:

- Maintain accreditation and to provide explanation and answers to questions of the ENFSI community
- Following new versions of quality standards
- Continuous improvement of the quality of forensic research
- Discussing new developments and trends

The QCLG meeting of 2022 was held in Stockholm during the EAFS2022. The program involved:

- ENFSI Document updates (review and process)
- Project- Writing Measurement uncertainty Guideline of quantitative forensic investigations- overview
- Measurement of uncertainty for qualitative methods (discussion and proposal)
- QMS benefits of ISO 10 000 Series of Quality Standards (discussion)
- Integrated Approach to Quality Management and Occupational Health and Safety in ENFSI Laboratories
- Update on TC 272 activities
- Discussion on what ENFSI institutes are doing about ISO 21043 standards and should ENFSI labs use this
- Feedback from the board
- ISO 17020 accreditation – survey results
- Introduction to the AFORE WP4 Training of Technical Experts
- Crime scene accreditation
- The process of forensic glass examination at the BKA – why both 17025 and 17020 accreditations
- ISO 17025 and ISO 17020 accreditation, discussion

There was a noticeable drop in the number of participants compared to previous years. At the last physical meeting in 2019 (Košice) 64 ENFSI members (QCLG members and others) participated. In Stockholm, 24 participants were present. This rather low attendance is possibly caused by the relatively high travel and accommodation costs, as well as the costs for participation in EAFS.

3. Facilitate the Establishment and Sharing of ENFSI Technical Documents

Best Practice manuals, Guidelines etc.

QCC assures the quality of all Best Practice Manuals (BPMs), Guidelines and other documents prior to final publication on the ENFSI website. During 2022, QCC has also been reviewing some of its own documents and general ENFSI documents which have been due for a review. See tables with information regarding review work performed in 2022 by the QCC document review working group.

Doc. Type	Name	Ref. Code	Issue no.
Best Practice Manual	Best Practice Manual for Forensic Examination of Fibres	BPM-TGH-04	1
Best Practice Manual	Best Practice Manual for the Forensic Examination of Handwriting	BPM-FHX-01	4
Best Practice Manual	Best Practice Manual for the forensic Examination of Paint	EPG-BPM-001	1
Guideline	Guideline for Facial Recognition System End Users	DI-GDL-001	1
Best Practice Manual	Best Practice Manual for Digital Audio Authenticity Analysis	FSA-BPM-002	1
Best Practice Manual	Best Practice Manual for Forensic Speaker Comparison	BPM -FSC-01	1
Best Practice Manual	Best Practice Manual for Human Forensic Biology and DNA Profiling	QCC-BPM-003	2
Best Practice Manual	Best Practice Manual for the Forensic Identification and Comparison of Glass	ENFSI-PGT-BPM-02	1
Best Practice Manual	Best Practice Manual for the implementation of a Quality Management System and Accreditation Model for Crime Scene Investigation	SOC-BPM-XXX	1
Framework	Framework for the Process for the Creation of Technical Documents	QCC-DOC-001	1
Framework	Framework for Template for Field Specific Guideline	QCC-FWK-002	1
Framework	Framework for Template for Field Specific Best Pratctice Manual	QCC-FWK-003	1
Framework	Framework for the Conduct of Proficiency Tests and Collaborative Excercises within ENFSI	QCC-FWK-004	1
Framework	Framework for Uncertainty of Measurement in Quantitative Analyses or Testing	QCC-FWK-005	1
Framework	Framework for the ENFSI QCC Document Review	QCC-FWK-006	1

4. QCC Members in 2022

Due to personal or work related reasons, 4 QCC members have left QCC in fall of 2021 and spring-summer 2022. With our thanks and gratitude for their contributions, these were Chanda Lowther-Harris (MPS, UK) who was the chair of QCC for several years, Ayşegül Şahin (ATK, Turkey), Peter Chovan (Institute of Forensic Services, Slovak Republic) and Gerald Pratsch (LKA Stuttgart, Germany).

The QCC therefore started recruiting new members at the end of 2021 and in 2022. In cooperation with Secretariat of ENFSI requests were send out to ENFSI representatives within the member laboratories. The QCC's request was for quality assurance managers to apply for membership of the QCC.

The result is that Claudia Pastore De Christofaro (SNPS, France), Daniala Vaz (PJ, Portugal), Sanya Sreekumar (MPS, UK) and Thierry De Baere (NICC Belgium) have joined the current members Alexandros Lagos (FSD, Greece), Sigita Jakimoviene (LPFSC, Lithuania) and Jos Tóth (NFI, The Netherlands). In September 2022, at the request of the sitting QCC members, Jos Tóth took over the chair position, from Chanda Lowther-Harris.

The Board representative for the QCC, who acts as the link between the QCC and the Board of ENFSI, is Dorijan Kerzan



5. Participation in AFORE project 3.3 and 3.4

The QCC participated in the set up and organization of two seminars. These were:

- WP 3.3. Accreditation as a management tool;
- WP 3.4. Next step in laboratory accreditation.

A combined seminar was held in Malmö on November 11, 2022. The number of participants was 24. The participants included directors, deputy directors and QA managers of ENFSI member institutes.

QCC member Alexandros Lagos is ENFSI's representative to the European Accreditation (EA) and International Laboratory Accreditation Cooperation (ILAC).

6. Guideline for Calculating Measurement of Uncertainty in Quantitative Forensic Methods

Since December 2019 the QCC is leading on the complete rewrite of the Measurement of uncertainty Guideline (2006 version) along with members of the QCLG, statisticians and academics. The draft Guideline was sent for feedback to the ENFSI Expert Working Groups in August 2022. The received feedback was used to improve the Guideline. Official peer review is in progress.

LOOKING AHEAD TO SOME OF THE QCC ACTIVITIES IN 2023

General:
Further improving QCC services for the Board and EWGs.

Specifically:

- Organizing a One day One issue Seminar (O&I and Flexscope), October 2023
- Organizing the QCLG meeting, October 2023
- Evaluation of ENFSI survey (purpose, survey technique, evaluation and analysis possible improvements
- Finishing/publishing Guideline for calculating measurement uncertainty In quantitative forensic investigations

Decision for starting project writing Guideline for calculating measurement uncertainty in qualitative forensic investigations

Research & Development (RDSC)

Organisation and Membership

During the year 2022 some changes have occurred in the membership of the RDSC. The membership of the RDSC at the end of 2022 is therefore as follows:

Members of the Research and Development Standing Committee

Bart Nys
(Chairman, NICC, Belgium)

Emil Hjalmarson
(member, NFC, Sweden)

B. Martina McBride
(member, FSI, Ireland)

Didier Meuwly
(member, NFI, Netherlands)

Attila Kuczmann*
(Board Liaison, SH Police, Germany)

Chris Porter
(Board Liaison, MET Police, United Kingdom)

*Dr. Stefan Becker left the Board and therefore was no longer Board Liaison. He was replaced by Dr. Attila Kuczmann, who replaced him in the Board after the Annual Meeting 2022.

Dr. Thomas Biermann retired from the BKA, Germany, and automatically also from the RDSC. His position is vacant.

Dr. Tapani Reinikainen moved to another position in the NBI, Finland, and automatically retired from the RDSC. His position is vacant.

Fortunately, a number of experts from different ENFSI members have come forward to fill these vacancies and during the beginning of 2023 the RDSC shall start the process of selection, and will subsequently advise the Board of ENFSI.

Technology Transformation Watch and White Papers

As is described in the ENFSI Action Plan 2020-2021, the RDSC is Task Owner of the Technology Watch for new scientific advancements that can have a potential application in forensic science.

Although the Knowledge Database containing forensic requirements, needs and constraints (initially set up in 2021 - the 'Trends Engine') was maintained, a need still exists for a more formal and developed process to systematically collect the necessary information. Efforts towards this are directed towards a new initiative in the creation of a collaborative 'DevSecOps' document, which will compile the state of the art of new developments in forensic science. Plans for a concrete collaboration in this context are being developed between the RDSC and Juan Arraiza Irujo (CEO of EACTDA), which will yield concrete results in 2023.

Involvement in the Organisation of the EAFS 2022 Conference

As noted elsewhere in this report, Emil Hjalmarson was closely involved in the organisation of this highly successful

conference. His work in the RDSC was therefore closely related to the EAFS organisation.

The RDSC in general was also very much involved in the planning and running of the conference through its collaboration with the Scientific Committee and the organisation of a 'European Day' at the conference itself (which was externally sponsored by ISF-P).

Finally, Prof. Didier Meuwly coordinated the publication effort, as he did for the previous EAFS instances and a special issue of Forensic Science International will be devoted to articles submitted by EAFS 2022 presenters.

Involvement in the Dialogues between ENFSI and the European Commission

RDSC Chair Bart Nys continues to be ENFSI's representative at the CERIS (formerly Community of Users) events. Bart is now officially a member of its Advisory Expert Group and attends the planning meetings. This too can potentially become a powerful source of information for our Trend Monitoring activity in the future.

Involvement in the ENFSI Vision and EFSA 2.0 Initiatives

On the 8th March 2022, during the French Presidency, the ENFSI Vision 2030 was presented to the Law Enforcement Working Party (LEWP) as the starting point for the Trio Presidency's efforts to ensure that forensic science remains at the forefront in the Union in the years to come. In this Vision document, describing the strategic plans of ENFSI – in coherence with the Vision of the International Forensic Strategic Alliance of which ENFSI forms the European partner – three pillars which describe the basis of the state of the art of forensic science and its application by the diverse judicial systems within Europe, are defined.

After the evaluation of the EU Vision for European Forensic Science 2020, recognising that EFSA had been a key initiative to promote cooperation between EU Member

States, concrete steps have been taken to shape the future of a European Forensic Area. An EFSA 2.0 has therefore been adopted by the Council of Europe which defines and follows an Action Plan to be executed by many of the EU's key stakeholders in law enforcement and forensics – among which ENFSI has an important role to play as a network of major forensic science providers.

Together with the Board, the RDSC has worked on the first draft Action Plan, which was presented by the Swedish Presidency to the Council for subsequent comments. RDSC will further elaborate on the Action Plan and will follow up on the ENFSI Actions which will be defined in its final version. This Plan will therefore form the basis and roadmap for forensic research by ENFSI experts in the decade to come.

Involvement in the Monopoly 2020 Project

Since RDSC was asked by the Board to review the proposals for the Monopoly Direct Grant 'MP2020' the proposal of ENFSI has been accepted by the EC for funding through a Direct Grant Action and renamed to 'CERTAIN-FORS'. Mr. Raimonds Apinis, who replaces Richard Gill as Monopoly Manager, organises and manages the ENFSI expert's efforts in this suite of projects. In 2022 no call for a new Direct Grant Action was published by ISF-P, we therefore have our hopes set for the beginning of 2023.

KEY PRO JECTS

KEY PROJECTS



Message to the ENFSI Community – Goodbye

DR. RICHARD GILL

It was back in late 2007, when working for the UK Forensic Science Service, that I received an unexpected invitation through my Director (Dave Werrett) to take on the role of Team Leader for a one-year EU funded ENFSI project, entitled “Study on Obstacles to Cooperation and Information-sharing among Forensic Science Laboratories and other Relevant Bodies of Different Member States and between these and Counterparts in Third Countries”. What a ‘concise’ title that was as an introduction to the world of EU thinking!! Throughout 2008 I worked with a wonderful group of colleagues drawn from the ENFSI Community and then presented the project results at my first ENFSI Annual Meeting in Rome in 2009. Later that same year, I was appointed as the ENFSI Monopoly (Direct Grant) Manager and have continued in that role until last week when the time was right for me to retire from my forensic career (starting in 1979) having spent the last 14 years of it working for ENFSI.

Over those years I have worked alongside so many enthusiastic and hard-working people across the ENFSI Community, far too many to mention individually by name. This has included the many ENFSI Boards, Expert Working Groups, Standing Committees, the various ENFSI Secretariats (The Hague, Warsaw and Wiesbaden) and the numerous individuals who have participated in the monopoly projects. Thus, I want to take this opportunity to send my sincere thanks to you all. It has been a privilege and absolute pleasure to collaborate with such professional people who share a strong desire to promote the advancement of European forensic science and to help it meet the highest possible standards. Thank you all and please accept my very best wishes for the continued progression of your own careers. Furthermore, I look forward to seeing ENFSI continue to grow and develop over the coming years and take an ever more prominent place in the European criminal justice system.

It was work, but it was also great fun, working with everyone to help secure ongoing EU funding for ENFSI. In parallel, I have made so many good friends over the years, scattered across the countries of Europe and the diverse ENFSI organisations.

In addition, I want to record my special thanks to the Directors of EFSI-Tallinn in Estonia (initially Üllar Lanno and more recently Ivar Prits) because they have provided my direct employment for many years.

Overall, I have worked with so many people across the whole ENFSI Community and hence I recognise that it will be difficult to ensure that this message finds its way to everyone concerned. Thus, having received this email, please pass it on to any relevant people that you think may have been overlooked.

Back in 2007, I had no thought whatsoever that the last years of my forensic career might involve working for ENFSI, and thus I now feel so very fortunate that pure chance led me to stumble towards that initial ENFSI project 14 years ago. Once I got involved, the work was so worthwhile, interesting and challenging, and I soon had the feeling that I might like to stay - and so I did!

Best wishes,

Richard
ENFSI Direct Grant Manager [Retired]

KEY PROJECTS



Raimonds Apinis

ENFSI DIRECT GRANT MANAGER

Since my engagement with ENFSI in the capacity of the Direct Grant Manager is still relatively recent, let me start with a short introduction of myself. I have 10 years of forensic management and project management experience gained at the State Forensic Science Bureau of Latvia. I am also associated with the Estonian Forensic Science Institute to whom I am grateful for taking care of my employment arrangements with ENFSI. I am thrilled to join the community of dedicated forensic scientists representing so many countries and institutions.

The year 2022 will go into history as the year when the world slowly but steadily returned to normal, at least in terms of movement and travel. The Covid pandemic deprived us of the opportunity to meet each other physically, limited our ability to travel, and as a result, many activities directly dependent on travel could not take place. On the other hand, the pandemic forced us to learn new things and acquire new habits. We learned to organize meetings online, use new tools, collaborate in the digital environment. At least some of these new habits are here to stay. We can definitely expect in the future more meetings online, more digital tools for online cooperation, and this new trend has already impacted the way the ENFSI direct grant projects are implemented.

Turning to the ENFSI direct grant projects, I would like to start with expressing my gratitude to the previous ENFSI Direct Grant Manager Dr Richard Gill from whom I have learned a lot. Richard Gill established the framework, the rules and principles how ENFSI direct grant projects are managed. His legacy is living on in the latest ENFSI direct grant project - MP2020 “Competency, Education, Research, Testing, Accreditation, and Innovation in Forensic Science” (CERTAIN-FORS) which was prepared by him, and, I believe, will continue to live on in the next ENFSI direct grant projects as well.

Among other ENFSI direct grant projects, CERTAIN-FORS is a record holder in many respects - the largest number of working packages (12), the historically largest number of participating countries (32) and institutions (59). The project covers 150 activities and 51 deliverables. All of this is testament to ENFSI's geographical size and outreach capacity.

Now, CERTAIN-FORS has reached the halfway point, the Mid-term report was submitted to the European Commission at the end of 2022. Shortly before, on 1st and 2nd December 2022 the project Team Leaders gathered in Bratislava, Slovakia, for a Progress meeting. This meeting was another innovation, allowing the Team Leaders to discuss problems and difficulties encountered during the implementation of the project, as well as to brainstorm potential solutions. One of the CERTAIN-FORS work packages that I would like to specifically highlight is – the work package 12 “European Day - Dissemination Event” – the first project activity in the history of ENFSI direct grant projects entirely dedicated to dissemination and information about forensic science, or more specifically - about EU co-funded projects. The event was held in Stockholm, Sweden, on 2nd of June 2022 within the framework of the European Forensic Science Academy. I hope that such events will become a tradition and that future projects will also have a place for information and dissemination activities.

Speaking of a job well done, one cannot fail to mention the ENFSI direct grant project MP2018 “Accreditation of Forensic Laboratories in Europe” (AFORE), which started in 2020 and was completed in 2022 after a one-year extension. This project was hit hard by the pandemic. Since a large part of the project's activities were related to travel, due to the pandemic, they had to be replaced with online activities, which could not always be a full substitute for meeting face-to-face. The one-year extension granted by the European Commission allowed the project team to achieve the planned goals, however, it was not possible to compensate all the lost meetings and trainings in person.

Finally, I would like to thank the CERTAIN-FORS and AFORE project team members, Team Leaders and all those involved in the implementation of these projects, as well as those institutions and heads of institutions that provided the project participants with all the necessary resources for successful project work.

In the light of EFSA 2.0 setting framework for the future of forensic science in Europe for the next 10 years and even further, ENFSI direct grants will continue to play essential role in funding activities set out in the EFSA 2.0 action plan.

KEY PROJECTS

ENFSI Direct Grant 2018 (MP2018)

Direct Grant Projects (2018) – initial 2-year programme with 12 month extension, €1,497,387 grant awarded / ISF-Police funding
Programme Theme: “Accreditation of Forensic Laboratories in Europe (AFORE)”
Current Status: Work commenced on 1st January 2020 / Formal EC extension of the implementation period granted until 31st December 2022
EU Reference: ISFP-2018-AG-IBA-ENFSI

Project Title		Project Leader
1	Work Package 1. Management & Administration.	ENFSI
2	Work Package 2. Accreditation Model for Crime Scene Investigation.	Katri Matveinen (NBIFL-Vantaa, FI)
3	Work Package 3. Training of Forensic Personnel in Accreditation Matters.	Christina Bertler Edlund (NFC-Linköping, SE)
4	Work Package 4. Training of Technical Assessors.	Wim Neuteboom (EFSI-Tallinn, EE)
5	Work Package 5. Development of New and Updated Best Practice Manuals (BPMs).	Dariusz Zuba (IFR-Krakow, PL)
	7 Best Practice Manuals (* indicates New BPMs): * Digital Image Authentication Examination of Fibres Examination of Gunshot Residues (GSR) Handwriting Examination * Voice Comparison * Human Forensic DNA Profiling Examination of Glass	

ENFSI Direct Grant 2020 (MP2020)

Direct Grant Projects (2020) – 2-year programme, €1,496,085 grant awarded / ISF-Police funding
Programme Theme: “Competency, Education, Research, Testing, Accreditation and Innovation in Forensic Science (CERTAIN-FORS)”.
Current Status: Grant Agreement signed / Work commenced on 1st January 2022.
EU Reference: **ISFP-2020-AG-IBA-ENFSI**

	Project Title	Project Leader
1	Work Package 1. Management & Administration.	ENFSI
2	Work Package 2. UNLOCK - fUNDamental fOrensic Knowledge	Didier Meuwly (NFI-The Hague, NL)
3	Work Package 3. Development of E Learning Concept Phase 2 - Evaluative Reporting and Interpretation, Textile Damage and Raman Spectroscopy Courses	Jan-Eric Grunwald (BLKA-Munich, DE)
4	Work Package 4. Training and competence assessment for Forensic Handwriting Experts	Dorijan Kerzan (NFL-Ljubljana, SI)
5	Work Package 5. Establishment of a Trace DNA Transfer Rate Repository & Bayes Net to Calculate LRs	Ingo Bastisch (BKA-Wiesbaden, DE)
6	Work Package 6. App Analyses and Reference Database Solution	Abdul Boztas (NFI-The Hague, NL)
7	Work Package 7. Forensic Multilingual Voices Database	André Saraiva (FSL-Lisbon, PT)
8	Work Package 8. Development of a New PT on the Interpretation of GSR Findings according to ISO 17043 and ISO13528 Demands	Ludwig Niewoehner (BKA-Wiesbaden, DE)
9	Work Package 9. Multidisciplinary Proficiency Test and Collaborative Exercises in Forensics	Francesco Zampa (RaCIS-Rome, IT)
10	Work Package 10. Benchmarking of Proficiency Tests for the Fingerprint Domain	Andy Becue (ESC UNIL-Lausanne, CH)
11	Work Package 11. Fingerprint WG Best Practice Manual 2nd Edition	Aldo Mattei (RaCIS-Rome, IT)
12	Work Package 12. European Day - Dissemination Event	Christina Bertler Edlund (NFC-Linköping, SE)

ENFSI PRO DUCTS

ENFSI PRODUCTS

Table of ENFSI products (EWG)

Responsible Body	Product Name	Product Type
EDEWG	Machine-Learning based printer-type recognition based on wavelet features	Software
DNA	Document of Database Management	Guideline/ Recommendation
	Guideline for the training of staff in forensic DNA-laboratories	Guideline
Drugs	Two Chemometric Workshops during Annual Meeting in Belgarde (May 2022) and EAFS in Stockholm (June 2022)	Workshop
	PT test-round 2022 in cooperation with Hungarian Intitute for Forensic Science	Proficiency Test Test Round
	Guideline for the use of Chemometrics in Forensic Chemistry	Guideline
DIWG	Guideline for Facial Recognition System End Users	Guideline
	Facial Image Comparison	Proficiency Test
	Steganography	Proficiency Test
	Video Recovery	Proficiency Test
ENFHEX	Collaborative Exercise 2022	collaborative excercise
FSAA	Best Practice Manual for Digital Audio Authenticity Analysis	Best Practice Manual
EPGT	Guideline for the initial inspection, search and recovery of forensic paint samples	Guideline
	Guideline for the forensic examination of paint by Fourier-transform infrared spectroscopy	Guideline
	Guideline for the forensic examination of paint by Raman spectroscopy	Guideline
	Guideline for the forensic examination of paint by SEM/EDS	Guideline
	Guideline for the forensic examination of paint by Pyrolysis Gas Chromatography-Mass spectrometry	Guideline
	Guideline for Recovery of Glass in Forensic Identification and Comparison of Glass	Guideline
	Guideline for the Forensic Examination of Visual Characteristics of Control and Revocered Samples of Glass	Guideline
	Guideline for the Determination of Refractive Indices of Glass Fragments	Guideline
	Guideline for Scanning Electronic Microscopy and Energy Dispersive Spectroscopy of Glass Samples in Forensic Science	Guideline
	Guideline on Micro X-ray Fluorescence Spectroscopy of Glass Samples on Forensic Science	Guideline
	Guideline for Quantitative Elemental Analysis of Glass Samples using LA-ICP-MS	Guideline
	Best Practice Manual for the Forensic Examination of Paint and ist accompanying Guidelines	Best Practice Manual
	EPGT EWG e-learning platform	e-learning platform

AFORE – Accreditation of Forensic Laboratories in Europe

WP2 – Accreditation Model for Crime Scene Investigation

Team Leader:

Katri Matveinen, NBIFL, Finland

Team Members:

Kaja Ventsel, Estonia

Katri Matveinen, Finland

Henna Kuskelin, Finland

Monika Hilgert, Germany

Agnieszka Lukomska, Poland

Piotr Trojanowski, Poland

Geir Hansen, Kaja Krogsæter, Norway

Tore Walstad, Norway

Rodney Munroe, Australia

Fernando Viegas, Portugal

Åsa Klasen, Erika Skoogh, Peter Wäppling, Sweden

Josita Limborgh, The Netherlands

Number of Team Meetings:

31 between 2020 - 2022

Activities and Achievements

Documents

AFORE WP2 produced three different types of documents to support members of the ENFSI Scene of Crime Working Group and forensic service providers who wish to develop a quality management system for crime scene investigation and raise awareness of the accreditation process.

WP2 carried out a survey to find out the extent to which European organisations with an assignment to conduct crime scene investigation and evidence collection at a scene of crime have a quality management system for crime scene investigation activities. A summary report on Results of the survey on implementation of a quality management system for crime scene investigation was published in 2021. The Best Practice Manual for the Implementation of a Quality Management System and Accreditation Model for Crime Scene Investigation provides detailed guidance on the development of a quality management system for crime scene investigation to meet the requirements of ISO/IEC 17020, as well as guidance on the accreditation process. The Best Practice Manual is available on the ENFSI website. The Policy Document on recommendations regarding Implementation of a Quality Management System and Accreditation in crime scene activities makes recommendations on the support needed from ENFSI and the European Union to promote the implementation of a quality management system for crime scene investigation, as a step towards accreditation in Europe. The recommendations are based on the conclusions of the WP2 activities.

Seminars

WP2 organized three training seminars to promote awareness and knowledge of the standards (ISO/IEC 17020, ISO 21043) and guidelines (ILAG G19 and ENFSI SoC

BPM). The seminars provided an outstanding forum to share experiences on how the above standards are interpreted to crime scene investigation and how standards are used in developing and maintaining a quality management system. The Training seminar on a Quality Management System for Crime Scene Investigation as a helping friend was held in Warsaw, 2022 to share good practises in implementing ISO/IEC 17020 to crime scene investigation, and raise awareness of the accreditation process and share experiences of benefits and challenges of accreditation.

The Training seminar for Internal Auditors in Crime Scene Investigation was held in Vantaa, 2022. The presentations and workshops provided information of the role of internal audits in a quality management system, shared good practices how to carry out internal audits according to ISO/IEC 17020 and provided support for planning internal audits, reporting of findings of internal audits and the follow-up procedures of non-conformities. Participants were very keen on learning from other organizations' experiences in performing internal audits. Defining non-conformities and the non-conformity management system raised interests a lot. The remote Seminar on Crime Scene Investigation Processes to the European co-operation for Accreditation (EA) was held in 2021, providing lead assessors of national accreditation bodies with an overview on crime scene investigation (CSI) processes and raising awareness of the field to be assessed. The national accreditation bodies expressed their willingness to organise joint seminars in collaboration with ENFSI and to strengthen the cooperation between the EA Inspection Committee and ENFSI in the field of CSI accreditation.

Outlook for the next year

The WP2 Policy Document provides recommendations and a way forward after the successful AFORE project. ENFSI and the European Union has an important role to play in developing a quality policy for crime scene investigation for the coming years.



WP3 – Accreditation as a Management Tool / Next Step in Laboratory Accreditation

Team Leader:

Christina Bertler Edlund, NFC, Sweden

Michael Hastrup (NFS, DK) and Jos Tóth (NFI, NL) acting project leaders per October 14, 2022)

Team Members:

6 members

Field of Activity:

Integral business operations in relation to quality assurance

Activities and Achievements

Seminar

In total 27 participants have registered and were actually present at the seminar on November 22, 2022 in Malmö (Sweden).

The primarily target group/participants was laboratory directors and quality managers.

The seminar contained:

- presentations given by 3 invited speakers from external industries and by the AFORE WP 3.3--3.4 project members;
- 4 prepared workshops were conducted based on aim and topics of the seminar
- workshop results and conclusions were presented and discussed.

The following outputs were achieved from the seminar:

- General insights were provided and shared on how accreditation has been used, and can be used more, to progress management practices and services in forensic institutes.
- Context was shared from other industries on how accreditation has assisted them in developing their products and services.
- Best practices and experiences were shared during the discussions on every seminar objective.
- From workshops and discussions, experiences were shared and added increased value of conducting the management review as a steering tool (Plan-Do-Check-Act) for the continuous improvement of the management system and its support of aims and goals.
- Opportunities for expanding the use of internal audits to more elements of the business execution aspects of forensic laboratories were discussed and recognized. This in relation to the requirements of ISO 17025.
- Insights and experiences were shared on how to use the SWOT methodology to identify potential weaknesses, internal and external threats, own strengths and opportunities (SWOT) for improving forensic services.
- Knowledge and experiences regarding the use of customer feedback and information for the continuously improvement of forensic services was deepened, including

possible techniques and activities to be applied for this purpose.

- Better understanding on how to comply with ISO requirements on the PDCA cycle. Including how to perform a consistent use of the PDCA cycle and how to increase the awareness of how this could contribute to improvement of the quality, effectiveness and the efficiency of the forensic services and business operations.
- Knowledge and experiences were shared and discussed about potential extensions of the lab's own scope of accreditation for forensic services (e.g. Flexscope and Opinions & Interpretations). Further leveraging the knowledge and expertise of its own investigators. This can, through the reports (statements), increase the client's information position.
- During the final panel discussion, connections were made between the different topics discussed during the seminar. This caused participants to have an even better overall understanding of how existing accreditation can be used even better to achieve the goals of a forensic laboratory.

Outlook for the next year

All presentations will be shared with the participants. No further actions are foreseen for AFORE WP 3.3-3.4 in 2023



WP4 – Training of Technical Experts

Team Leader:
Wim Neuteboom

Team Members:
Merike Rump
Üllar Lanno (left in the course of the project)
Viktor Krutob
Toomas Tiivel
Keith Fryer
Pavel Laptev
Grit Schüller
Zuzana Obertová

Local Support:
Maris Puust
Kertu Kulm

Field of Activity:
Training of senior forensic practitioners as ‘technical experts’ to work alongside National Accreditation Bodies (NABs) when assessing quality systems in forensic laboratories in the disciplines Digital Forensics, Facial Image Comparison and Crime Scene Investigation

- Products
Course materials
- Timetable, Curriculum and Training Manual
 - Printed hand-outs of PPTs
 - Documentation supporting the exercises and workshops

- Lectures and workshops (4 days per sub-discipline) at the 3 training seminars*
- Trained assessors in expertise fields Digital Forensics (17), Facial Image Comparison (16) and Crime Scene Investigation (23)
 - Framework for the training of forensic examiners to act as technical experts performing ISO-assessments

Product Description
Training seminars have been developed for the expertise fields Digital Forensics (1), Facial Image Comparison (2) and Crime Scene Investigation (3). The following topics are covered: Accreditation Standards, Accreditation Process, Role of technical Assessor, Preparation for Pre-Assessment Visit, Method documentation & control, Competence & Professional Judgement, Witnessing Inspections, Auditing case files, Sample handling and continuity, Assessing Management activities (Internal audits, Reviews & Corrective actions), Equipment calibration, Accommodation & Sub Contracted Services, Validation and verification (methods, equipment and SOPs), Assessors’ and Final Meeting and Final Report.



Knowledge transfer by lectures, workshops, practical exercises, role playing and discussions. Course material (all in English): Training Curriculum, Timetable, Training Manual and Hand-outs (PPTs) of all lectures. Each seminar takes 4 full working days – the maximal number of trainees is 20 per seminar.

The training is designed for experienced forensic examiners in the 3 respective expertise fields. On successful completion of the seminar, the trainees will be able to act as technical experts in their field on behalf of National Accreditation Bodies to perform ISO17020 and/or 17025 assessments.

Each training seminar has been organised only one time in 2022. At this moment, there are no plans to organise these seminars again. However, if there is new interest to organise the same or a similar seminar in future (expertise field, location, date, etc.), please contact the ENFSI Secretariat

Activities and Achievements
Although the Corona pandemic has cast a long shadow over the WP4 project, it can be concluded that the purpose of the project has been achieved: the 3 training events for technical assessors in the fields of Digital Forensics, Facial Image Comparison and Crime Scene Investigation respectively were successfully delivered despite the troublesome circumstances.

The total number of trainees who participated in the training events was 56. Specified over the forensic fields these figures are: Digital Forensics (17), Facial Image Comparison (16) and Crime Scene Investigation (23).

All trainees demonstrated the required knowledge and skills during the training and therefore all received a Certificate of Participation. The names of these qualified technical assessors have been submitted with their permission to the ENFSI Secretariat as well as the ENFSI QCC. They are now prepared to perform as technical assessors in national and regional European co-operation for Accreditation (EA) assessments, as well as in international ISO-assessments. Moreover, their increased knowledge and skills on Quality Management can also be applied in other quality related situations.

Outlook for the next year
The project has been finalized by the end of 2022. No plans for any continuation in 2023.



WP5 – Production of New and Updated Best Practice Manuals

Team Leader:
Dariusz Zuba (Institute of Forensic Research, Krakow, Poland)

Sub-team leaders:
BPM1: Klara Eklund (Swedish National Forensic Centre, Linköping, Sweden)
BPM2: Jolanta Wąs-Gubała (Institute of Forensic Research, Krakow, Poland)
BPM3: Ludwig Niewöhner (Federal Criminal Police Office, Forensic Science Institute, Wiesbaden, Germany)
BPM4: Andreia Vieira (Forensic Science Laboratory, Lisbon, Portugal)
BPM5: Isolde Wagner (Federal Criminal Police Office, Forensic Science Institute, Wiesbaden, Germany)
BPM6: Stavroulla Xenophontos (The Cyprus Institute of Neurology & Genetics, Nicosia, Cyprus)
BPM7: Knut-Endre Sjøstad (National Criminal Investigation Service (NCIS), Forensic Science Department, Oslo, Norway)

Team Members:

More than 60 experts from all over Europe participated actively in the development of the documents. The teams varied in size, from five to more than 10. The larger teams were mainly responsible for developing new documents.

- Product Description
Seven documents were developed, namely:
- *BPM1:* Best Practice Manual for Digital Image Authentication
 - *BPM2:* Best Practice Manual for the Forensic Examination of Fibres
 - *BPM3:* Best Practice Manual for the Forensic Examination of Inorganic Gunshot Residue by SEM/EDS
 - *BPM4:* Best Practice Manual for the Forensic Handwriting Examination
 - *BPM5:* Best Practice Manual for the Methodology of Forensic Speaker Comparison
 - *BPM6:* Best Practice Manual for Human Forensic Biology and DNA Profiling
 - *BPM7:* Best Practice Manual for the Forensic Identification and Comparison of Glass

The BPMs cover the entire forensic process, from evidence seizure to the presentation of results in court. It encompasses the specific aspects related to resources, handling items, initial assessment, methods, sequence of examinations, reconstruction, validation, quality assurance evaluation and presentation of results.

Activities and Achievements

- Initially, it was planned that the BPMs would be developed in physical face-to-face expert meetings, and presented at the annual ENFSI working group meetings. Due to the COVID-19 outbreak, only 2 such meetings were held during the planned project period. Extending the project by 12 months resulted in a total of 7 additional expert meetings and 1 dissemination event in 2022. The remaining meetings were held online, mainly using the Microsoft Teams platform. Only the Sub-Team 1 organized approximately 50 video

conference meetings. The experts worked also offline on the documents.

- All project activities defined in the Grant Agreement were fulfilled, including several workshops organized during the annual ENFSI working group meetings.

Outlook for the next year
The documents were published on the ENFSI website at the end of 2022. Information about newly developed BPMs will be disseminated at expert group meetings, scientific conferences and through social media. Therefore, it can be expected that additional expert comments will be provided and will be used to update the documents in the future. It is worth noting that all documents, in accordance with ENFSI policy, were subject to public review at the stage of development.

ENFSI PRODUCTS

WP5.1 – Digital Image Authentication

Team Leader:
Klara Eklund
Team Members:
Start of Project 2020: 13 participants
End of Project: 8 participants
Field of Activity:
Development of a new Best Practice Manual

Product Description
The new BPM document addresses the forensic process for authentication of digital image files, i.e., assessing the extent to which supplied questions and claims concerning the genesis and lifecycle (provenance) of digital image data can be supported or answered. Therefore, this BPM deals with: context analysis, source analysis, integrity analysis, processing analysis and manipulation detection. Analysis methods discussed, include auxiliary data analysis and image content analysis, both via algorithmic methods or visual inspection. The BPM covers the entire forensic process, from digital image file seizure to the presentation of results in court. It encompasses the specific aspects related to resources, handling items, initial assessment, methods, sequence of examinations, reconstruction, validation, quality assurance evaluation and presentation of results.

- Activities and Achievements
- All face-to-face expert meetings were cancelled due to the COVID-19 pandemic.
 - Approximately 50 video conference meetings were performed in the project.
 - All project activities in the GA were fulfilled (writing, reviewing and dissemination).
 - A workshop was held during the ENFSI DIWG annual video conference meeting in September 2020.
 - The writing activities were performed both online and offline.
 - The writing process of all sections proceeded to March 2021.
 - In April 2021, the review process started.
 - In October 2021, the BPM document was approved by the ENFSI Board.
 - In November 2021, a plenary session was held during the ENFSI DIWG annual video conference meeting.

Outlook for the next year
No activity planned for 2023.

ENFSI PRODUCTS

WP5.2 – Best Practice Manual for the Forensic Examination of Fibres

Team Leader:
Jolanta Was-Gubala, Institute of Forensic Research, Krakow, Poland
Team Members:
Maria Kamposos, Bundeskriminalamt Forensic Science Institute, Wiesbaden, Germany
Susanne Johansson, Swedish National Forensic Centre, Linköping, Sweden
Sabine Hess, Zurich Forensic Science Institute, Zurich, Switzerland
Kelly Sheridan, Northumbria University Newcastle, United Kingdom
Ray Palmer, Northumbria University, Independent Forensic Science Consultant, United Kingdom
Team Advisor:
Jan-Eric Grunwald, Bavarian State Criminal Police Office, Munich, Germany

Field of Activity
The aim of the project was to produce a new Best Practice Manual for the Forensic Examination of Fibres. The previous related document was developed by the European Fibres Group members in 2001, and after 10 years it has been modernized and restructured into several individual guidelines. The version of the Best Practice Manual for the Forensic Examination of Fibres, prepared as part of the AFORE project, according to the ENFSI policy, can be seen as a merging between established knowledge and recent needs for standardization and harmonization in the forensic community.
Forensic examination of fibers is an interdisciplinary area, based on knowledge in the field of biology, chemistry and textile technology, in which human factor plays an important role. Therefore, in this field of forensic science, it is important to implement activities that foster objectivity, such as a quality assurance system, standardization, verification of results, or compliance with appropriate guidelines contained in the Best Practice Manual, dedicated to these forensic examinations.

Product Description
Team members thoroughly revised previous related documents and developed the new Best Practice Manual for the Forensic Examination of Fibres with additional elements such as Resources, Validation and Estimation of Uncertainty of Measurement, Quality Assurance, Assessment of Results and Interpretation or Presentation of Results. This Best Practice Manual provides a guideline for the entire forensic process of fibre examination, including recovery at scenes of crime and in the laboratory, laboratory examination, i.e., identification, comparison and analysis, evidential evaluation and interpretation, and presentation of evidence. This document also encompasses the requirements for systems, procedures, personnel, equipment and facilities for the forensic process of fibre examination.

Activities and Achievements
During the implementation of the project in 2020-2022, team members worked during 23 video meetings and independently between meetings. Additionally, there was one commentary round among the community of the European Textile and Hair Group (ETHG), one online workshop during the ETHG Annual Meeting in 2021, public review, assessment by the QCC and approval by the ENFSI Board.
Outlook for the next year
Although the main Best Practice Manual on the Forensic Examination of Fibres was completed in 2022, its six Appendices, being documents created several years ago, need to be updated based on the latest literature on the subject.



ENFSI PRODUCTS

WP5.3 – Update and expansion of the Best Practice Manual for the Forensic Examination of Inorganic Gunshot Residue by SEM/EDS

Team Leader:
Ludwig Niewöhner, Bundeskriminalamt, Germany

Team Members:
Martin Barth, Bundeskriminalamt, Germany
Lawrence Gunaratnam, National Bureau of Investigation, Finland (retired)
Amalia Brouwer-Stamouli, Netherlands Forensic Institute, The Netherlands
Zuzanna Brozek-Mucha, Institute of Forensic Research, Poland
Bart Nys, National Institute of Criminalistics and Criminology, Belgium
Sylvia Steffen, Landeskriminalamt Düsseldorf, Germany

Field of Activity:
The principal aim of this project was to review the existing version of the Best Practice Manual on Forensic Examination of GSR, update and improve the existing references, and add of further significant references.

Product Description
The project group, which was comprised by active members of the ENFSI Expert Working Group Firearms/GSR, has extensively revised and expanded the existing BPM which resulted in issuing a new edition 2. The Manual was re-structured and amended according to the new ENFSI templates.

Activities and Achievements
During the implementation of the project (2020-2022) 13 meetings took place (3 in-person and 10 online).

Four surveys were completed within the Working Group to learn more about member laboratories' practices regarding training new experts, collecting request samples for casework, conducting comparisons and evaluating findings.

Edition 4 of the BPM underwent public revision, evaluation by QCC and was approved by the ENFSI Board.

Outlook for the next year
Further revisions of the BPM will be performed on request in due course.

ENFSI PRODUCTS

WP5.4 – Update and Expansion of Best Practice Manual for Forensic Examination of Handwriting

Team Leader:
Andeia Vieira, Forensic Science Laboratory, Lisbon, Portugal

Team Members:
Elina Rönkä, National Bureau of Investigation, Finland
Erich Kupferschmid, Forensic Science Institute Zürich, Switzerland
Gerhard Grube, Landeskriminalamt Berlin, Germany
Maria João Branco, LEDEM, University of Porto, Portugal
Nataša Žener, National forensic laboratory, Ljubljana, Slovenia
Tomasz Dziedzic, Institute of Forensic Research, Poland

Team Advisors:
Dorijan Kerzan, National Forensic Laboratory, Ljubljana, Slovenia
Jonathan Morris, SPA Forensic Services, Gartcosh, Scotland
Nikolaos Kalantzis, Chartoularios, Piraeus, Greece

Product Description
ENFHEX has extensively revised and expanded the BPM for Forensic Handwriting Examination which resulted in issuing its Edition 4. The Manual has been structured around the ACE-V approach and new Appendices have been created to guide users through the key stages of the examination process.

Comparison Appendix explains in detail how to systematically confront each handwriting feature in questioned and known samples and how to document the results.

Evaluation Appendix presents a practical application of the process of evaluative reporting, i.e. how to evaluate all findings as a whole with competing propositions (hypotheses) in such a way as to obtain the value of evidential strength.

Sampling Appendix provides a procedure for collecting reference samples, both request and from the course of business.

A set of useful forms has been prepared which can be easily adapted to the needs of individual laboratories and, as a result, contribute to the standardization of examinations within ENFHEX.

Activities and Achievements
During the implementation of the project (2020-2022) 13 meetings took place (3 in-person and 10 online).
Four surveys were completed within the Working Group to learn more about member laboratories' practices regarding training new experts, collecting request samples for casework, conducting comparisons and evaluating findings.
Edition 4 of the BPM underwent public revision, evaluation by QCC and was approved by the ENFSI Board.

Outlook for the next year
Even though the project itself has been finished in 2022, the new edition of the BPM is being translated into different European languages. Spanish and Italian language versions have been already accomplished and the Polish is under way.

WP5.5 – BPM for the Methodology of Forensic Speaker Comparison

Team Leader:
Isolde Wagner, Federal Criminal Police Office, Forensic Science Institute, Germany

Team Advisor:
Dr. Vincent Hughes, Department of Language and Linguistic Science, University of York, UK

Permanent Team Members:
Dr. Dagmar Boss, Bavarian State Criminal Police Office, Forensic Science Institute, Germany

Temporary Team Members:
Dr. Miriam Rolfes, Berlin State Criminal Police Office, Forensic Science Institute, Germany
Bernardas Šalna, Forensic Science Centre of Lithuania, Vilnius, Lithuania
Timur Svirava, North-Western Forensic Science Center of the Ministry of Justice, St. Petersburg, Russia
Ivan Siparov, North-Western Forensic Science Center of the Ministry of Justice, St. Petersburg, Russia

Field of Activity
The principal aim of this project was to write a Best Practice Manual for the Methodology of Forensic Speaker Comparison. The BPM addresses one of the most important tasks in the field of forensic speech and audio analysis, i.e. examining audio recordings containing the voices of unknown and known speakers in order to answer the question of whether these voices belong to the same speaker or different speakers. The document describes the traditional auditory and acoustic approach which is still widely used alongside technological innovation of automatic processing. Since this methodology is human-based to a high degree, it is important to implement measures that foster objectivity, such as validation, quality controls, and verification of results.

Product Description
Following ISO 17020 and 17025 standards the BPM outlines the entire process from receipt of recordings to conclusion, report and presentation at court as well as aspects of quality assurance, such as qualification, training & assessment of personnel, facilities & environmental conditions of the laboratory, equipment used, health & safety aspects, validation, handling items, and quality controls, like e.g. proficiency testing and peer review.

The core of the document is dedicated to analytical methods: Within the tradition of forensic speaker comparison, a range of speech features is analysed to capture the many dimensions on which speakers can be distinguished. From a wide range of discriminatory speech features some of the most common ones are highlighted. In addition, an extended bibliography is appended to the BPM.

Activities and Achievements
During the implementation of the project (2020-2022) 35 online meetings took place to develop the document. The first draft version of the BPM underwent public review. The revised version was presented during the EAFS conference 2022, evaluated by the QCC, and approved by the ENFSI Board.

Outlook for the next year
The BPM will serve as an informative guidance for experts in this area. It will also be presented during the conference of the International Association for Forensic Phonetics and Acoustics (IAFPA) 2023.

WP5.6 – BPM for Human Forensic Biology & DNA Profiling

Team Leader:
Dariusz Zuba, Institute of Forensic Research, IFR, Krakow, Poland

Sub-Team Leader:
Sander Kneppers, the Netherlands Forensic Institute, The Hague, Netherlands

Chairpersons:
Stavroulla Xenophontos, Laboratory of Forensic Genetics, CING, Cyprus
Tom Heylen, National Institute for Criminalistics and Criminology, Belgium

Team Members:
Ricky Ansell, National Forensic Centre, NFC, Swedish Police Authority, Sweden
Paola Di Simone, Forensic Science Police Service, Italian National Police, Italy
June Guinness, Forensic Science Regulation Unit, Home Office Science, UK
Peter Gill, Forensic Genetics Research Group, Oslo University Hospital, Norway
Tacha Hicks Champod, School of Criminal Justice & Forensic Genetics Unit, Lausanne University Hospital and University of Lausanne, Switzerland
Ate Kloosterman, the Netherlands Forensic Institute, the Hague, Netherlands (retired in 2021)
Aikaterini Kondili, DNA Subdivision, Forensic Science Division, Hellenic Police, Greece
Astrid Quak, the Netherlands Forensic Institute, the Hague, Netherlands

Field of Activity
The aim of this project was to prepare the ENFSI Best Practice Manual for Human Forensic Biology & DNA Profiling with the purpose to provide a framework for procedures, quality principles, staff training and approaches for the forensic examination. This BPM can now be used by ENFSI member laboratories as well as other forensic DNA laboratories to establish and maintain working practices in the field of human forensic biology and DNA profiling. This BPM will help to deliver reliable results, maximize the quality of the information obtained and produce robust results. The use of consistent methodology and the production of more comparable results will facilitate interchange of data between laboratories and promote standardization. In addition, National Accreditation Bodies (NABs) may take this ENFSI BPM into consideration when carrying out the accreditation of processes that are being delivered by forensic DNA service providers.

Product Description
This BPM encompasses best practice guidance with respect to all aspects of work within a forensic DNA laboratory. In order to avoid repetition of information in the BPM, reference is made to relevant ENFSI, Forensic Science Regulator/FSR and Scientific Working Group for DNA Analysis Methods/SWGDM documents as well as the required quality standards, legislation and codes of conduct that should be consulted by forensic DNA service providers. Requirements and recommendations are concisely defined

for resources (including personnel, equipment, reference materials and data, facilities and environmental conditions as well as consumables and reagents), selection of methods, validation, quality assurance (including advice for risk assessment), item handling, initial assessment, prioritization and sequence of examinations, assessment of results and interpretation, presentation of results and health and safety issues. Two appendices are included where examples and further detailed information is provided with regards to evaluation and presentation of DNA data when the issue for the court regards how/when the DNA was deposited. These appendices summarize and combine the information from the current ENFSI and International Society of Forensic Genetics/ISFG guidelines for evaluative reporting. Overall, this BPM provides a wealth of information within and through its references for state-of-the-art, quality assured services in order to assist forensic DNA laboratories with their daily work.

Activities and Achievements
During the implementation of the project (2020-2022) 28 meetings took place (1 in-person and 27 online). The BPM was distributed for public consultation, then for peer-review by the ENFSI Expert DNA WG followed by a final review by the ENFSI Quality Control & Competence Committee (QCC), before being published in December 2022. This BPM may be considered to be the work of all the ENFSI Expert DNA WG due to their valuable and constructive contribution during the review process.

Outlook for the next year
A survey may be carried out to evaluate the implementation and impact of this BPM in forensic DNA laboratories.

CERTAIN-FORS – Competency, Education, Research, Testing, Accreditation and Innovation in Forensic Science

WP2 – UNLOCK – fUNDamental fOrensiC Knowledge

Team Leader:

Didier Meuwly, Netherlands Forensic Institute, The Hague

Team Members:

Tacha Hicks, University of Lausanne, Lausanne
Christophe Champod, University of Lausanne, Lausanne
Yvonne O'Dowd, Forensic Science Ireland, Dublin
Charles Berger, Netherlands Forensic Institute, The Hague

Field of Activity

Knowledge development:

The overall aim of UNLOCK is to contribute to the development of a solid scientific foundation in Forensic Science through the dissemination of fundamental knowledge pertinent to all Forensic Science Practitioners, via an online platform. It is part of the ongoing improvement and maintenance of high standards among practitioners of ENFSI members and partners.

Basic General Forensic Knowledge Exam:

The project builds on the "Basic General Forensic Knowledge Exam (BGFKE)", developed previously under the Monopoly project 2010. The work involves updating the BGFKE Reader, with content that is topical and relevant in 2022, comprising topics fundamental to forensic science. It will include areas such as quality, digital technology, the reporting of results of analysis with an understanding the significance of results (and the importance of activity level interpretation) as well as the human factors that impact on Forensic Science.

Online examination:

It will also involve the development of introductory videos covering all topics, as well as developing online workshops and exam sessions.

Product Description

- UNLOCK e-learning platform: accessible to all ENFSI members/partners
- UNLOCK reader: available to all ENFSI members/partners
- UNLOCK online examination: available to ENFSI members and partners (Cepol-Europol-Interpol)

Activities and Achievements

During the first year the reader has been updated. Due to unexpected circumstances (project leader sickness) the other activities have been delayed. A deadline extension of 3 months has been requested.

Outlook for the next year

In 2023 the online platform will be set up, the questions of the examination will be produced, the explanatory videos will be filmed and the workshop will be prepared and probably be given in the 3 first months of 2024.

WP3 – Development of E Learning Concept Phase 2 - Evaluative Reporting and Interpretation, Textile Damage and Raman Spectroscopy Courses

Team Leader:

Jan-Eric Grunwald, BLKA, Munich, DE

Team members:

6 members from UNIL (CH), FOR Zurich (CH), VTEB (LV), FSI (Dublin, IE) and SPA (Aberdeen, UK)

Team Members:

More than 60 experts from all over Europe participated actively in the development of the documents. The teams varied in size, from five to more than 10. The larger teams were mainly responsible for developing new documents.

Field of Activity

Textile & Hair Examinations

Product Description

In this WP, we are expanding the existing ETHG e-learning platform by developing three new full on-line courses on the following subjects:

- Interpretation of evidence: Case pre-assessment and evaluative reporting
- Textile damage examination
- Raman spectroscopy

The intention behind this activity is to raise the levels of expertise in technical analyses as well as interpretation of evidence in our field and, very importantly, promote a standardized approach to reporting by providing an interactive state-of-the-art training in these subjects.

Activities and Achievements

In 2022, we have had 3 in-person WP team-meetings (3 work-days each), where we do most of the work, creating narrative and content for the on-line courses. All 3 courses consist of several modules and are "work in progress" at the moment.

Outlook for the next year

In 2023 we have planned another 3 team meetings to continue our work. Additionally, there will be a workshop taking place in September, to collect feedback from invited test-users from different countries and institutes.



ENFSI PRODUCTS

WP4 – Training and competence assessment for Forensic Handwriting Experts

Team Leader:
Dorijan Kerzan, National Forensic Laboratory, Ljubljana, Slovenia

Team members:
Jana Aumesitere, State Forensic Science Bureau, Riga, Latvia
Maria João Branco, Ledem, University of Porto, Porto, Portugal
Barbora Cakovska, Institute of Forensic Science, Bratislava, Slovakia
Nicole Crown, Zurich Forensic Science Institute, Zurich, Switzerland
Tomasz Dziedzic, Institute of Forensic Research, Krakow, Poland
Carina Fernandes, NCForenses Institute, Porto, Portugal
Nikoloas Kalantzis, Chartoularios Institute, Piraeus, Greece
Erich Kupferschmid, Zurich Forensic Science Institute, Switzerland
Andrea Ledic, Forensic Science Centre, Zagreb, Croatia
Raymond Marquis, School of Forensic Science, Lausanne, Switzerland
Erwin Sadorf, Bayerisches Landeskriminalamt, Munich, Germany
Kristofer Spjuth, Swedish National Forensic Centre, Linköping, Sweden
Susana Lopes, Forensic Science Laboratory, Porto, Portugal

Team Advisors:
Jonathan Morris, SPA Forensic Services, Gartcosh, Scotland
Mara Merlino, Kentucky State University, USA
Carolyn Bird, Forensic Science South Australia, Australia

Field of Activity
Competency Assessment
The main goal of this activity is to assess competency of Forensic Handwriting Examiners (FHEs) with aim to develop tools (i.e. testing and training tools) for particularly challenging cases.

Training in Traditional Forensic Handwriting Examination
The main goal of this activity is to provide, both trainers and trainees, with tools and materials on traditional forensic handwriting examination, if possible applicable to all ENFHEx laboratories, thus creating some kind of uniformity of the training process.

Training in Examination of Digitally Captured Signatures
The main goal of this tool-box is to enable FHEs to get acquainted and trained in examination of Digitally Captured Signatures and handwritten entries.

Product Description
• An on-line training program (e-learning platform) for traditional forensic handwriting examinations and for digitally captured handwriting examinations.
• An on-line repository of training material and competency testing material.
• A competence test for traditional handwriting examinations.
• A competence testing framework (toolbox) for both newly trained and established forensic handwriting experts covering both traditional and digitally captured handwriting.

Activities and Achievements
During the first year of the implementation period (2022) four whole-team meetings took place (two in-person and two on-line) as well as 12 online meetings within three sub-groups.

15 slideshows have been drafted, which will be further complemented with media (pictures and videos) showing practical aspects of forensic handwriting examination.

A survey was completed within the Working Group to learn more about competency of forensic handwriting experts, analysis of ENFHEx Collaborative Exercises' results was accomplished, and an error reduction tool for forensic handwriting examination was developed.

Outlook for the next year
Record of training videos, preparation of training materials and exercise kits, development of a Proficiency Testing program, 3-4 in-person meetings.



ENFSI PRODUCTS

WP5 – ReAct (Establishment of a data repository and Bayesian Networks that can be used to calculate likelihood ratios at activity level)

Team Leader:
Ingo Bastisch, BKA, Germany

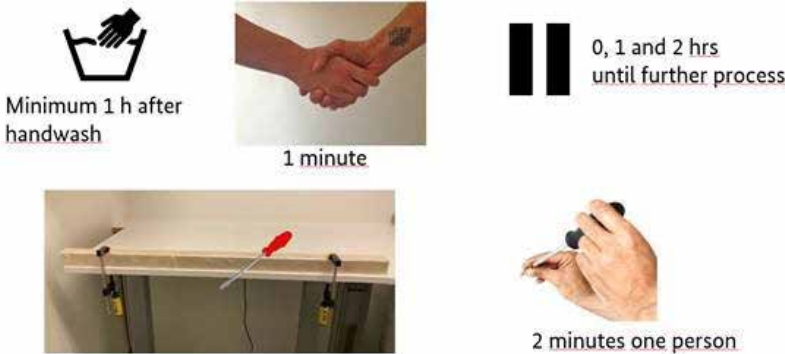
Team members:
31 Institutes

Field of Activity:
DNA Analysis, activity level

Product Description
This project is a large multi-laboratory study addressing the recovery of DNA after a number of controlled experiments including deposition and transfer of DNA. The questions at court are no longer criticizing the analytical method itself but argue against a criminal activity of the defendants while considering alternative explanations of how the defendant's DNA could have been transferred. This study mimics common reported possible DNA transfer scenarios that hopefully will be the basis for the generation of better models for assessing these kinds of scenarios. This involves the use of Bayes nets.

Activities and Achievements
The first experimental parts were complete in year one and a virtual and face-to-face meeting took place. The second year is for the completion of the analytical part, the analysis of the data and the assessment of models. An outline of a training program will be developed and the results will be disseminated through publications and scientific meetings

Outlook for the next year
The second year is for the completion of the analytical part, the analysis of the data and the assessment of models. An outline of a training program will be developed and the results will be disseminated through publications and scientific meetings.



WP6 – App Analyses and Reference Database Solution

Team Leader:
Abdul Boztas, Netherlands Forensic Institute, Netherlands

Team members:
Jeroen de Jong, Netherlands Forensic Institute, Netherlands
Sampo Ojala, Forensic Laboratory, Finland
Katsumoto Terauchi, National Police Agency, Japan
Daisuke Sumita, National Police Agency, Japan
Panagiotis Antonopoulos, Hellenic Police, Forensic Science Division, Greece
Dimitrios Lamprou, Hellenic Police, Forensic Science Division, Greece

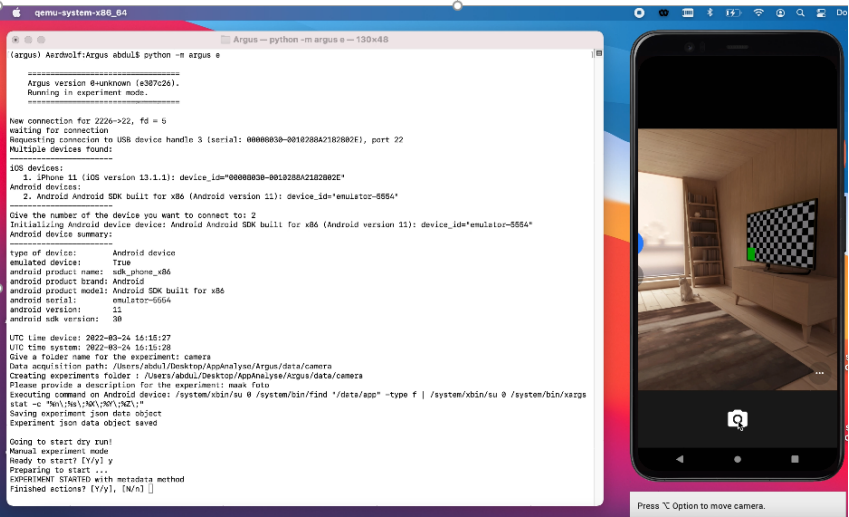
Field of Activity
Digital Forensics

Product Description
The aim of this project is to develop an app analysis software (Argus) and platform (Aardwolf) for determining and exporting files which are changed, created or deleted during the execution of certain actions with an app. The generated files and traces by app will be stored in a reference database to share generated data with other users.

Activities and Achievements

- The new version of Argus is implemented in 2022 and tested by users.
- We are currently working on setting up the Aardwolf platform
- We have given a presentation about our project during ENFSI meeting in Stockholm
- We have also organized a workshop in the Netherlands for the end users.

Outlook for the next year
We are going to implement the Aardwolf platform and make our software available to law enforcement in the EU.



python

Experiment description: maak foto

Status	Snapshot	Filename	File type	Action	Pathname
1 created	0 - 1	543d783b6d2da26e9deb0c0ca896cdc74eeefaa1a58b625437b128f0	image/jpeg	Show	/data/data/com.android.camera2/cache/image_manager_dsk_cache/543d783b6d2da26e9deb0c0ca896cdc74eeefaa1a58b625437b128f0
2 created	0 - 1	be8d30d1a3858ac3c52788b5c6ac07e413a89272b52063883cce999fe652.0	image/jpeg	Show	/data/data/com.android.camera2/cache/image_manager_dsk_cache/be8d30d1a3858ac3c52788b5c6ac07e413a89272b52063883cce999fe652.0
3 modified	0 - 1	journal	text/plain	Show	/data/data/com.android.camera2/cache/image_manager_dsk_cache/journal
4 modified	0 - 1	external.db	application/vnd.sqlite3	Show	/data/data/com.android.providers.media.module/databases/external.db
5 modified	0 - 1	external.db-shm	application/octet-stream	Show	/data/data/com.android.providers.media.module/databases/external.db-shm
6 modified	0 - 1	external.db-wal	application/octet-stream	Show	/data/data/com.android.providers.media.module/databases/external.db-wal
7 created	0 - 1	IMG_20220224_171618.jpg	image/jpeg	Show	/data/media/0/Pictures/IMG_20220224_171618.jpg
8 created	0 - 1	system_app_attricmcode@1648138579149.txt	text/plain	Show	/data/system/dropbox/system_app_attricmcode@1648138579149.txt
9 created	0 - 1	system_app_attricmcode@1648138579470.txt	text/plain	Show	/data/system/dropbox/system_app_attricmcode@1648138579470.txt
10 created	0 - 1	system_app_attricmcode@1648138579504.txt	text/plain	Show	/data/system/dropbox/system_app_attricmcode@1648138579504.txt

WP7 – Forensic Multilingual Voices Database

Team Leader:
André Saraiva, Forensic Science Laboratory, Portugal

Team members:
Jelena Devenson, Forensic Science Centre of Lithuania, Lithuania
Vasile Dan-Sas, National Institute of Forensic Expertise, Romania
Possibility to have a new member from Hungary: Attila Fejes, Special Service for National Security Institute for Expert Services

Field of Activity
Forensic Speech and Audio Analysis, particularly Forensic Automatic Speaker Recognition

Product Description
Development of a forensics voice samples database, obtained from volunteers, to be shared with the ENFSI FSAAWG members. This database will fulfil the absence of non-native languages in reference populations for Forensic Automatic Speaker Recognition applications and also allows the impact of Covid protection masks in the same field.

Activities and Achievements

- The collection process is being carried out with the contribution of Forensic Institutes from Portugal, Lithuania, Romania, Turkey, Croatia, Ukraine, Georgia, Azerbaijan, Greece, Hungary and Spain.
- An abstract was accepted in EAFA 2022 (oral presentation did not occur because the presenter was infected with Covid)
- Oral presentation in the 23rd Forensic Speech and Audio Analysis Working Group Meeting, November 4, online

Outlook for the next year

- Data acquisition, compilation and characterization will be finalized.
- The first draft of the DB will be tested.
- A minimum of two work meetings will be scheduled.
- At least one conference article will be submitted.
- One scientific article will be submitted to a peer review journal.

ENFSI PRODUCTS

WP8 – Development of a New PT on the Interpretation of GSR Findings according to ISO 17043 and ISO13528 demands

Team Leader:
Ludwig Niewöhner, Bundeskriminalamt, Germany

Team Members:
Dieter Neimke, Bundeskriminalamt, Germany
Matti Löfmann, National Bureau of Investigation, Finland
Glen Roepnarain, Netherlands Forensic Institute, The Netherlands

Field of Activity
The principal aim of this project is the development and the performance of a proficiency testing scheme on the “assessment of forensic findings in Gunshot Residue investigation” and it is part of ENFSI activities towards a European/worldwide harmonization of forensic investigation methods in firearm related crimes. It will provide new representative sample material for high-standard and reliable methods.

Product Description
The development of the new proficiency test will be based on an already existing “ENFSI Proficiency Test on the Identification of GSR by SEM/EDS”. However, this existing PT mainly focusses on the assessment of the applied analytical methods (SEM/EDS). The new PT will aim more on the assessment of the forensic expert in interpreting the GSR findings on a set of case samples (embedded in a case scenario).

This is a new concept for a PT that will result in the design for new test samples based on "real" GSR particles applied on "real" GSR stubs. This new PT will be a useful extension to the already existing ENFSI PT.

Activities and Achievements
Up to now 6 meetings took place (3 in-person and 3 online meetings).

Currently the development and production of suitable samples for the PT is in progress. First test-sets of PT samples have been analyzed by the project members.

The current progress of the project was presented at the 28th Annual Meeting of the ENFSI Expert Working Group Firearms/GSR, in Lisbon, PT; Oct. 2022.

Outlook for the next year
Scheduled performance/sample shipment of the PT: October 2023

ENFSI PRODUCTS

WP9

Team Leader:
Francesco Zampa

Team members:
Livia Zatkalikova (DNA-WG)
Sander Kneppers (DNA-WG)
Kairi Kriiska-Maiväli (EDEWG)
Helen Bandey (FIN-WG)
Andy Bécue (FIN-WG)
Aldo Mattei (FIN-WG)
Maria João Branco (ENFHEX)
Maria Kambosos (ETHG)
Eric Bouzaïd (ETHG)
Matthew Beardah (FINEX)
Jürgen Bügler (FINEX)

Field of Activity
Multidisciplinary Collaborative Exercises

Product Description
Multidisciplinary Collaborative Exercises
One multidisciplinary collaborative exercise (MdCE) was carried out in 2022. This was a multidisciplinary CE consisting of the examination of a letter. The purpose of the submission was to determine the forensic information that was available for four different disciplines (DNA, Fingerprints, Documents and Handwriting). This approach to testing of forensic disciplines gave the opportunity to analyze good practice within the various scientific areas, as well as examining the process and sequence of events within a laboratory.

The test was distributed in May/June 2022 and the deadline for submission of the CE findings by participating organizations was fixed for the 2nd September 2022. Results from 50 laboratories that carried out the full range of activities were received and analyzed. The final report was shared with the participants on 15th December 2022.

Outlook for the next year
Another MdCE is planned for 2023. This is a multidisciplinary CE consisting of the examination of an alleged Improvised Explosive Device (IED). The purpose of the submission is to determine the forensic information that is available for four different disciplines (Explosives, DNA, Fingerprints, Fibers and Hair). The registration to the exercise was opened on 1st February 2023 for a limited number of laboratories. Only organizations that have the full capability to carry out all four test types/forensic disciplines were accepted to participate in the CE. It is planned to distribute the test material in April 2023.



ENFSI PRODUCTS

WP10 – Benchmarking of ProficiencyTests for the Fingerprint Domain

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Field of Activity
Assessment of Proficiency Tests dedicated to fingermark visualization, imaging and comparison

Activities and Achievements
During this first year, we were able to deliver two relevant documents. The first one is an inventory of the currently available commercial Proficiency Tests (PTs) related to the fields of fingermark visualization, imaging, and comparison. In addition to this document, we generated two original assessment forms, based on a series of criteria (i.e. purchase procedure, instructions, test setup and completion, provider’s final report). These two assessment forms will be used to benchmark the different PTs that were purchased and completed by the team members, with the aim of providing informed advices to the fingerprint community.

Outlook for the next year
During the second year, the team members will continue to purchase, complete, and assess PTs. The main objective will consist in establishing grading rules and a benchmarking model, based on the criteria considered in the assessment forms.

ENFSI PRODUCTS

WP11 – Fingerprint examination Best Practice Manual, 2nd Edition

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Field of Activity
The Fingerprint Working Group recognized that a huge standardization effort was put in place by the U.S. government with the creation within the National Institute of Standards and Technology of the Organization of Science Areas Committees (NIST-OSAC) tasked to develop specific standards and best practice recommendations in all forensic fields. The Friction Ridge Subcommittee (FRSC) produced a considerable amount of work in the last 3 years, with a great deal of details. Such work was properly evaluated by the FINWG, adapted and incorporated in the European scenario.

Published standards in the fingerprint field by the American Board of Standards (ASB) need to be evaluated as well, because they might potentially impact the European Courts of Justice. In fact, in future years, the standardization process, started in the USA, will affect also Europe, and FINWG wants to be adequately prepared.

Other sources of documents considered for the Fingerprint examination BPM are the Fingerprint Visualization Manual, Home Office, UK, and a vast series of documents produced by the UK Forensic Science Regulator.

Moreover, there is the urgency to incorporate all the new technologies recently developed in the fingerprint field, in the BPM. These new tools are based on software which are extremely reliable and could bring to the automation of some of the fingerprint processes (e.g. automated association of ten print cards, automated assessment of the quality of fingermarks, automated association of a fingermark to a candidate with AI based algorithms).

The objective of this project is to realize a comprehensive publication, which could refer to valid and updated existing documents and can actively contribute to the harmonization of the processes and procedures of the fingerprint laboratories across Europe.

Product Description
1. A comprehensive bibliography of all relevant standards, best practices and guidelines relevant for fingerprint examination
2. A repository of all reference documents
3. The second edition of the Fingerprint Examination Best Practice Manual, covering tall laboratory activities of visualization, imaging, and comparison (direct and through databases) of friction ridge marks

Activities and Achievements
1. Scoping the BPM Task
2. Virtual meeting 1.: lesson learned from the previous experience of editing BPMs. Definition of the list of documents to be examined and to their means of distribution
3. Document collection and creation of the repository. Access given to team members
4. Team Meeting 1 (in-person): Definition of a list of priorities and allocation of tasks to team members. Constitution of task groups. Activity 11.4 Virtual Meeting (Examination of Documents)
5. Virtual meeting 2: advances in the examination of the documents by the task groups. Gap analysis on the expected advances
6. Virtual Meeting 3: List of the contents of the BPM
7. Dissemination at IAI 2022
8. Team Meeting 2: drafting of the BPM chapters
9. Dissemination at ENFSI FINWG Annual Meeting 2022
10. Virtual Meeting 4 and 5: review of the state of the document
11. Virtual meeting 6: plans for the 2023
12. Dissemination at AAFS 2023

Outlook for the next year
The team will meet at least 2 times to complete the draft of the BPM. The outcomes of the work package will be disseminated at IAI 2023 Educational Conference and at the FIN WG Annual meeting 2023. A draft of the whole document is expected to be ready by fall 2023.



EAFS 2022 – European Day

At the EAFS 2022, one day was specifically devoted to European cooperation. Throughout this day, a number of activities was dedicated to emphasize the importance of collaboration throughout Europe, and further, how Europe can play a role in the global forensic science community.

On stage to open the day, we had the ENFSI Board Chairperson Christina Bertler Edlund alongside Dr. Nada Milisavljevic of the European Commission, DG Home. Christina highlighted the importance of cooperation and of ENFSI as an enabler for such cooperation, highlighting specifically the common vision set out by ENFSI and an updated European Forensic Science Area (EFSA) plan. Nada expressed the commissions view on forensic science as an important area to develop and presented a comprehensive overview of the opportunities provided to support research, innovation and development through the Horizon Europe and Internal Security Fund (ISF).

Among the activities related to the European Day was an exhibition of projects funded through the European Commission. In total 18 projects from the Horizon Europe, Horizon 2020 and ISF programs were exhibited at the conference. In addition, several projects coordinated by ENFSI and funded via the Direct Grants received from the ISF programme demonstrated their results.

Within the European Perspective track there were eight sessions during the day, all highlighting results achieved through European cooperation.

Plenary speakers throughout the day highlighted the importance of cooperation and exemplified what the forensic science community can achieve. To start off the day, Professor Fredrik Heintz of Linköping University Sweden presented on the topic of using Artificial Intelligence within Law Enforcement and the need for trustworthy AI.

Unfortunately, due to medical reasons, the second plenary speaker Professor Dr. Peter M. Schneider from the University of Cologne, Germany, could not attend the conference in person. However, he provided a pre-recorded version of his talk on the results from and implementation of the VISAGE project, a project that provides key contributions to the field of deriving visual attributes through genomics. The presentation was highly appreciated and well attended. Sadly, Peter passed away soon after the conference and we would like to acknowledge his contribution and dedication to forensic science.

The final plenary speaker of the European Day was Dr. Justice Tettey of the United Nations Office on Drugs and Crime (UNODC). He highlighted in his talk how the conditions under which forensic science practitioners conduct their work vary across the world and the need for sharing knowledge and experience not only within Europe, but globally.

To start off the panel debate, Arnoud Heeres of the European Commission, DG Home, presented his experience of working with the International Security Fund (ISF) programme. Arnoud exemplified the potential of these initiatives by describing the work on the Cerberus project. This project significantly contributed to the successful cracking of the EncroChat network.

The panel debate that followed, highlighted the opportunities enabled through joint innovation activities, the obligation and importance of distributing the findings within Europe and globally, and the importance of facilitating innovation uptake.

From the survey of the EAFS 2022 participants, we can conclude that the European Day was an appreciated activity. The two questions particularly relating to the European Day project exhibition both scored a median value of 4 on a scale of 5.



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