

Fingerprint Quality Standards Specialist Group (FQSSG)

Note of the meeting held on 29 June 2021 via teleconference.

1. Welcome, Introduction and Apologies

- 1.1 The Chair welcomed all to the meeting. A full list of the attendee organisations and apologies is provided at Annex A.

2. Minutes of the last meeting

- 2.1 There were no comments on minutes, and these would be published on the Regulator's website at [Fingerprint Quality Standards Specialist Group meeting minutes, November 2020 \(publishing.service.gov.uk\)](https://publishing.service.gov.uk/2021/06/29/fqssg-minutes-november-2020).

3. Actions and Matters Arising

- 3.1 An update was provided on Action 11 from the November 2020 meeting and it was agreed that there was sufficient training in in-house training for close/near fingerprint matches. This action was closed.
- 3.2 An update was provided on the ongoing action from the June 2020 meeting, Action 5. It was agreed that the FQSSG should assist the FCN on the development of an accreditation pack for the IDENT1 update to ensure that police forces did not take different approaches. It was agreed that a sub-group be established to set out the high-level requirements for the pack. Representatives from the FCN, FSRU, and Metropolitan Police Service volunteered to join this sub-group and the representative from UKAS would

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review the output but would not be able to be involved in development of the pack. The sub-group would begin work in a few month's time.

Action 1:

3.3 Set of high-level requirements to be agreed for the accreditation pack for the new IDENT1. UKAS representative to provide comment on output.

3.4 All other actions were complete and there were no further ongoing actions.

4. FSR Act and Forensic Activities

4.1 The new Forensic Science Regulator, Gary Pugh, presented a summary of the Forensic Science Regulation Act and what forensic activities would mean in terms of fingerprint examinations. The Group were informed of the process of commencement of this new Act and the powers associated with the Act.

4.2 The Regulator informed the Group that defining the scope of forensic science activities would be required and the FQSSG would be consulted on activities relevant to its remit.

4.3 The representative from the MPS noted that terminology would need to be carefully considered and noted there were differences in activities relating to searching and to comparison. The representative queried whether automated processes such as ten-print comparisons would be included in scope.

4.4 The Regulator noted that forensic databases would be considered separately and that activities without human intervention would fall into database activity. Fingerprint activity was initially being considered as four areas:

- i) Comparison of ridge detail from an unknown source against a known source
- ii) Comparison of ridge detail from an unknown source against a database.
- iii) Cadaver identification / confirmation of identity.
- iv) Activity reporting.

4.5 The representative from UKAS noted that some granularity of comparisons would be helpful as there would be difference in validation for certain processes. The Regulator responded that a template was being developed to assist in making definitions. There would be the option once an activity type was

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defined to include detail of what specific activities would be include in that activity type. This could provide the detail UKAS needed.

- 4.6 The representative from Greater Manchester Police raised the activity of comparing ridge detail taken from digital material. The UKAS representative noted that this activity was not accredited however the MPS representative advised that this activity had been validated by the MPS and was being performed as an unaccredited activity and reported with the appropriate caveat. This activity was also being performed in Scotland for intelligence purposes only and was not being used in court.
- 4.7 The academic representative highlighted that problems with fingerprint comparisons came from poor quality, unknown source, ridge detail and suggested that activities should not be defined by the type, or source of the ridge detail but by the amount of information present.
- 4.8 This was acknowledged as a good consideration by the Chair and the Regulator and the FQSSG would be asked to consider how fingerprint activities should be defined and advise the Regulator.

5. Workplan

Agree and sign off additions

- 5.1 A representative from the FSRU took the group through the workplan.
- 5.2 Defining activities had been added to the workplan and a template would be sent out to seek the views of the group.

Action 2

- 5.3 FSRU to complete definitions template and secretariat to share with FQSSG for addition of definitions of fingerprint activities that should be classed as forensic activities in the new statutory code.
- 5.4 Development of an appendix to cover standards in CSI recovery would be led by a sub-group with representatives from CSI and FQSSG. The terms of reference and nominations for members were complete and the sub-group would meet later in the year. It was acknowledged that this activity would be too

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late to assist with achieving CSI accreditation, however, the members remained supportive of the need for this sub-group and the appendix.

5.5 The review of documentation in light of changes in working practice resulting from the Covid pandemic would be incorporated during the documentation review required for the new FSR Codes of Practice.

5.6 As release of the IDENT 1 searching algorithm would be delayed the workplan would be updated to reflect that this work would continue to April 2022.

Action 3

5.7 Update the workplan, including moving the searching algorithm deadline to April 2022.

5.8 A working group had been identified to progress the guidance on the evaluative opinion document and delivery was noted on the workplan for winter 2021. The FQSSG was in support of this work continuing as a priority and a meeting of the working group would be arranged for September. The representative from the FCN requested involvement in this work as it would affect the development of IT systems.

Action 4

5.9 Arrange a meeting of the Interpretation Issues Working Group to progress the guidance document to support the evaluative opinion document.

5.10 The workplan included reference to a watching brief on probabilistic interpretation and it was noted that this would be discussed as part of the work of the Interpretation Issues Working Group.

5.11 The watching brief on the TF Bureau Tools would be discussed under item 7.

5.12 Quality and Scientific issues remained as a routine item, with no additions.

5.13 The Dstl lessons learned document would be discussed under item 7. The representative noted that running another collaborative exercise should be discussed at the next meeting.

Action 5

5.14 Add discussion of future collaborative exercises to the workplan.

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6. Accreditation Updates

UKAS

- 6.1 The representative from UKAS informed that accreditation visits had been delayed as a result of the pandemic however, the intention was still to return to site visits.
- 6.2 UKAS had released new publications including Lab51, Laboratories Performing Analysis of Toxicology Samples, and the document list had been implemented by UKAS for toxicology.
- 6.3 UKAS had published a technical bulletin on the transition to new national accreditation symbols and the timeframes for adoption of the new symbols.
- 6.4 The group were informed that UKAS would begin inspecting to version seven of the FSR Codes from the 26th of July 2021. A gap analysis would be available on the UKAS website with the expectation that it would be completed and returned to UKAS by the 22nd of June.
- 6.5 UKAS would be hosting a Fingerprint Comparison Technical assessor workshops on the 2nd of July 2021, and the agenda would include validation of printers, schedule review, and extension to scope.
- 6.6 The group were informed that UKAS would be carrying out a review of the schedule of accreditation for fingerprints and they may look to tie this in with the FSR's review of activities. The UKAS representative therefore asked to be kept informed of timescales so any amendment of schedules would align with newly defined forensic activities. The Regulator advised the representative that a first draft of activities was expected in autumn 2021 and the FSRU would engage with UKAS during the process.

NPCC – Bureau

- 6.7 A written update had been shared with the members ahead of the meeting. The main points were:
- 6.8 Leidos had taken over the support contract for IDENT1 and this had been a fairly smooth transition.

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6.9 The fingerprint community had raised concerns the deadline for adding IDENT1 to the scope of accreditation given the delay to the update to IDENT1. The previous FSR had advised it would be 18 months from the go live date.

6.10 Work on a national ground truth database was ongoing.

NPCC – Crime Scene

6.11 The Forensic Capability Network (FCN) representative informed the group that the FCN was continuing to support forces in document reviews for CSI accreditation and producing a quality matters newsletter on learning for CSI. These could be found on Knowledge Hub.

6.12 The FCN would be holding a network event on the 1st of July for all CSIs and Quality Managers, UKAS would also be represented.

6.13 CSI validation workstreams were focussed on digital forensics and validation requests could be made through the FCN enquiry log.

6.14 Work on batch testing of fingerprint powders was continuing and an FCN/Dstl workshop had been held to compare previous validation work by CAST.

7. Quality/Scientific/Development Updates**HOB**

7.1 A Home Office Biometrics (HOB) programme representative provided the group with an update.

7.2 The roll out of IDENT1 was further delayed to a go live date of April 2022. Fujitsu had moved from testing to working on stability issues. HOB was looking at options for the matcher service supplier contract which was due for renewal in 2023 and a decision on approach was expected to be made at the end of July.

7.3 Transition of IDENT1 and IABS service management to Leidos had been completed successfully.

7.4 Leidos were running a substantial work programme including cloud transformations for IDENT1 and IABS and these 18-24 months projects were expected to start design work in August 2021 and November 2021 respectively.

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- 7.5 Leidos would also run a proof of concept for a virtual IDENT1 platform with an expected completion date of March 2022. If the trial was successful a platform would be built and delivered in an 18-24 month project.
- 7.6 The Home Office representative informed the group that changes to the legislation on retention of immigration fingerprints from 10 to 15 years were to be made on the 1st of July. This would result in a steadily increasing collection that the law enforcement marks could be compared against over the next few years.
- 7.7 The Home Office Biometrics Programme was also looking at self-enrolment of fingerprints for immigration. A pilot was expected to commence in 2024 on a system to enrol fingerprints at home using contactless capture. These prints would be searched against the law enforcement collections.
- 7.8 The representative from the FSRU noted that the group would be interested in the HOB programme work on contactless capture as this was relevant to the discussion of comparing ridge detail taken from images and video. A watching brief over this work would be added to the FQSSG workplan.

Action 6

- 7.9 Add watching brief for HOB validation contact-less capture programme to workplan.
- 7.10 The HOB representative advised that an industry challenge was running to establish how mature the technology for contactless capture was and the view was that more development was needed. For the pilot the Home Office would provide smart phones and 500-600 donors to capture enrolment of the reference sets and create a ground truth database (GTD). The terms of the GTD would mean that the data could also be used for law enforcement validation work. Data was expected to be collected in November and tested with the existing IDENT1 algorithm. The HOB programme representative did not expect the current algorithm to perform well enough on the contactless captured marks.

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- 7.11 Dstl had published two reports on the collaborative fingerprint exercise as well as a technical note on novel plastics and a publication on replacing Synperonic® N in physical developer, these publications could be shared with members of the FQSSG if requested.
- 7.12 In response to the Statement of User Needs (SUN) submitted to Home Office Commissioning (HOC) by the FSRU representative. There had been a meeting between HOC, the FSRU representative and Dstl to agree the scoped programme of work to be undertaken by Dstl in the upcoming year. This work would cover short term problems with standards and regulatory support, an update of the fingerprint visualisation manual and collaborative exercises. A futures strand had also been established to explore potential longer opportunities and challenges to fingerprint visualisation.
- 7.13 The technical content of the update to the visualisation manual was expected to be completed by the end of August with the aim of having a draft produced by Christmas and implemented by forces by the end of the financial year.
- 7.14 There would be changes to some processes (formulations and/or guidance on use) as a result of classification changes to chemicals based on the latest health, safety and environmental information.
- 7.15 An implementation activity would be run following the launch of the manual to give an overview and assist forces in getting the most out of the new manual.
- 7.16 The Dstl representative also highlighted that the visualisation manual was relying on some very old validation data, for example validation work on Ninhydrin (Nin) was 30 years old. There had been changes to substrates, such as recycled plastics, and there may have been changes to the make up of fingerprints, for example for changes to diets that mean caution should be exerted over relying on this old validation data.
- 7.17 The representative from the MPS noted that they had experienced some challenges with developing Nin marks and had wondered if this was related to the use of hand sanitising gels. The Dstl representative noted that they did not have data on the effect of hand sanitising gels on Nin.

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7.18 The Dstl representative informed the group that the results of the collaborative exercise and the ground truth data had been circulated to forces before Christmas. This data could also be shared with FQSSG.

Action 7

7.19 Dstl reports on collaborative exercise outcomes to be circulated to FQSSG.

7.20 As part of the agree programme of work under the SUN for the upcoming year, Dstl would lead a virtual workshop covering the fingerprint visualisation aspects of the collaborative exercise with the aim of sharing learning and to consider the implementation of new practices. There would also be time at the end of the workshop to discuss the scope of the next collaborative exercise.

NPCC – Transforming Forensics (TF)

7.21 The group had been provided with a written update of work in Transforming Forensics (TF) and information on the fingerprint elements of the work programme was provided by the TF representative.

7.22 An update was provided on the Xchange apps that were demonstrated to the group in November 2020. The first technical release had been provided to EMSOU and TF were working through the feedback to ensure a national tool was developed. Training packages had been tested with EMSOU and a competency element was included at the end of training. The second release would be to South West Forensics and work was underway on reading the app for deployment to them.

7.23 The Xchange apps were being validated independently and the practical side of this work was complete. A report was being prepared on the Bureau app with the help of the MPS representative and was expected to be completed by the end of July to support SW forensics with their validation activities.

NPCC – NFFSB and Enhancement Labs

7.24 A written update had been provided to the group ahead of the meeting as the representative had to leave the meeting. The main points of the update relating to fingerprints were:

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- 7.25 The Fingerprint Enhancement Labs (FEL) group had met in April and information continued to be shared electronically.
- 7.26 The IRM members reported the transition to Leidos for the service management of IDENT1 had gone extremely well.
- 7.27 The IRM also discussed the Police National Computer (PNC) deletion issue. It was expected that the missing fingerprint forms would be re-inserted and automatically searched ten print to mark. Until resolution was completed this remained a risk to the Fingerprint bureaux and wider policing however, the number of unique fingerprint forms deleted was low as most of the affected records had another fingerprint form linked to their PNC record.
- 7.28 There was a meeting of the Forensics Information Database Service (FINDS) Strategy Board on the 15th of April and it was noted that a review of the international DNA and fingerprint data exchange policy was being undertaken with the expectation to publish in the autumn.
- 7.29 FINDS was continuing to work with the Home Office Biometrics programme to create a container of fingerprint data for the accreditation of the strategic matcher algorithm for IDENT1. The container was expected to contain approximately 127,000 anonymised tenprints by November 2021. Forces would be able to add their own ground truth tenprints into the container and launch searches against it for their validation of IDENT1.
- 7.30 The Forensic Capability Network (FCN) had hosted an online event on user requirements for a national fingerprint ground truth database and work on the donor consent form and processes for creating new material was ongoing.
- 7.31 The FCN would begin work in June on a future capability roadmap for fingerprints and footwear.
- 7.32 The national guidance for the retention, storage and destruction of forensic materials, aligned to the NPCC National Digital and Physical Evidence Retention Guidance (published Feb 2021), had been through the required approvals process and would be published by the FCN in June 2021.

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- 7.33 FCN had developed a Service Transition Plan for moving Xchange and fingerprint products from TF to FCN. The transition was expected to take place in October.

8. Professional Updates

R&D/ENFSI

- 8.1 The ENSFI representative highlighted two areas of activity for the group:
- 8.2 The 2020 ACE annual collaborative exercise (on identification) had been conducted and gave a point of comparison with performance in Europe against the recent Dstl collaborative activity in the UK. From the results obtained from 53 ENFSI laboratories, no false positives (identifications) were made. The False Negative Rate (FNR) measured on all the comparisons made was 0.43%, notably higher for palms (4.58%) compared to fingers (0.25%).
- 8.3 A series of projects potentially funded by the Monopoly programme 2020 had been submitted to the ENFSI board. Two had been retained for further consideration and potential submission to the EU: Fingerprint WG Best Practice Manual 2nd Edition, and Benchmarking of Proficiency Tests for the Fingerprint Domain.
- 8.4 The representative from Dstl added that there was a third project that had received funding which was a multidisciplinary proficiency testing collaborative exercise in forensics. This would be starting in January and the FQSSG would be kept informed of progress.

College of Policing

- 8.5 The College of Policing (CoP) representative provided the group with an update on the work completed on the Fingerprint Comparison learning programme since the last update:
- 8.6 All three stages of the programme had been launched and were available to Police Forces via the College Managed Learning Environment (MLE). Other agencies could apply for a licence to deliver the learning and should contact the CoP representative.

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8.7 The work putting together the assessments for stages 2 & 3 was being led through the IRM group.

Chartered Society of Forensic Sciences (CSFS)

8.8 The group were provided with a written update from the CSFS the main points were:

8.9 The Society would be holding a Virtual Student Conference in December focusing on employment/careers/next steps. Any potential employers within the forensic arena interested in presenting should contact the CSFS.

8.10 The Society had been holding a series of webinars and webinars for students that were free to members. There would be a break from the webinars over the summer for website updates and they would start again in September. All previous webinars were available to members.

9. AOB

9.1 The academic representative informed the group that there was an international ground truth database of fingerprints that had been created which addresses issues around GDPR and was available free of charge. This database may be useful for the work being carried out by the FCN. The FCN/TF representative would follow up on this.

Annex A

Organisation representatives present:

The Chartered Society of Forensic Sciences (CSFS)

College of Policing

Dstl (2 representatives)

Fingerprint Associates Limited

Forensic Capability Network (FCN)

Forensic Science Regulator

Forensic Science Regulation Unit (FSRU) (2 representatives)

Greater Manchester Police (GMP)

Home Office Biometrics (HOB) Programme

Home Office Science Secretariat (HO)

Lausanne University (academic)

Metropolitan Police Service (MPS)

Scottish Police Authority (SPA)

Transforming Forensics (TF)

United Kingdom Accreditation Service (UKAS)

Apologies:

Crown Prosecution Service (CPS)

East Midlands Special Operations Unit - Forensic Services

Regional Scientific Support Services Yorkshire and the Humber