Forensic Science Regulator
Overseeing Quality

Fingerprint Quality Standards Specialist Group (FQSSG)

Note of the meeting held on 04 June 2019 at Home Office, 2 Marsham Street, London, SW1P 4DF.

1.0   Welcome, Introduction and Apologies

1.1   The Chair welcomed the members to the meeting, including a representative from Fingerprint Associates Limited who is a new member and was attending their first meeting. A list of attendees and apologies can be found at Annex A.

2.0   Minutes of the last FQSSG meeting on 12 February 2019

2.1   The Chair requested feedback on the note from the last meeting and a small amendment, which the group accepted, was suggested by the UKAS representative.

Action 1: Secretariat to finalise and publish minutes of the last meeting.

3.0   Actions from previous meeting and Matters Arising

3.1   Copies of the action table had been distributed to members with a request for comments.

3.2   Action 1: It was noted that copies of the feedback were included in the meeting pack. One member suggested the language should be rephrased. In regard to the event, congratulations were issued from the room regarding the meeting on likelihood ratio. A member noted she would use the information to show the method can be used at the analysis stage alongside evidence to support incomplete data with appropriate language to address examiner reluctance towards the method. A suggestion to incorporate the creation of guidance for this utilisation was agreed for the work plan. Therefore, it was acknowledged that the likelihood ratio for fingerprint identification could be used to clarify what is selective and what is missing as it is part of the analysis but not the results. People were hesitant to use it due to the technical details, and the only way to get around this hesitancy was via training. It was acknowledged that training packages, including from the College of Policing, need to be addressed to show when an opinion was being documented. This training would include information on transparency, defined boundaries of usage and appropriate methods to articulate how the conclusion was reached. The Chair said the adoption must come from the community and suggested formation of a fingerprint-community subgroup, following production of terms of reference.
The CPS representative commented that if Likelihood Ratios were to be used, then people would demand its use and SFR1s currently being issued would quickly need to be SFR2 with the introduction of disclosure issues.

Action 2: The Lausanne University representative to share links to tutorials on likelihood ratio with the Fingerprint Associates Limited representative.

Action 3: To develop terms of reference (ToR) and membership person specification for 'Evaluation and Interpretation' guidance (specifically for fingerprints and including probabilistic as appropriate) sub group.

Action 4: East Midlands Special Operations Unit representative to seek practitioner participation nominations using person specification to the sub group. This would be dependent on Action 3.

Action 5: Crown Prosecution Service (CPS) representative to share details of academia representative (AM) from the Turin Institute as potential member of the sub group.

Action 6: FSRU representatives to agree and convene sub working group after terms of reference approved at next meeting. This would be dependent on action 3 and agreement of ToR and person specification.

3.3   Action 2: Completed.

3.4   Action 3: Would be covered at item 5a.

3.5   Action 4: The MPS representative had shared a version of the reporting template with the UKAS representative. The UKAS representative found the reporting style was sensible and that it made sense. It was agreed that now the template had been produced, it would have to be populated before further review. It was noted that the template did not inform users about the workflow, but the Principles of Concept Guidance would perform that function. This action was marked as completed, with a new action created to ensure validation performed was credible. It was mentioned that the available Ground Truth Data (GTD) was not all true GTD as some bureaux had contributed examiner determined data as GTD. This led to a discussion as to whether this should be entered on the national risk register and whether there was any guidance on the level of verification required. It was determined that such criteria were not for UKAS to determine but should be set out at national level.

Action 7: East Midlands Special Operations Unit representative to query responsibility for sign off on a national user requirement and validation / verification specifications of the new matcher algorithms to be raised with the NPCC National Fingerprint Board.

3.6   Action 5: This item would be covered at item 5b.

3.7   Action 6: No feedback was received. This action would be discussed at item 5c.

3.8   Action 7: FSRU updated the group that Home Office Commissioning had been contacted to determine what funding was available for a proficiency test and discovered that funding would be via the Commissioning Hub and Dstl. To clarify, it was stated the aim for the proficiency test was to measure identification performance/ accuracy as the

current 'state of play' and was to be used by a minimum of 28 police forces, not including non-accredited organisations. It was stated that the plan was to have the money committed within the 2019/20 financial year. It was anticipated that Dstl would administer the PT when it was produced.

Action 8: FSRU to action state of play proficiency test project commissioning request and submission to Home Office Commissioning Hub on behalf of the Regulator.

4.0   Terms of reference update

4.1   Terms of Reference following addition of new member were approved and ratified.

Action 9: Secretariat to finalise and publish FQSSG updated Terms of Reference.

5.0   Work Plan

5.1   The group were asked for any further feedback or comments on the validation guidance. Clarification was sought on how the validation library would be published. It was noted that some of the information contained was commercially sensitive, and while vendors would not be anonymous the information would not be published rather, made available to bureaux to demonstrate validation. A question was asked regarding powders validation, and whether less high-level feedback was required. It was agreed that protocol specifications and exacting experimental information (e.g. temperature, humidity) should be evidenced.

Action 10: Dstl to contact the West Midlands Police Service representative regarding published powders guidance to determine appropriate level for CSI fingerprint related validation preparedness for ISO 17020 accreditation.

Action 11: The Regulator and UKAS to raise concern to the NPCC Performance and Standards Board that the CSI fingerprint validation preparedness and readiness could delay meeting the ISO 17020 accreditation.

Action 12: East Midlands Special Operations Unit representative to check Dstl, as expert user, and CSI stakeholders were linked regarding topical guidance for fingerprint related validation readiness to be raised with the NPCC National Fingerprint Board.

5.2   Questionnaire: The group were updated that a paper had been compiled, with previous feedback incorporated. Transforming Forensics had provided a catalogue of fingerprint opportunities. A number of outputs had been identified to fit under their research and development themes. There was also a section on utilisation of artificial intelligence (AI) for outputs. The group was asked for thoughts on whether the AI content should be included considering it relates to fingerprints. It was noted that a problem with AI was that stakeholders didn't have access to the data, with some groups looking for partners with which to develop AI further. It was decided to exclude the AI work, but to include the combination modality biometric.

Action 13: Sign off and agreement for output descriptors from the TF 'opportunities' list to be added by FSRU under existing research themes with the addition of new combined biometric modalities into the R&D document prior to finalisation and publication before the next meeting.

5.3   The work plan document reviews were discussed and needed subgroups to bring them to a close. It was noted that the FSR-C-127 document required feedback from UKAS and the FEL group. Regarding imaging and transmission, it was acknowledged that this was an important area with much disparity, and if not addressed could lead to problems for crime scenes. It was noted that validation should prove how results were obtained. There was no full workflow as the parts were seen as separate. It was stated that some aspects had already been clarified, including lighting at crime scenes. It was noted that digital enhancements also needed consideration, as what may improve human judgement may not correlate with algorithmic outputs.

Action 14: **FSRU, UKAS and East Midlands Special Operations Unit representative to seek feedback from UKAS and the fingerprint enhancement lab group (FEL) on FSR-C-127.**

Action 15: FSRU, Dstl, and MPS representatives to form subgroup to progress review and update FSR-C-127 using feedback and crime scene considerations.

Action 16: The Regulator to seek information on validation in relation to the requirements for imaging and transmission contained in FSR-C-127 from the CSI expert network.

Action 17: East Midlands Special Operations Unit representative to obtain feedback from bureaux on FSR-C-128.

Action 18: FSRU, Greater Manchester Police representative and MPS representative to form subgroup to progress review and update FSR-C-128 using feedback.

6.0   Accreditation updates

6.1   a. UKAS

6.2   An update was provided on the bureau accreditation, there were 19 accredited bureaux in the UK, with two further first visits required and seven other bureaux working through actions. UKAS were working on how to make the process even more efficient. With CSI, it was noted that five pre-assessment visits had been carried out and two more were being arranged, but that no other AC2s had been submitted. It was anticipated that two or three initial assessments might be carried out by the end of 2019, and while some organisations were suggesting undertaking full assessment before the end of the year, the number suggested that over 30 assessments would have to be carried out in 2020 to meet the deadline of October 2020. In response to a question, it was confirmed that the resource for these tasks did not currently impact upon the wider function, but this would be assessed over time. Transforming Forensics were circulating lessons learnt documents to ensure groups could prepare for accreditation. The best estimate was for around 50% accreditation, in terms of assessment visits, for October 2020.

6.3   There were no updates from Bureau or Crime Scene.

7.0   Quality/ scientific/ development updates

7.1   Defence Science and Technology Laboratory (Dstl)

7.2   It was stated that is was one year since CAST and Dstl merged. A large change of staff initially proved difficult, but new teams were being built up and some of the projects on the technical programme from before the merger had been maintained. Technical projects were ongoing for processes including; powder suspension; physical developer replacement; Indandione solution finetuning; IT recovery systems; reduction of single-use plastics in equipment; solvents for amino acid reagents; solvent use for tape removal; MALDI validation of blood identification. It was noted that the update of the fingerprint manual was proposed to finish next year, focussing specifically on technical updates. The site at Sandridge was due to close April 2020, new labs were being commissioned at Porton Down. The group were leveraging work and funding via the Ministry of Defence as well as commissioning boards. It was also noted that a commercial organisation with police customers had a method to enhance marks on items such as ammunition, Dstl had not validated such a method. The group was informed of a PhD project looking at finger-marks on walls following advances in paint technology since the guidance in the Fingerprint Visualisation Manual was originally compiled.

7.3   Home Office Biometrics (HOB) – Fingerprints

7.4   An update on fingerprint activities was provided that highlighted the main area of interest as mobile fingerprint identification. It was noted that up to 20 forces were using the HOB mobile search and API service, with further forces expected to begin use. Immigration and Border Force teams were also using it. The group was informed that over 6000 fingerprint searches a month had been recorded, which was a significant increase on the previous year.

7.5   It was noted that the Prüm fingerprint rollout was progressing and entering the EU approval stage. Exchanges with Germany in the first instance were expected to go ahead early next year.

7.6   The group were updated on the status of the procurement of the strategic central and bureau platform as contracts were coming to an end. A new stage would run through to March 2021 at which point a new supplier would be in place. The evaluation stage of procurement was complete, and a third bidder had been identified.

7.7   The group were informed that Matcher delivery was well underway in terms of delivery of the platform, which should available by the end of 2019. Delivery had been split into a number of stages/delivery parcels to ensure initial deliverables were ready this year. On stage two, print-to-print, mark-to-mark and print-to-mark, it was noted that as the build phase was entered the delivery of the stage would be determined. Stage three related to migration, which was planned to be completed by the end of next year. It was noted that after the delivery of the product, funding had been set aside for delivery of bureau tools, for provision of search capability, orthogonal and mark-up tools to take full advantage of the matching capabilities.

Action 19: The gap identified of limited bureau specific ground truth data (GTD) made available to HOB for matcher validation and the impact on bureau of not having adequate GTD for verification once new matcher was live to be raised as a

risk to the NPCC National Fingerprint Board, to be actioned by the East Midlands Special Operations Unit representative.

8.0 Professional Updates

8.1   R&D/ ENFSI

8.2   The group were updated that the ENFSI fingerprint and handwriting working groups would be holding a combined meeting. It was also noted that proficiency tests for ENFSI would be improved and that it would be efficient to align these with the tests in the UK. This point was agreed, and it was noted that this was something the Forensic Science Regulator would be looking at over the next year, working to ensure the tests were available for everyone in order to remove the burden from individual groups.

8.3   Chartered Society of Forensic Sciences (CSFS)

8.4   The group were updated that the CSFS Fingerprint Division conference took place in Birmingham in May 2019. There was good attendance with thought-provoking presentations. The society was investigating a fellows networking day. It was noted that there needed to be a better balance between academic and practitioner attendance of conferences.

9.0   AOB

9.1   It was noted that there should be a shared resource to report on active research. The response highlighted that a number of separate platforms exist but that they were not joined up or easy to access.

9.2   It was noted that there were a number of new Members, therefore contact details should be updated.

9.3   The next FQSSG meeting would take place on 17th October in Birmingham.

Annex A

Organisation Representatives Present:
Scottish Police Authority (chair)
The Forensic Science Regulator
The Chartered Society of Forensic Sciences
College of Policing
Dstl
East Midlands Special Operations Unit (EMSOU)
Greater Manchester Police
Home Office - Biometric Programme (HOB)
Home Office – FSRU
Home Office - Science Secretariat
Metropolitan Police Service
Transforming Forensics
University of Lausanne
West Yorkshire Police

Apologies:
Crown Prosecution Service
UK Accreditation Service
West Midlands Police