

Retrospective Assisted Facial Recognition Trial on Historic Criminal Case Data

Submitted by: Police Digital Service, Law Enforcement Portfolio, Home Office

Summary

The Police Digital Service team wish to discuss the ethical considerations of a proposed trial of retrospective Assisted Facial Recognition (AFR) technology. The trial would compare an original manual review of footage with a new review by an operator using AFR. The CCTV material and information about the original manual review would be sourced from historic closed criminal cases, in partnership with West Midlands Police and Kent Police.

It is to be noted that the team is in discussion with Cardiff University about potential external review of the Trial Protocol. The Trial Protocol is supplied in addition to this paper, to give detail and context for the ethical advice sought.

Questions to the WMP OPCC:

- Have the key ethical considerations in relation to this trial been correctly identified?
- Is the board content that these concerns are being adequately addressed?

Key Ethical Considerations

The Police Digital Service has identified the key ethical considerations as the following:

1) Proportionality of using AFR technology on data which contains the person being sought, but also may include members of the public

A facial photo of the target person will be used to search the footage for “possible matches”. Members of the public whose faces appear in the footage will be scanned for similarity and disregarded if not similar. If deemed sufficiently similar, a frame containing the face of the member of the public will be presented to the AFR operator for review alongside the probe image.

As the tool is being used for research purposes there is no risk of harm resulting from incorrectly spotting a person, as no action would be taken (excluding the scenario outlined in point 2 below).

We believe the use of AFR technology in this case is necessary and proportionate because the research results will inform the debate on the future use of assisted facial recognition technology. If the evidence base indicates the technology is useful, it could lead to improvements in operational policing which could help reduce crime and prevent harm.

2) Risk of uncovering new information relating to a historic case

In the highly unlikely scenario that something is found of relevance to the outcome of the closed case, it will be necessary to re-open the case, to ensure the case is appropriately investigated and avoid the risk of a miscarriage of justice.

If a case is re-opened, WMP will deal with the case under its normal processes and without use of the AFR tool. This process will be agreed in advance of trial start, and be documented in a Memorandum of Understanding, supporting the Data Protection and Impact Assessment.

The cases selected by the forces will be historic closed cases with a low risk of being re-opened – for example, where the defendant has pleaded guilty, or where avenues of appeal have already been exhausted.

Prior to this point, the team has tested the technology as far as possible using self-generated footage and test data sets, but these learnings are limited by the artificial nature of the data. All efforts have been made to design a trial which uses real police data but with the minimum possible risk of having an operational impact.

3) Risk that the AFR technology may not be equally accurate in identifying different groups of people based on their characteristics (e.g. gender, ethnicity)

As the tool is being used for research purposes there is no risk of harm resulting from incorrectly spotting a person, as no action would be taken (excluding the scenario outlined above). As part of the research, indicators of bias will be recorded, but there will not be a sufficient quantity of data to work with to get significant results on bias.

It should be noted that a wider piece of work on bias in facial algorithms is being planned by Home Office Biometrics, and the project team are participating in this.

Note on personal data risks: Further risks specifically related to personal data are being identified in Data Protection and Impact Assessment, currently being drafted in consultation with the ICO. For your information, the latest version of the DPIA Risk Table is supplied, however it has not yet been finalised.

Accompanying documents

- 1: Excerpt from Data Protection and Impact Assessment (Draft) – risk table
- 2: Trial Protocol

Background

Context for Police Digital Service's work on Assisted Facial Recognition

Today police and the Home Office have a limited evidence base for deciding how to invest in facial recognition in video technology. The facial recognition project aims to improve this evidence base and determine if there is a business case for police to use facial recognition in video technology.

In addition to planning this trial and future trials to test purported benefits of AFR, we are also conducting contextual research in police forces, and technical research into the maturity of the facial recognition market.

Aims of this trial and plan for future trials

The proposed trial seeks to compare the conclusions of the original manual review of a selection of CCTV footage with an operator using the AFR technology on the same footage.

The trial has four aims

- to see if the same people are spotted
- to see if there is a significant time saving
- to test the ability of the technology to handle real police data
- identify any technological, organisational or usability issues

This initial trial seeks to gain valuable insight into these areas while operating within the limitations of what is proportionate and feasible in the policing context – including the limited variety of suitable footage available, and the demand on police time to prepare for and participate in this research. There are numerous variables that cannot be controlled

for in this trial due to the data and participants available, but these will be noted where possible and used to inform the direction of future testing.

This trial is anticipated to be the first in a series aiming to gather evidence in relation to possible law enforcement applications of AFR technology. These further trials will be developed iteratively in response to the findings of the first trial, but may seek to achieve greater scale and rigour in the examination of accuracy, human-computer interaction and the operational variation of different police use cases.