Jane's Police Product Review: Capturing the Criminals

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Merseyside Police's facial recognition technology could see it play a key role in a project to introduce national standards of image capture, as Gary Mason reports.

Earlier this year, the FIND project to introduce national standards for police image capture was wound up by the National Policing Improvement Agency (NPIA) due to funding issues.

However, this work has now been re-launched by the NPIA as the Police Image Capture Standard (PICS).

The announcement comes at a time when Merseyside Police continues to develop new ways of using facial recognition technology to help create minimum standards of image capture and identify suspects more rapidly.

The news that the FIND project has been re-launched as PICS could place the force in an important position to share its best practice in this area with other forces.

Taking the lead

Merseyside was the first force in the country to trial a **Digital Image Booth (DIB)** to allow it to take better quality images of suspects that pass through custody using facial recognition technology.

At present, the majority of forces use either digital or manual cameras to capture their images or mugshots - leading to variation in the quality of images.

These booths are now standard practice in all Merseyside Police custody centres and the force is compiling all the images it generates onto a locally held database.

Other forces such as City of London and Hertfordshire now use the booths in their custody suites.

Merseyside Police has now taking his work a step further and become the first UK force to trial new technology that will help it verify the identity of arrested suspects even before they reach the custody desk.

The **Digital Image Register (DIR)** takes images of a suspect when they are kept in the airlock or holding cell outside custody and searches the images against a locally held data base.

This alerts the custody sergeant from the outset as to whether the person is already known to the police and may be wanted on bail or warrant.

It also allows him or her to decide which prisoners to process first, based on their past criminality. Once the custody sergeant confirms the person they want, rather than having to key all they necessary data into the Niche custody system, they press a button and the custody record is automatically filled out with all existing data on that person.

The register has been trialled at the force's busy St Anne's Custody Suite where it has identified on average 40 per cent of suspects who pass through custody.

The force embarked on the trial because it was looking for ways to speed up the time it takes to process prisoners in custody and allow officers to spend more time on the streets. It predicts that the technology has the potential to save it in excess of 2,000 hours in officer time each year.

Facial recognition experts **OmniPerception** developed the software used in the Digital Image Register to take the pictures.

The company's AFIT.QA™ and Colossus™ software not only takes good quality images, but is also capable of searching the images against the database in a matter of seconds - allowing for rapid identification of suspects.

The register unit itself is supplied by DW Group, which has been working with the force to ensure the unit is rigorous enough to withstand the custody environment, that the lighting is of sufficient standard to take good quality images and that it is easy for officers to use.

Both companies have previously worked with the force on the **Digital Image Booth** project.

Valuable Intelligence

Simon Byrne, assistant chief constable (area operations) of Merseyside Police, says the trial had been a success and that the force was aiming to roll-out the **DIR** across their eight custody centres from January.

'The fact that suspects can now be identified even before they reach the custody desk is a truly innovative idea that has never been done before by a police force,' he says.

'This not only speeds up the custody process and enables officers to spend more time on the streets, it also provides officers with valuable intelligence on an individual offender. This could include safety issues such as violence and also communicable diseases.'

Merseyside Police currently has a quarter of a million images on its database and hopes that it will continue to grow once the technology is rolled out across the force.

David McIntosh, the chief executive officer (CEO) of **OmniPerception**, says that Merseyside Police is one of a number of forces that are now beginning to see the benefits that facial recognition technology can realise.

'Facial recognition technology can be of enormous benefit to forces because of the rapid and accurate way it can identify suspects and also detect if somebody is trying to use an alias,' he says.

'It has never been used by a police force in this way before and we predict that it is the first of many examples of innovative applications in the future.'

Lighting the way

Patrick Leigh, the CEO of DW Group, says the main challenge for the Digital Image Register project was dealing with the varying types of holding cells that all have different lighting in them. 'Facial recognition is very reliant on the environment and we needed to make sure that every holding cell has the same lighting, which is a challenge because this is not always possible,' he said.

As a result, DW Group has now redesigned the register in conjunction with Merseyside Police to produce **DIR 2** - which has a light canopy to address this issue.

It has also moved the touchscreen PC to the side of the unit. This is because during the early trials the force found offenders were looking at the officer what was working the touchscreen rather than at the **Digital Image Register**, which sometimes resulted in a low-quality image.

Mr Byrne says his force already has plans to compare images from the database against crime scene pictures, such as CCTV images.

'In order for us to get that far there has to be some improvements in the database that's behind all this,' he said. 'We are working to develop that and also the quality of the image capture.'

About the Digital Image Register

The **Digital Image Register (DIR)** is a wall-mounted unit produced by DW Group that contains OmniPerception's AFIT.QA™ and Colossus™ facial recognition technology.

When a suspect reaches custody they are put into a holding cell or airlock where they have their image taken by standing in front of the register.

Using a touchscreen, the officer enters his shoulder number, takes the picture and presses the search button, which searches the image against a database in seconds.

If a match is recorded, relevant information is colour coded in order to comply with data protection requirements.

The colour codes are:

- Green - the person is know to the police but there are no markers against their name;

- Yellow - there is a bail marker against the person's name;

- Amber - the person is wanted on warrant; and

- Red - the person is wanted and is considered a serious criminal.

The DW Group is now developing the next generation **Digital Image Register** following feedback from the Merseyside trial.