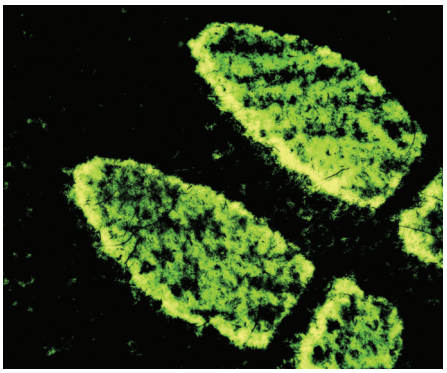
NEW SOFTWARE HELPING TO FIGHT CRIME

IMPACT!



Revolutionary software that speeds up processing times for forensic evidence could help police crack crimes faster.

↗ 10x
LIMA software can identify marks such as footprints ten times faster than existing systems.

↗ 20 minutes
It now takes less than 20 minutes to identify a fingerprint compared with 24 hours using the traditional approach.

Marks from footwear, gloves, tyres and fingers left at crime scenes can yield important forensic evidence and intelligence. The new software provides a fast, accurate way of transmitting and enhancing images of these marks, and allows officers to search police databases for possible matches.

The system was developed by engineers at the University of Sheffield with EPSRC support.

IMPACT ON CRIME

- → The new software significantly reduces the time taken to process a print of a shoe, glove or tyre found at a crime scene.
- → Police can identify matches with prints held on central databases rapidly and remotely, receiving important intelligence while at a crime scene.
- → Police forces will be able to investigate more crimes as the time and cost of each investigation is reduced.

Using footprints to catch criminals

The University of Sheffield research team have already developed software to transmit fingerprint images directly from crime scenes to central forensics bureaus – a technology now in use by more than 30 police forces in the UK. Now they have taken this software a step further so that it can deal with footprints, glove marks and tyre tracks as well.

Fast track identification

Traditionally, any evidence at a crime scene had to be lifted or photographed, then driven to a forensics bureau, where it would be sent off to the appropriate expert, explains researcher Maria Pavlou. This could take a day or even more. Now officers at the scene can relay this evidence immediately, and tap into centrally held databases to provide timely intelligence that can help identify and apprehend criminals.

Information at the touch of a screen

"The Latent Image Markup and Analysis (LIMA) software combines the visual abilities of forensic experts to inspect forensic marks with a visually intuitive toolbox to allow fast and accurate searching," explains Dr Pavlou. The software corrects the scale and perspective of the mark and identifies its specific make or model, but also allows the forensics expert to compare the marks with others found at local crime scenes. She continues: "Using the latest in touch-screen technology, a central database of thousands of models can be searched and compared, and any significant information is sent straight back to the officer in the field."

Police officers can also use terminals in custody suites to identify a shoeprint or fingerprint taken from someone they are questioning, adds Dr Pavlou. The officer can then access any correlated information immediately while the person is still being questioned.

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