

Towards a smart digital forensic advisor to support first responders with at-scene triage of digital evidence across crime types

Working towards the development of a digital tool to enhance at-scene triage of digital evidence across crime types.

Key details

Lead institution	University College London
Principal researcher(s)	Dr Mark Warner (UCL), Dr Maria MacLennan (University of Edinburgh), Prof Niamh Nic Daeid (University of Dundee), Dr Oriola Sallavaci (University of Essex), Prof Sarah Morris (University of Southampton), Dr Valeria Abreu (UCL), and Cathy O'Brien (UCL) mark.warner@ucl.ac.uk
Police region	London
Collaboration and partnership	<ul style="list-style-type: none">• Metropolitan Police Service• Nottinghamshire Police• West Midlands Police• College of Policing• Forensic Capability Network
Level of research	Professional/work based
Project start date	March 2024
Date due for completion	November 2025

Research context

Over 90% of reported crime has a digital element, with most digital evidence seized by front-line officers who often lack digital forensic awareness and training (NPCC 2020). Even those with advanced training, such as Digital Media Investigators (DMIs), can find it challenging to stay up to date with the speed of technological developments and its use in crime (Wilson-Kovacs 2021).

Prior research as well as government reports highlight the significant backlog in digital evidence processing, with current approaches to identifying, seizing and examining devices recognised as being insufficient and in need of modernisation (HMICFRS 2022). Triage in its various forms in digital forensics has emerged as one solution to coping with the challenges brought forth by the increasing numbers of seized devices, and the resulting disparity between service demand and available resources (Wilson-Kovacs 2021).

This project aims to understand how a digital tool could support front-line officers apply a consistent and evidence-based approach to performing triage of digital evidence at-scene across different crime types and policing operating models.

Research methodology

This project will apply a grounded theory approach to develop the theoretical underpinning of digital evidence search and seizure, throughout data collection. We will be collecting data through observations, semi-structured interviews and document and literature review. We aim to interview:

- digital forensic investigators (including digital strategy advisors)
- non-specialist officers with recent experience of search and seizure (including search planning)
- Digital Media Investigators (DMIs)
- senior officers and staff involved in search at a strategic level
- private digital forensic practitioners
- criminal law experts
- experts in policing ethics

Research participation

If you are (or have recently been) involved in planning search and seizure operations, conducting search and seizure operations, or assessing digital evidence after search (for example, from an investigative or legal perspective), and would be interested in being interviewed in a 30 to 60 minute online or in-person interview, then we would like to hear from you.

Please e-mail your interest to: mark.warner@ucl.ac.uk.

References

- Dodge A, Spencer D, Ricciardelli R and Ballucci D. 2019. 'This isn't your father's police force': Digital evidence in sexual assault investigations'. Australian & New Zealand Journal of Criminology, 52(4), pp 499–515.
- Gibbs Van Brunschot E, Abela G, Witt C and Hak JW. 2023. 'Poisoned chalice?': The challenges of forensic science and technology for homicide investigations'. Police Practice and Research, 24(4), pp 475–492.
- HMICFRS. 2022. '[An inspection into how well the police and other agencies use digital forensics in their investigations](#)', His Majesty's Inspectorate of Constabulary and Fire & Rescue Services.
- House of Lords Science and Technology Select Committee. 2019. '[Forensic science and the criminal justice system: a blueprint for change](#)'.
- NPCC. 2020. 'Digital Forensic Science Strategy'.
- Parsonage H. 2009. 'Computer Forensics Case Assessment and Triage'.
- Wilson-Kovacs D. 2021. 'Digital media investigators: challenges and opportunities in the use of digital forensics in police investigations in England and Wales'. Policing: An International Journal, 44(4), pp 669–682.

Tags

- [Digital intelligence and investigation](#)