



Challenges and Opportunities in the Use of Digital Forensics in Investigations

Dana Wilson-Kovacs

Research and Practice in Conversation

14 December 2021

Why digital forensics?



- Insight into current organisational arrangements and best practices
- Demand for examination has grown in parallel with the use of digital devices
- More than 90% of crime in the UK has a digital element
- Many types of digital devices – most common mobile phones and computers
- An investigation may involve several devices from suspects, victims and witnesses, plus information from other sources – such as CCTV footage and cell site data



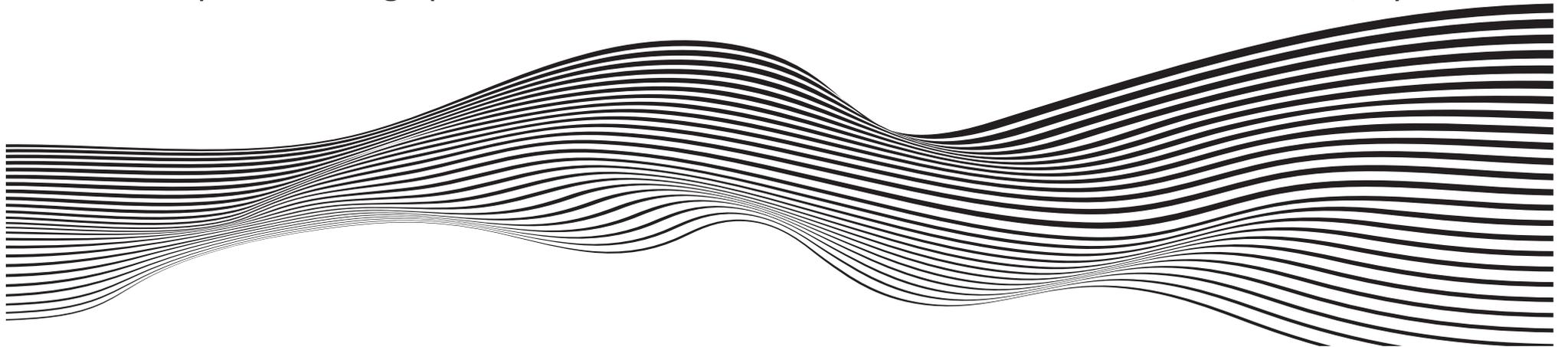
Exeter University Pilot on Triage in DF (January - July 2017)

- How to manage demand for DF examination?
- Administrative triage for the selection of exhibits with most evidential value

Findings at a glance:

Mixed ability of police gatekeepers to select the most relevant case exhibits

Ownership of the triage process – i.e. how are items submitted and decisions made, by whom?



Digital Forensics in Policing (September 2017-August 2019)

Ethnographic study of 4 digital forensic units and a regionalisation initiative

- What do DF practices tell us about
...the use of resources, skills and expertise?

Findings at a glance:

Top-down pressures for accreditation, standardization and efficient service delivery

Lack of digital forensic awareness among frontline officers

DF staff attrition, occupational strain, change fatigue

Understanding the Use of Digital Forensics in Policing in England and Wales (September 2018 - February 2022)

- What are the bottlenecks in the collection, analysis and use of digital evidence? What is the role of digital forensics in this process?
- What are the difficulties in documenting, assessing and understanding the impact of digital technology on criminal investigations? How can they be best addressed?
 - Case management systems
 - Accreditation processes
 - New occupational groups and professional roles
 - Use of digital evidence in court



Cases Prioritisation

Internal views (DFU)

Matrix helps establish order of cases
Focused on risk in relation to IIOC and CSA
Interpretive components of risk assessment =
time intensive

External perceptions (Officers)

DFU too specialised in indecent images?
How can the matrix address risk in other types of serious
and major crimes?

Ways forward

1. Identify with practitioners the most current and relevant issues for local practice and develop an empirically informed, contextually embedded understanding of problems
2. Consider the bigger picture - analyse and compare what works locally, regionally and nationally and try to engage all relevant stakeholders
3. Develop dialogue across different forces and between different professionals (DF practitioners/police officers, management, CPS, expert witnesses, pracademics)

Project webpage: <https://digital-forensics-in-policing.net>

Email: M.D.Wilson-Kovacs @exeter.ac.uk