D51 Technological Integration and How it Affects the Forensic Resource

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After attending this presentation, attendees will have an insight into how the forensic resource can be affected by the introduction of novel technology into the operational framework of investigative practice. Methods will be suggested which could be employed to implement novel technology within the operational infrastructure of forensic investigation.

This presentation will impact the forensic community and/or humanity by presenting an approach to integrating technology within the domain of forensic investigation, one which is based upon attaining a user centered design concept and one which provides systems level functionality. The impact of this will be the implementation of relevant, cost effective technology through understanding system requirements and thus reducing the potential for adversely affecting the quality of the forensic resource.

The quality of forensic evidence is affected by the recovery process. The effectiveness of subsequent forensic analyses and consequential examination depends on the quality of the processes employed at the recovery stage. This presentation highlights research looking at technological and methodological change to support evidence recovery and how changes affect the quality of the recovery process, and consequently, the forensic resource. A case study will be presented which will look at the effects of technological change to law enforcement agencies, particularly how the introduction of new working practices and new technologies into organizational infrastructures lead to decreases in performance, rather than the increases which were anticipated. The case offers an insight into where integration problems exist and the complexities involved in rectifying the situation. Change appears to affect the forensic performance of the crime scene investigators, and as a consequence of the perceived dip in performance, a period of modification to technological support and to the methodologies employed needs to be undertaken. Poor integration strategies can be detrimental financially and operationally, this can impact on morale and the working culture of the team. The research looked at the bureaucratic responsibilities and analyses the consequence of change to other practitioners within the investigative process. Often studies that explore change point to problems in the integration strategies; on many occasions there is a failure to consider the complex interdependencies that connect different parts of the organizational 'system'. Forensic investigation is an example of this notion, where, very often, evidential quality, or continuity, is affected by the work of others in the chain of investigative process. The process of re-description is often dependent on understanding how the system operates from beginning to end, particularly how the investigation builds and how the accumulated information is displayed and utilized throughout each stage. In this work, a simple description of such interdependencies is adopted. Understanding, attained through partnership, enables future research to be embedded in the notion of user centered approaches to designing relevant technology for matters concerning forensic science. Focusing on systems level functionality, and supporting the forensic resource through automating processes allows the crime scene investigator greater time at the scene, whilst encompassing the bureaucratic and administrative requirements of the modern police service. The information acquired throughout this research is being used to determine what is prevalent to the investigator, and consequently, others involved in the investigation. By considering the narratives used and the collaborative requirements for information management and forensic process, the data can be used to focus design on appropriate user based technology, methods to aid data capture, and connectivity to support the flow and management of pertinent information.

Technology, Crime Scene Investigation, User Centered Design

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