C41 Narrative Use Cases for Harmonizing Forensic Science Practices and Digital/Multimedia Evidence

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Learning Overview: Attendees of this presentation will learn to apply core forensic science processes to cases involving digital/multimedia evidence. After attending this presentation, attendees will have a clearer understanding of how to integrate digital/multimedia evidence and forensic science by: (1) learning how to apply core forensic concepts and principles (as defined in the Organization of Scientific Area Committees [OSAC] technical publication 002) to digital/multimedia evidence; (2) comprehending the use of narrative to understand and explain forensic treatment and interpretation of digital/multimedia evidence; (3) emphasizing the importance of narrative in forensic science; and (4) raising the awareness of judges, attorneys, and juries of the uses and value of digital/multimedia evidence.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by: (1) strengthening scientific foundations of digital/multimedia evidence; (2) increasing the practical application of core forensic concepts in digital/multimedia evidence; (3) clarifying the importance of narrative in conveying forensic science concepts and results; (4) increasing participation in generating and refining use cases for digital/multimedia evidence in forensic science; and (5) raising awareness of judges, attorneys, and juries as to the uses and value of digital/multimedia evidence.

There is a need for increased integration of digital/multimedia evidence into forensic science.[1] At the same time, there is a need for digital transformations in forensic science.[2] The National Institute of Standards and Technology Organization of Scientific Area Committees (NIST OSAC) process has encouraged all forensic science disciplines to explore their foundations and practices; it has also revealed the commonalities between them.[3]

Narrative theory plays an important role in forensic science in clearly conveying concepts and findings using a framework and context that people can easily comprehend.[4] Taking this approach, this presentation will guide forensic practitioners through the practice of applying core forensic processes to actual digital forensic investigations. Specifically, this presentation introduces a project out of the NIST OSAC that is creating a reference database of narrative use cases involving digital/multimedia evidence that capture the methods and outcomes in relation to underlying core forensic questions and processes. Narrative use cases in this reference database cover forensic analysis of digital/multimedia evidence, including speaker comparison and facial comparison.

This work is part of the OSAC Digital/Multimedia Scientific Area Committee (SAC).

Reference(s):

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2. Casey, Eoghan, Ribaux, Olivier, Roux, Claude. 2018. The Kodak Syndrome: Risks and Opportunities Created by Decentralization of Forensic Capabilities. *Journal of Forensic Sciences,* Volume 64, Issue 1.
3. Pollitt, Mark, Casey, Eoghan, Jaquet-Chiffelle, David-Olivier, and Gladyshev, Pavel. 2018. *A Framework for Harmonizing Forensic Science Practices and Digital/Multimedia Evidence.* Retrieved from http://dx.doi.org/10.29325/OSAC.TS.0002.
4. Pollitt, Mark. 2013. History, Historiography, and the Hermeneutics of the Hard Drive. *Advances in Digital Forensics IX*. Eds. Peterson, G. and Sujeet Shenoi. New York. Springer. 2013. 3-17.

Digital Transformations, Narrative Use Cases, NIST OSAC

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