

J17 Forensic Document Examination: Early Incorporation of the Forensic Intelligence Paradigm

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Learning Overview: After attending this presentation, attendees will better understand the relatively new academic pursuit of forensic intelligence, as well as gain insight into how, throughout the history of forensic document examination, laboratories have practically worked with this concept.

Impact on the Forensic Science Community: This presentation will impact the forensic science community because, ultimately, attendees will take away a sense of how they can apply the principles of forensic intelligence into their research and casework.

Forensic science is simply defined as the application of scientific knowledge to legal matters. Traditionally, the results of forensic analyses are used to help resolve criminal investigations; however, with modern advancements, many of the scientific techniques used in forensic analyses are now common and necessary parts of investigations in both the private and public domain and can be applied from the earliest moments.

Intelligence is the end result of the collection and subsequent analysis of information assembled from myriad sources. The purpose of gathering intelligence relates directly to the directive or mandate of the organization collecting the information. Worldwide, intelligence-gathering agencies draw upon the gamut of their resources in order to render a more complete model during investigations. The use of science and, in particular, forensic science, has long been a part of these resources; however, this does not preclude other organizations from employing forensic analyses in the development of their intelligence product.

Forensic intelligence has been defined in the literature as the accurate, timely, and useful product of logically processing forensic case data for investigation and intelligence purposes.¹ This literature, courtesy of various academic groups working to establish processes and models to exploit forensic case data, highlights excellent examples of intelligence derived from the various forensic disciplines.²⁻⁷

Forensic examination of the materials, substances, and objects seized from seemingly random or disparate instances or events may identify links between suspects, activities, or items and their involvement in criminal activity. This approach, to look to the collective data generated by these many forensic analyses in new ways to discern non-obvious linkages, will bolster our current practices to create better product and ultimately make better, more-informed decisions throughout the international law enforcement continuum. Ultimately, a mature forensic intelligence approach may provide data prior to an event, particularly in a criminal environment with a serial/recurring component.

This presentation will introduce the topic of forensic intelligence and establish how forensic document examination, from the earliest times, has incorporated these ideas into casework. Further, over the past many years, various data collection tools have been developed by forensic document laboratories around the world with the express purpose of providing ways to link disparate casework. This presentation will highlight some examples of these tools and how they have been used in forensic document examination, as well as to shine a light on the potential to use these same tools to generate data that could input the investigation of other crimes not typically thought of as being in the realm of forensic document examination.

Reference(s):

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- ² Simon Baechler, O. Ribaux, and P. Margot. 2012. 2012 Student Paper: Toward a Novel Forensic Intelligence Model: Systematic Profiling of False Identity Documents. *Forensic Science and Policy Management*, no. 3: 70-84.
- ^{3.} Quentin Rossy, S. Ioset, D. Dessimoz, and O. Ribaux. 2013. Integrating forensic information in a crime intelligence database. *Forensic Science International*, no. 230: 137-146.
- ^{4.} Alastair Ross. 2014. Elements of a forensic intelligence model. Australian Journal of Forensic Sciences, vol. 47 no. 1: 8-15.
- ^{5.} Marie Morelato, J. Broseus, A. De Grazia, M. Tahtouh, P. Esseiva, and C. Roux. 2018. Forensic drug intelligence and the rise of cryptomarkets. Part II: Combination of data from the physical and virtual markets. *Forensic Science International*, no. 288: 201-210.
- ⁶ Anna Agius, M. Morelato, S. Moret, S. Chadwick, K. Jones, R. Epple, J. Brown and C. Roux. 2018. Using handwriting to infer a writer's country of origin for forensic intelligence purposes. *Forensic Science International*. no. 282: 144-156.
- 7. Anne Bannwarth, M. Morelato, L. Benaglia, F. Been, P. Esseiva, O. Delemont and C. Roux. 2018. The use of wastewater analysis in forensic intelligence: Drug consumption comparison between Sydney and different European cities. *Forensic Sciences Research* 2471-1411.

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