The Optimization of Forensic Operations

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Summary

This paper addresses the issue of optimizing forensic operations with a primary focus on tactical operations, since forensic tactics lags behind forensic technique and comprehensive study into its improvement methods are yet to be found in the Polish literature. The authors of the publications that have been issued so far usually did not go beyond investigating isolated tactic operations (one publication – one type of operation, many a time one author – one type of activity) or examining case files with a view to checking if the operations performed as part of the relevant proceedings were in compliance with the rules imposed by the law, internal instructions and daily practice to date; the said publications did not discuss the reasonableness of the rules themselves. This publication is geared towards analysing the said rules and closing a serious gap in this respect.

This work's priority is to describe the general dependencies and regularities which characterise forensics-related issues, as well as to present peculiar "meta-methods" (the methods which govern the development and application of methods). In this paper the methods for seeking, developing, evaluating and adopting solutions carry more weight than specific solutions to the problems encountered in practice. Individual solutions are addressed, however, especially to serve as an illustration for more general deliberations. A distinction has been drawn between internal forensic operations (solving the cases under investigation) and external forensic operations (presenting the results and conclusions in a manner acceptable by the courts and the public), with the focus given to the former.

The methods and recommendations described in this paper vary in their level of their formality and range from precise "algorithms" up to casual "common-sense" remarks. Optimization methods under discussion include

universal methods suitable for application in various fields, methods "borrowed" from other scientific disciplines and modified to meet the requirements of forensic science, methods employed in forensic operations in other countries and matched to the Polish reality, methods put forward in the literature, methods used informally in current practice in the Third Republic of Poland, methods employed in the past and the most recent methods. Knowledge from many disciplines has been put to use – starting from the probability theory and network graphs, through information theories and the psychology of decision-making, up to legal sciences and historical source analysis. Special attention has been given to the utilisation of pioneering achievements of the Polish school of cybernetics, created by Marian Mazur and developed by Józef Kossecki. These achievements, pioneering and unique on a global scale, have not been put to an extensive use yet in forensics. As this work shows (and as certain other forensic publications confirm), the opportunities for the utilization of these achievements are vast – in many fields and aspects of forensics (which means that they are "broad"), and provide the grounds for considerable improvements and the introduction of far-reaching changes (which means that they are "deep").

This work not only discusses the output of the Polish school of cybernetics and their usability in forensics; it goes beyond it – by systematizing and developing some of the said achievements.

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