

UNCOVER

Development of an efficient steganalysis framework for uncovering hidden data in digital media



ABSTRACT

Criminals and terrorists use more and more data hiding methods (steganography) for concealing incriminating information in innocent-looking digital media files such as images, video, audio, and text files. UNCOVER's main objective is to fill existing gaps in the ability of Law Enforcement Agencies (LEAs) for detecting the presence of such hidden information (i.e., steganalysis). The members of UNCOVER are committed to substantially increase the technological autonomy of LEAs in the field of digital media steganalysis. With its consortium of 22 partners including LEAs, forensic institutes, leading researchers working at universities and research institutions, as well as industrial companies, UNCOVER sets out to outperform available steganalysis solutions in terms of performance, usability, operational needs, privacy protection, and chain-of-custody considerations.

PROJECT OBJECTIVES



CONDUCT a detailed analysis about the various aspects of the needs and requirements of LEAs for detecting and investigating steganography.



CONSOLIDATE relevant information about existing steganographic tools and centralise this information in an intuitive database for LEAs.



IMPROVE existing methods for operational steganalysis in digital media workflows.



IMPLEMENT a flexible online-platform by combining the micro-service architecture with REST- APIs for supporting interoperability.



DEMONSTRATE the steganographic detection capabilities with realistic test cases and scenarios delivered by the LEAs.



ANALYSE the requirements in order to make the obtained results admissible in European court rules.



PROVIDE a comprehensive training program for LEAs and forensic institutes by providing in-house training.



VALIDATE the project results with practitioners, disseminate the outcomes, and prepare an exploitation plan.



PROJECT FACTS

Duration

36 Months

Horizon 2020

SU-FCT02-2020

Research and Innovation Action

REFERENCE

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Coordinator

ROYAL MILITARY ACADEMY
(Belgium)



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