LOCARD- Lawful evidence collecting and continuity platform development

Advanced technology is used by criminals to perform acts of fraud and terrorism, as well as industrial and intellectual property theft. Digital technology is also used in other crimes. In fact, the omnipresence of digital tools and their use in criminal activities makes digital evidence instrumental for criminal investigation. However, digital evidence is not always admissible in a court of law. The EU-funded LOCARD project aims to procure a comprehensive platform that permits the storage of digital evidence data and ensures appropriate chain custody in juridical work. LOCARD will employ a 'Trusted Execution Environment' to guarantee privacy and provide access to a range of digital evidence.

Digital evidence is currently an integral part of criminal investigations, and not confined to pure cybercrime cases. Criminal behaviours like financial frauds, intellectual property theft, industrial espionage, and terrorist networks leverage the Internet and cyberspace. The very ubiquity of digital devices, e.g. smartphones, in modern society makes digital evidence extremely relevant for investigations about all kinds of criminal behaviour like murder, contraband activities, and people smuggling, to name a few.

Due to its nature, the use of digital evidence in a court of law has always been challenging. It is critical that it should be accompanied by a proper chain of custody, guaranteeing its source and integrity.

LOCARD aims to provide a holistic platform for chain of custody assurance along the forensic workflow, a trusted distributed platform allowing the storage of digital evidence metadata in a blockchain.

Each node of LOCARD will be able to independently set its own permission policies and to selectively share access to digital evidence with other nodes when deemed necessary and upon proper authorization through fine-grained policies. LOCARD's modularity will also allow diverse actors to tailor the platform to their specific needs and role in the digital forensic workflow, from preparation and readiness, to collection, to analysis and reporting.

LOCARD will have a crowdsource module to collect citizen reports of selected violations, a crawler to detect and correlate online deviant behaviour, and a toolkit for investigators that will assist them in collecting online and offline evidence.

This will be powered by an immutable storage and an identity management system that will protect privacy and handle access to evidence data using a Trusted Execution Environment. Blockchain technology will not only guarantee that information about the evidence cannot be tampered with, but allow interoperability without the need for a trusted third party.

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