Abstract

Since the lives of the persons are on the edge after being convicted in digital crimes. The main goal of digital forensics is to extract accurate evidence which determines whether the convict is guilty or not. The recent challenge is due to the big size of data that the investigator may deal with. These data stored in unnoticeable tiny devices such as USB sticks which may lead to a muddled decision because of the tediousness of the investigation. Fortunately, in Windows Operating systems, all users' transactions are stored in a central point which is known as Windows Registry. It stores all hardware and software configurations, user activities, and transactions. Therefore, digital forensics based on Windows registry is considered as a hot research field. This paper presents a proposed framework for digital crime investigation based on Fuzzy logic. It helps the investigator in the decision making phase about the evidence. This deals with the extracted evidence from relevant Windows Registry keys. Also, tracking the usage of USB devices for data theft was presented. Finally the proposed framework was tested on a simulated case study.
Fuzzy Crime Investigation Framework for Tracking Data Theft based on USB Storage

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Index Terms

Computer Science

Fuzzy Systems
Keywords

Computer forensics  Crime investigation  Fuzzy logic  Data theft based on USB storage