

ABSTRACT

Instant messaging applications are one of the popular applications that are often installed on smartphones today. The presence of instant messaging makes the existence of SMS (Short Message Service) increasingly replaceable. One of the famous instant messaging applications is Telegram. Telegram has many features, including being able to send long messages, send pictures or videos, group chat, and much more. Due to its flexible nature and no need to use credit when sending messages, it allows users to chat and exchange information freely. This can create a potential crime for criminals who abuse the features of instant messaging. The problems faced by forensic practitioners are the difficulty of getting access to digital data in the Telegram database and the use of manual forensic methods which take a long time for the investigation process. In this study, the methodology used is based on the NIST 800-101r1 and the implementation of the Android forensic application and Desktop forensic applications that can automatically acquire and filtered digital data on the non-volatile storage database and compare it with the manual acquisition method. The result of this research is to create an application that can assist investigators in carrying out forensic procedures. The use of the application can provide a time efficiency of 94.8% and the extraction results produced from the application are the same as the extraction results using the manual method. From encrypted data into data that can be read and analyzed to then be used as evidence in legal proceedings.

Keywords: *Instant Messaging, Android, Digital Forensics, Telegram.*