ABSTRACT

Smartphone devices are experiencing very rapid updates along with advances in technology. The form of convenience is the existence of instant messaging on smartphones with various operating systems. Android is an operating system that is widely used by the community. To socialize remotely using a smartphone, various social media applications are available, ranging from SMS, Whatsapp, Line, Telegram, etc. With the growth of users which every year increases not only in a positive direction but also in a negative direction. One of them is fraudulent actions via telephone and text messages. Fraud perpetrators after being caught often leave traces of digital data in their actions, so here there is a forensic team that will handle it, but there are various methods. Can use manual methods and application methods of existing forensic tools, MOBILedit Forensic Express and FinalMobile Forensics are one of them. This study aims to compare these methods, to find out which one is the best for investigators with research limitations on rooting and digital data acquisition on Android Smartphones.

The steps to be taken in comparing the forensic methods to be studied are by comparing the efficiency and accuracy of each forensic method to be tested, by acquiring digital data for the Whatsapp application with the NIST SP 800-101r1 method.

Digital data acquisition will use the method developed by the National Institute of Standards and Technology (NIST). Therefore, in this study, the research material will be the manual acquisition method and the acquisition method using the MOBILEdit Forensic Express and FinalMobile Forensics applications. The results of this efficiency and accuracy comparison are expected to help and increase knowledge in the scope of digital forensics

Keywords**:** *Tools,* Forensik, *smartphone,* artefak, investigator, Whatsapp, data digital, Android