
ANALYSIS SEARCH DATA USING THE NATIONAL INSTITUTE OF STANDARD AND TECHNOLOGY (NIST) METHOD ON CYBERCRIME

By

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Abstract

This research has a background on how to find data that has been lost or that has been deleted with an application that can help find the data, so this method will be able to find it. This method is the one used in this research. By using this method, it can be ascertained that the data will be determined using the NIST legal analysis scenario and legal export condition scenario methods so that it can be concluded that the search for data will be much easier and the search for data will find much greater. The problem raised in this research is how to find lost data or data that is sought in various systems. With this system, it can be ascertained that the data is analyzed as legal data and can be ascertained as evidence because the data was intentionally omitted or the data was intentionally hidden. The purpose of this study is how to find hidden or missing data. These data are important data that can be used as evidence in court as a legal basis for legal experts.

Keyword: *Search Data, National Institute of Standard And Technology (NIST), Cybercrime, Data Protection.*

INTRODUCTION

The sophistication of technology brings many conveniences to people's lives. There are many things that can be done by using the internet, namely communicating. But there is also a negative side, namely crime in cyberspace known as Cyber Crime.

Cyber Crime is an action that harms a person or related institution and the user of the facility aims to benefit himself or another person. And Cyber Crime is a crime so that it is regulated in Law No. 11 of 2008, concerning information and electronic transactions.

Based on information in the Internet Security Threat Report volume 17 from security company Symantec, throughout 2011 Indonesia was the country with the most cyber crime activity, ranking 10. According to data from the Indonesian National Police, from April 2020 to July 2021, at least 937 cases were reported. Of the 937 cases, there were

three cases with the highest number, namely cases of provocative, hate content and hate speech which were reported the most, around 473 cases. Then followed by online fraud with 259 cases and pornographic content with 82 cases.

Based on the explanation of the problems above, we need a technique that is able to search and find forensic digital evidence to handle Cyber Crime cases. several tools as a tool to find digital forensic evidence.

Based on book entitled Computer Security Systems, defines Computer Forensics as a science that discusses findings in the form of digital evidence after events related to computer security occur.

Based on digital forensics is part of forensic science which includes the discovery of artifacts and investigation of material (data) found on digital devices (computers, mobile phones, tablets, PDAs, networking devices, storage and the like).

The definition of information technology according to Brown, DeHayes, Hoffer, and Perkins is a combination of computer technology consisting of hardware and software to process and store information communication technology to distribute information.

Based on book Professional Computer Ethics defines that Cyber Crime is one of the negative impacts of technological developments that cause extensive losses for all modern life today.

Based on Digital Forensic Analysis of Telegram Applications on Android-based smartphones. In his research, in this study, the process of removing digital evidence from the Telegram application using the MOBILedit Forensic Tool 7.0 and using the Mobile Forensic method created by the National Institute of Standard and Technology (NIST).

RESEARCH METHOD

The method in this study used the National Institute of Standards and Technology (NIST). This method consists of several stages including: Collection (Collection), Testing (Examination), Analysis (Analysis), Report (Reporting).

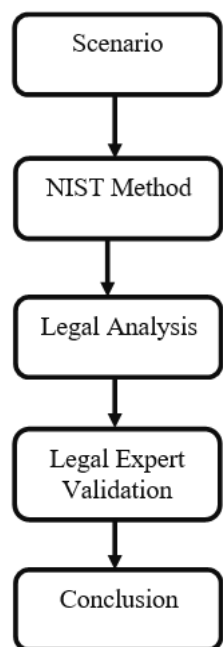


Figure 1. Research Method
Scenario Design

The scenarios carried out to facilitate the investigation of cyber pornography cases are:

1. Initially the suspect created a WhatsApp account (Account A)
2. Next, the suspect asks for the victim's phone number which is used on the WhatsApp account in order to get the victim's account (Account B).
3. Then the suspect sends a conversation to the victim's account (normal initial conditions).
4. Account A sends a conversation containing pornographic content to account B.
5. After the conversation is complete, the suspect deletes all conversation data containing pornographic content from the device.

RESULT AND DISCUSSION

How to get the forensic evidence data needed as forensic evidence from WhatsApp Messenger focuses on the file sent and the content of the conversation. Using the recovery application to recover deleted WhatsApp messenger data and analyze the WhatsApp messenger database obtained with DB Browser for SQLite

Process:

- Line forensic research is executed according to the scenario
- The android device used has gone through the root process.
- The data entered in the Line messenger is data that is only used for simulation.
- Data on Line messenger is deleted, then performs recovery in order to recover data before searching for forensic data evidence.
- Research is focused on finding forensic data on the Line messenger application on the android smartphone platform.

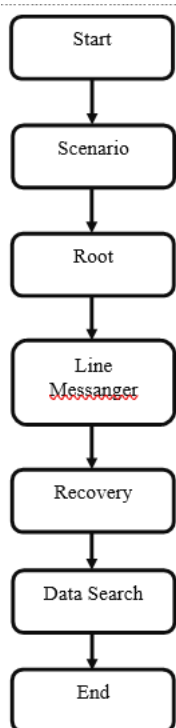


Figure 2. Data Search Scenario Process Method:

- The method used is a digital forensic method with the assumption that digital devices are used as tools for criminal acts.
- Digital forensics method that focuses on handling and analyzing the data that has been obtained.

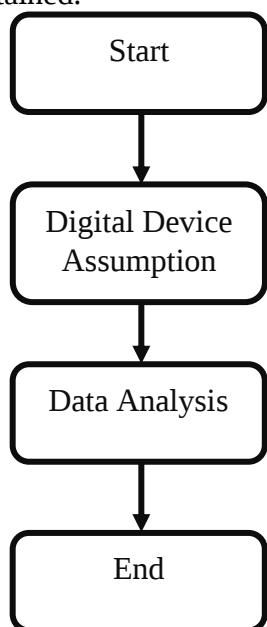


Figure 3. Data Search Scenario Method

Forensic Analysis of Encrypted Instant Messaging Applications on Android. This study aims to analyze the location data storage of different IM applications often used on Android devices. The study was conducted using Android phones with various versions of Android OS. The tools used in this research are Universal ADB Driver, WhatsApp KeyDB Extractor, WhatsApp Viewer and SQLiteSpy.

Forensic Analysis of LINE Messenger on Android. The study used a virtual machine with a standard installation of Windows OS 10. BlueStacks application was installed on Windows 10. Then we rooted BlueStacks. The BlueStacks App Player is designed to allow Android applications to run on Windows PC and Macintosh computers. This study shows that the use of lines for Android leaves material based on the fact that it is useful in volatile memory and non-volatile memory. In this paper, they study and report Forensic Analysis of instant messages namely the Android System line. Due to the limitations of the trial cost they used BlueStacks to emulate the Android OS system. Implementation may vary between different end devs.

CONCLUSION

Based on the simulated case, there are two legal aspects to be subject to, the first is the legal aspect for pornography cases subject to Law article 27 paragraph (1) of the ITE Law. The second case, namely the disappearance of evidence, will be subject to Article 282 of the Criminal Code.

With the data method given in this study, it can be concluded that the data can be searched based on data assumptions and data analysis so that the data in the system can be found even if the data is deleted or hidden.

Future research is how to make an application that can search directly for the data you are looking for so you don't need to use other applications. By using one centralized application, you can find data in other databases and find what you are looking for without having to use other applications

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